LEGISLATIVE COUNCIL ECONOMY AND INFRASTRUCTURE COMMITTEE

Inquiry into Wildlife Roadstrike in Victoria

Geelong – Wednesday 20 August 2025

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WITNESS

Lucas Cooke, Chief Executive Officer, Field and Game Australia.

The CHAIR: I declare open the Legislative Council Economy and Infrastructure Committee's public hearing for the Inquiry into Wildlife Roadstrike in Victoria. Please ensure that mobile phones have been switched to silent and that background noise is minimised.

I would like to begin this hearing by respectfully acknowledging the Aboriginal peoples, the traditional custodians of the various lands we are gathered on today, and pay my respects to their ancestors, elders and families. I particularly welcome any elders or community members who are here today to impart their knowledge of this issue to the committee or who are watching the broadcast of these proceedings. I also welcome any other members of the public watching via the live broadcast.

To kick off we will just get committee members to introduce themselves to you, Lucas. We will start with Richard on the screen.

Richard WELCH: Good morning. I am Richard Welch, Member for North-East Metro.

John BERGER: John Berger, Member for Southern Metro.

Gaelle BROAD: Hi. Gaelle Broad, Member for Northern Victoria.

The CHAIR: Georgie Purcell, Member for Northern Victoria.

Katherine COPSEY: Katherine Copsey, Member for Southern Metropolitan.

The CHAIR: Wonderful. All evidence taken is protected by parliamentary privilege as provided by the *Constitution Act 1975* and further subject to the provisions of the Legislative Council standing orders. Therefore the information you provide during this hearing is protected by law. You are protected against any action for what you say during this hearing, but if you go elsewhere and repeat the same things those comments may not be protected by this privilege. Any deliberately false evidence or misleading of the committee may be considered a contempt of Parliament.

All evidence is being recorded and you will be provided with a proof version of the transcript following the hearing, and then transcripts will ultimately be made public and posted on the committee's website. For the Hansard record, can you please state your full name and the organisation you are appearing on behalf of.

Lucas COOKE: Thank you. My name is Lucas Cooke, and I am the CEO of Field and Game Australia.

The CHAIR: Wonderful. Thank you. We now welcome your opening comments but ask that they are kept to around 10 to 15 minutes to ensure plenty of time for questions.

Lucas COOKE: No problem. Thank you, Chair and the committee, for having me here today. Field and Game Australia is here as a present, active and proactive manager of land, wildlife and our wild places. Our organisation was founded in 1958 by community groups who recognised failures in environmental management and chose to act. We are not a hunting lobby. We are conservationists. We restore wetlands, we plant vegetation, we manage predators and we contribute tens of thousands of hours to volunteer work every year, and that record speaks louder than caricature. The founding groups of FDA were hunting and angling groups – we do not shy away from that – but those groups already existed, and we are the conservation and stewardship side of that coin, a subtlety that I know is often missed and overlooked about our organisation. So I wanted to start out by pointing out that fact.

Scientists, land managers and genuine wildlife stewards all tend to think in terms of populations, not individuals. Every time, every wildlife collision on our roads is a tragedy for the wildlife and the humans involved. We face a choice, as far as Field and Game sees it: we can get caught up in trying to save every individual and fail, or we can act as responsible stewards. We can manage populations so that fewer tragedies occur in the first place. Our point of view would be that the science is overwhelming. Ecologists in multiple studies have found that unmanaged peri-urban kangaroo populations in particular inevitably suffer starvation,

disease, road trauma and habitat collapse through overpopulation. If they are left unmanaged, then the suffering is untold. Sharp and colleagues in 2014 did a comprehensive review of the ACT kangaroo management program, for instance, and concluded that conservation culling was necessary because measures such as fertility control alone could not reduce the suffering or protect the biodiversity in those environments. For us, the lesson is clear: population level management prevents cruelty, while sentiment-driven inaction prolongs it.

International best practice points the same way. I was lucky enough just very recently to visit Alberta in Canada, and I actually got to drive part of the Banff National Park road. That program that they have done in that national park is often touted as the telling tale for fencing and overpass and underpass structures and all that sort of thing, and there is no second way of taking it. What they have achieved is amazing. With their crossings, combined with continuous fencing and the program they have run there, they have achieved an 80 per cent reduction in wildlife vehicle accidents on those stretches of road. The measures worked because they were paired with professional monitoring and adaptive management by ecologists. In the United States suburban deer control programs show the same pattern: while signage, crossings and other mitigation help at the margins, the only reliable long-term solution is reduced animal numbers. Science is unambiguous: infrastructure alone is not enough. Population management must be central and must be guided by professionals.

The Victorian wildlife rehabilitation guidelines, developed by the Department of Energy, Environment and Climate Action in partnership with Zoos Victoria and wildlife veterinarians and rehabilitators in 2020, emphasise that action is important for injured wildlife. We do not shy away from that, but we also point to the fact that a lot of the time the kindest thing is to euthanise animals once they are injured, and our focus would be on trying to prevent them being injured in the first place. I do not want to doubt or take away from the network of carers in Victoria. Carers are important. They do have a role to play in rehabilitating injured wildlife, and I think our position from the carer front is just that carers should not be on the front line; their role should be supporting viable threatened species under proper standards – certainly not keeping kangaroos as pets or parading them on social media. That is not welfare and undermines confidence and prolongs suffering. As far as we can see, we want this committee and the government to consider the management of wildlife holistically. The humane path is to look at the top level, not just reactionary measures.

We would encourage the government to seek measures to prevent road strikes in the first place and to consider humane wildlife management programs as part of that. To go on to the points that Field and Game would most like to make, I think our first and leading position on this matter in Victoria is that we do need to clean up. It is cared for in a lot of different pieces of legislation by a lot of different departments and bodies. The first point we would like to make is that we would like to see a legislated Victorian wildlife road strike code of practice, one clear framework that sets responsibilities for motorists, for responders and for carers. We would like to see funded professional roadside response programs. Our position would be that councils already have trained animal control officers with appropriate vehicles and traffic control mandates. They should be supported by similarly trained and equipped volunteers outside of hours. We would like to see more regulation around the volunteers and who is actually equipped and enabled to respond to these incidents. We would like to see a regulated role for carers under strict standards. Fourth, we would like to see active population management, including humane culling where required, guided by wildlife biologists and ecologists working at a population level.

We would like to see targeted infrastructure, but only in genuine hotspots, evaluated for cost-effectiveness and always paired with population management. A centralised database combining insurer, council, police and citizen data to identify hotspots and track outcomes we think would be more than useful. We would also like to encourage the government to consider innovative funding ideas: insurers, developers, philanthropic partners – who else can foot some of the cost for these programs, outside of just increasing costs to taxpayers.

We see that Victoria faces a choice. Do we fund ideology and expensive, emotive and reactionary measures, or do we follow the science, have professional, accountable population level management that prevents cruelty before it occurs, protects motorists and delivers genuine conservation outcomes? I think that would be the statement, that Field and Game Australia would urge the committee to choose the latter, and we encourage conversation in this space.

The CHAIR: Thank you. We will kick off with questions from Mr Berger.

John BERGER: Thank you, Chair. And thank you for your attendance this morning. Gee, there was a lot in that. I am just wondering where I should start. I am interested to understand a little bit more if we could unpack what your experience was in Canada, given that they have got an 80 per cent reduction, and how that might apply in a scenario in Victoria?

Lucas COOKE: Yes. The trip out to Banff was incidental. I was actually there as a guest of American Wildlife Conservation Partners, who had their annual summer meeting in Alberta, in Calgary, this year, which was a fantastic gathering in and of itself. Not to go too far down that thing, but that is a group of around 50 wildlife conservation organisations that meet annually and focus on policy. This is a matter of importance to Canadians and Americans as well. Part of the area of policy that they were visiting was similar things: how to reduce wildlife road strike incidence. The Banff model, as I said, is a fantastic model; there is no doubt about that whatsoever. They have got 87 kilometres of highway through that national park that they have fenced either side. They have put overpass and underpass structures through it. And yes, the stats are an 80 per cent reduction in collisions with deer and elk and other species in that park. There are a lot of things I saw in North America, though, when I came away thinking, 'That's amazing, but we could never, ever afford that.' That is a $400 million project, that highway, and around $100 million of that was on their fencing and their underpass and overpass structures. So whilst it is incredible and amazing and you cannot for a second overstate what an amazing job they have done, there is no way I can see that Victoria can afford that sort of thing – and we do not have one central area that is a thoroughfare for wildlife to the point where that particular corridor is. So, yes, I think that should be held up as the shining light of how fencing can work, but also with a big dose of reality, of going, 'It's expensive to do it that way.'

John BERGER: Sure. Your presentation featured heavily the code of practice. Are there any particular things in a code of practice that you might see would be preferred in your mind, as opposed to just a broad summary of codes of practice?

Lucas COOKE: Well, I think the importance of a code of practice would be to bring the fragmented bits and pieces that we have currently together. In a lot of ways I do not think there are going to be a lot of things in there that we have not seen in the past, but bringing parts of the *Wildlife Act* and POCTA and other regulations that at the moment try and control this are central. In my mind a central code of practice would just bring all of those into one place, and it might not set out a whole heap of new responsibilities or determinations in there, but it would at least make it a central place where you come to find that information.

John BERGER: Last one, Chair, if I could. You mentioned the ACT program. Can you give the committee a bit of an insight as to what that was about?

Lucas COOKE: That was a study they did specifically on the kangaroo populations. It was a study by Sharp et al in 2014 where they reviewed kangaroo management programs. I could find more detail on that program if you like, but the outtake I took from that was just that they concluded, by looking at all the options, that conservation culling was necessary and that they did include a considerable study of fertility control programs and determined that those were ineffective. One of the big take-outs I know from reading that report was that their fertility control programs are too slow. They have to be a long way in advance if they are going to work.

John BERGER: Sure. Thanks, Chair.

The CHAIR: Great. Thanks, Mr Berger. Ms Broad.

Gaelle BROAD: Thank you very much for appearing today. Just interested – we have heard during the hearings so far about different technologies. Some groups have spoken about virtual fencing, but we have heard competing insights into how effective that is. But signage has been discussed. I guess I am interested in thermal cameras – you know, what can be fitted to cars. But, in your view, are these practical solutions for Victoria?

Lucas COOKE: I think there are some amazing emerging technologies and things out there. I do not want to I do not want to put a damper on them saying none of them work, but I think the measures that we have seen rolled out so far have mostly been done in fairly small scale, trial-type things, and the actual outcome of them has been inconclusive at best, or probably negative in most of the examples where I have considered them. Yes, the thermal cameras on cars thing is a great idea, but again, the cost and reality of trying to fit that sort of technology to every single motor vehicle that is out there in Australia is probably fairly prohibitive, and virtual fencing is in similar ways. I have read a few studies where I was pretty encouraged with them, but then at the

same time, when I have seen independent reviews of those studies, quite often they tend to be that they are fairly inconclusive. Yes, I think our position on them would be we would love to see more trials and we would love to see the uptake. We are not saying, 'Don't ever consider technology,' but I do not think there is a technology that seems to be present at the moment that is conclusively successful in all applications.

Gaelle BROAD: Do you have an idea, on the thermal imaging on cars, what the cost is roughly?

Lucas COOKE: Sorry, I do not have a per each cost in front of me, no. But I can take that on notice and provide you more information.

Gaelle BROAD: That would be just great. You mentioned too wildlife carers, and we have heard from a number of different groups. You talked about councils having a role to play in that. Can you expand on that? What role do you think they can play?

Lucas COOKE: My position is that wildlife carers are again an absolutely vital and important part of this. But I think wildlife carers should be caring; I do not think they should be responding. I think our position would be that the position of wildlife carers is to have dedicated facilities and staff and the ability to look after wildlife once they are provided to them. I think the obvious problem that we have with the solution – or the piecemeal solution, if you like, that we have at the moment – is individuals, members of the public, trying to respond to roadside incidents who are either accidentally or incidentally putting themselves and others at risk. I do not think that is a model we should be celebrating or trying to expand. From our point of view we look at it and go, 'Local councils already have animal control officers' – they have different names in different municipalities, but generally speaking I see quite often in my travels council vehicles with the appropriate level of high-vis signage on them. A lot of them now have the dedicated wildlife box on the back. They have got a vehicle. They are perfectly set up to respond to these incidents. I think our position would be that we would like to see those funded and put to use as roadside responders. Then the role for carers should be, once those injured animals are triaged and assessed, that they would be then delivered, probably through a professional veterinarian service, and then on to carers to do the looking after, rehabilitating side of things.

Gaelle BROAD: Your organisation, Field and Game, has a lot to do with wetlands and ducks. Is there anything you have learned from that conservation work that you think could apply in this case, what we are looking at with wildlife road strike?

Lucas COOKE: Our submission, which we have and will table, and my introduction today did focus largely, obviously, on kangaroos and deer. In the case of ducks, certainly road strike does impact ducks. Again, you are down here in beautiful Geelong. If you go for a drive and see a lot of these lovely urban wetlands that we have in this area, they definitely have roads running right by them. Especially in nesting time our Australian native ducks, as do all ducks worldwide, have a tendency to hatch beautiful clutches of ducklings, and then they jump out of their nest and head off overland and unfortunately we do see ducks, in those urban environments especially, that do fall victim to road strike. We have looked at it at length, and we have done a lot of work, again with our North American conservation partners in particular. They have done broadscale studies on fencing, and they have actually concluded that fencing is counterproductive for ducks. Ducks will end up walking up and down a fence because they know the direction they want to go, and when you put a fence in their way, they will just walk up and down that same fence. In the studies that have been done they tend to then get picked off by avian predators anyway. It is not good for duckling survival rates. So I think as far as ducks go, we sort of look at it and go, 'What we'd really like to see are massive amounts of habitat outside of urban environments where ducks have plenty of space to grow and breed and raise their young.' We cannot really come up with any economical way to protect ducks in that urban environment, unfortunately – fences and that sort of thing probably just are not going to work.

Gaelle BROAD: You have sort of touched on it: as we look at road strikes, and certainly we want to reduce the number of incidents, what does world's best practice look like?

Lucas COOKE: That is one of the things where we are certainly going well and truly down a rabbit hole, trying to work out what the best models are. I think the best models that we can find worldwide, when we go looking for people that have already answered this question, are holistic models that consider population dynamics as a whole, models that are designed and run by wildlife ecologists and biologists looking at a

population level and going, 'How do we ensure the population is healthy and at sustainable numbers?' That is really where we would say this has got to start.

Gaelle BROAD: Just coming down here today I saw 12 animals on the side of the road that were wildlife road strikes. I think we do want to look at ways to reduce that number. This committee is very much about recommendations. If there was one key recommendation, or a top three, what are your thoughts?

Lucas COOKE: I think our top one is that code of practice or that single place that we can go to to consider everything to do with road strikes. I would really like to see all these sometimes conflicting pieces of legislation brought together in one place so we can have one code of practice or one place to go to to consider how Victoria is managing and addressing road strikes and what we are doing to mitigate them in the future – all of those sorts of things in one place rather than spread out. Also, it is trying to break it down. I have mentioned council responders, but I know councils will tell you quite often: is it the state responder's responsibility, is it the federal responsibility, is it a local council responsibility? Again, a single code of practice would make really clear whose responsibility it is to act at different levels of this whole process to make sure that we have got the right framework in place. That would be the recommendation – I hope, number one – that we could get out of this.

The CHAIR: Thanks, Ms Broad. I will go next. You touched on that you do not think wildlife carers should be responding to wildlife road strike. We have heard from councils that rely heavily on wildlife carers to respond to wildlife road strike. Domestic animal managers do not respond to wildlife road strike. Why does Field and Game think that the current system does not work when these people actually receive training, unlike council officers?

Lucas COOKE: Well, I think the training is indisputable. We want to see them have training, but I think people that are equipped and resourced should –

The CHAIR: So why aren't wildlife carers equipped?

Lucas COOKE: Do they have the appropriate vehicles? Do they have the appropriate traffic management mandates or training? Do they have a code of practice or something that they can operate under that makes sure they are acting in a safe, humane way that is not causing any incidents?

The CHAIR: I agree with you on a code of practice, but one does not exist regardless. I am just wondering why we take that responsibility off highly skilled, experienced, trained carers who actually go through a program with Wildlife Victoria and hand it over to councils who do not have the ability to respond to this crisis?

Lucas COOKE: I think we want to give councils the responsibility to respond to that crisis. I think that is where we are coming from. We would rather see paid professionals fully equipped and resourced to do it.

The CHAIR: Do you think councils have the capacity to respond to wildlife road strike? Ten million animals are hit on Australian roads every year, and they are busy responding to cats and dogs already currently.

Lucas COOKE: Right now I do not think they do – I agree, I do not think they do. I think they should have. I think in our picture of the world, trying to work out where that responsibility should lie, that is where we would see it eventually lying. Do we think they have the capability to do it right now? No. That is why funding et cetera is important.

The CHAIR: What we find – and I obviously engage a lot in this space – is that councils call Wildlife Victoria because they are the experts with the thousands of volunteers who have gone through the training that can respond to this. Would Field and Game be supportive, if a code of practice existed, for carers to respond to it? Would that satisfy the organisation or the desire to take this completely away from the wildlife community?

Lucas COOKE: I think ultimately we should still be aiming for a level where there is a professional framework that supports this. Field and Game Australia's volunteers respond to roadside incidents as well, and unfortunately we are most often called when it gets to the point where euthanasia is required.

The CHAIR: Same with wildlife carers.

Lucas COOKE: Yes. I know somewhere in the stats we saw that over 50 per cent of animals that are struck die eventually anyway, or 50 per cent of those that enter care, so that is not including all of those that do not enter care. The trauma and the things that people face – I do not think it should sit on volunteers. Volunteers will always play a role. Our wildlife carer volunteers will always play a role, but if you are looking at the perfect model that you want to end up with, I do not think we should be counting on volunteers to bear the burden.

The CHAIR: I do not think we should be either. I think we should be paying these people who are already experts, so we would agree on that. Do you have any stats on how often Field and Game responds to wildlife road strike? You mentioned before that you do. That was going to be my next question. Could you tell us how often this happens? Is Field and Game called as opposed to Wildlife Victoria or –

Lucas COOKE: It tends to be local, so I could not tell you and I do not have a stat off the top of my head. It tends to be local. Our local volunteers that we talk to – I was talking to a gentleman just recently from western Victoria that has done it for many, many years. So he is called locally; they do not call Field and Game Australia generally. We have had calls in the past, but that is fairly piecemeal. It is more a case of our individuals at local level being known for that.

The CHAIR: Yes. You talked about overpopulation of animals, or so-called overpopulation, and you have spoken about kangaroos. Kangaroos are not the only victims of wildlife road strike. We see koalas, wombats, echidnas, frogs. Is Field and Game proposing that we cull all native animals?

Lucas COOKE: No, of course not. It is interesting that you bring up koalas, because one of the interesting stats is that koalas actually have a really high response rate and survival rate in care. Koalas are one where we would go: yes, okay, they can reasonably and reliably be picked up, rehabilitated and cared for. Kangaroos have a really poor prognosis and a really high death rate.

The CHAIR: What are you basing that on?

Lucas COOKE: There is a long-term study in New South Wales that was done. They considered over 100,000 different wildlife strikes. Their long-term records indicated that many rehabilitated koalas do reintegrate. Among those readmitted and later assessed, 66 per cent spent six or more months back in the wild and 33 per cent survived for more than two years once reintroduced into the wild. Kangaroos did not have that same rate. Again, if you are looking at it as a holistic approach to this, some animals have a really, really good response rate and survival rate and some do not. I think we need to focus our limited resources on making sure those most likely to survive are the ones that get the resources.

The CHAIR: So, just to come back to the original question, Field and Game is only proposing shooting of kangaroos and no other species as a response to wildlife road strike?

Lucas COOKE: I think, again, we are not necessarily advocating the shooting as a response to wildlife. In the studies that have already been done – and there was another study I referred to earlier that was a DELWP study that recommends it – macropods are at a higher risk of all mortality, and so it was actually DELWP that made the recommendation that all injured macropods and pouch young should be euthanised on the roadside, rather than what has happened.

The CHAIR: Yes, I acknowledge that.

Lucas COOKE: So you are familiar –

The CHAIR: I do not think DELWP or DEECA would be seen as the leading authority to carers on wildlife rescue, given that they are the department that also authorises the shooting as well. But my question in relation to kangaroo shooting is: we actually heard extensive evidence from carers and rescuers who do successfully rehabilitate kangaroos very regularly, and they do not keep them as pets. I just want to clarify that that is actually illegal for them to do. They do have a code of practice, which you have spoken about, that requires them to release them into the wild. They are not pets. But we did hear that the shooting of kangaroos actually scatters these populations and is often the reason that kangaroos end up on roads and become victims of wildlife road strikes. So how does Field and Game reconcile that, if the shooting that you support is contributing to the actual problem we are trying to address?

Lucas COOKE: Well, I think, again, it is true in a lot of these studies where they were considering roadside euthanasia and the effectiveness of that. One of the key recommendations was that the people conducting that work are allowed to use sound moderators on those firearms for exactly that reason. We agree, having loud gunshots going off on roadsides is not a good idea, but there are tools available to mitigate that.

The CHAIR: We actually heard from a kangaroo shooter who claimed that they cannot use them at the last hearing.

Lucas COOKE: The sound moderators are currently not allowed to be used, no. So again, that would be something that we would probably ultimately be seeking to amend – that in these circumstances moderators are allowed.

The CHAIR: Yes. But separately to that, do you accept that shooting these kangaroos actually poses a risk of increasing the problem? Obviously kangaroos exist in mobs. It separates the mobs. Some of them get shot and actually get hit by a car after they have been shot because of the scattering or a missed shot.

Lucas COOKE: Again, I think the science would suggest that – and again, there was another of these long-term studies that was done in New South Wales, where shooting at the proximity or the ranges where roadside euthanasia would be done resulted in the immediate death of over 98 per cent of all kangaroos shot, and –

The CHAIR: Do you mean shooting kangaroos that have been hit by cars or shooting programs? I am referring to shooting programs.

Lucas COOKE: I believe that particular program was looking at urban wildlife control, so that was a study done of urban wildlife control. So they were not already struck; they were in urban environments where they were highly likely to come into contact with cars. And yes, it was successful in over 98 per cent of the chances of immediate euthanasia of that animal. Now, might a mob scatter or run across a road? I guess they are wild animals; they could. I do not think that would be a widespread reason not to control those populations, though.

The CHAIR: Lastly, one of the things that I am particularly interested in in this inquiry is not killing the wildlife; it is finding ways to coexist with the wildlife. Something that is abundantly clear is that they are so often an afterthought in all of our legislation. In fact our planning Act does not even have the word 'wildlife' in it. Would Field and Game be supportive of considering alternative options that do not result in the killing of animals in developments and infrastructure to stop this problem occurring in the first place?

Lucas COOKE: I think absolutely developers, road designers, road builders, all these people that have a part to play – that should, again, be the primary goal: to stop this conflict happening in the first place.

The CHAIR: Thank you. We will go to Mr Welch.

Richard WELCH: Thank you, Chair. Good morning. Thanks for your presentation. Probably one of the biggest benefits we could hope to get out of this inquiry is the contentious discussion around kangaroo numbers, because then we can be a bit more scientific about things. I would just like to ask you a few questions in that area, and you can be as expansive as you like. But first of all, is it your view that we have a genuine overpopulation problem with kangaroos in Victoria?

Lucas COOKE: I think if you consider it, the overall population might not be the absolute issue but the location. We certainly have too many kangaroos in peri-urban areas, so areas where they are likely to come into conflict with humans. If you could wave a magic wand and take those kangaroos and drop them all out in the outback somewhere where they were not going to come into conflict with humans, would I say there are too many kangaroos? Maybe not. But the reality is we definitely have too many deer and kangaroos – I think they are the two big problems we have in peri-urban environments. I probably should have prefaced it maybe slightly more, and I will now: I absolutely adore kangaroos. They are an amazing, amazing native species. They are a fantastic animal. Not for a second am I saying that we should wave a wand that makes all kangaroos disappear. I think we just need to be responsible and realistic in our management of kangaroos and deer in environments where they are going to come into conflict with humans and motor vehicles.

Richard WELCH: How do you feel the permit system and the tag system are working? Do you think that is fit for purpose? Do you think it is calibrated to the problem we are trying to address?

Lucas COOKE: I do not think it is quite, because again, the way the permitting process is, especially the tagging process or the professional side of things, means that they are actually disincentivised to operate in the very areas we are talking about. So if you are a commercial harvester, you are much better off driving out into the outback and shooting the kangaroos out there than trying to control them in the peri-urban environments where they are a problem. It is actually a little bit counterintuitive.

Richard WELCH: Can you explain why that is the case?

Lucas COOKE: The main ones are simply safety and the likelihood of commercial harvesters being interfered with if they are operating in proximity to homes and other people that do not understand who they are or why they are there.

Richard WELCH: And do you have any views on how we can improve that or how we can improve the population management protocols, processes, rules, whatever they are? What would be your input on how that could be better managed?

Lucas COOKE: To address that exact problem that we have just articulated, I think that the code of conduct is a good start. But also within the other pieces of legislation that we are looking at using to control this, it is about actually recognising that what we want to do is increase the population control in these peri-urban environments, and therefore we need to work to make sure that the legislation or rules that they are operating under actually do that.

Richard WELCH: Yes, and I guess what I am inviting you to do is have input into that here and now: what would we change; what would make it more effective?

Lucas COOKE: I think if you look at world's best practice type circumstances, they do not look at a state population and give their tags based on that; they would be much more localised. So you might issue more tags specifically in the environments where the population needs to be lower and less outside of that. Really tailoring the program to fit the problem I suppose is what I am saying.

Richard WELCH: Yes, okay. That makes sense. Also in terms of deer population, and I guess people have less sentimentality about deer anyway, as they are not a native animal, could you describe the scale of the problem from your experience and your views on levels of overpopulation? Is it really just another parallel to kangaroos or does it have anything distinct about it?

Lucas COOKE: It is parallel, with the difference being that deer are an introduced species. Again if you are really looking at management programs and you are looking at the levels of population that you actually want to keep on the landscape, deer are going to have a lower level, I would imagine, than native wildlife. We should be trying to make sure that the natives take precedence. But I think the rest of the problem is parallel. The main issue where we see deer coming into conflict with humans and motor vehicles is again in these peri-urban environments where it is more difficult to control their populations. I think that parallel is exactly the same.

Richard WELCH: Forgive my ignorance, do they work under a tag system as well? I actually do not know.

Lucas COOKE: Again, it is fairly convoluted, the deer system. On private land I think the current wording is they are deprotected, so they can be controlled on private land right now. With public land, access and hunting are very strictly controlled.

Richard WELCH: Thank you very much. Thank you, Chair.

The CHAIR: Thanks, Mr Welch. We will finish with Ms Copsey.

Katherine COPSEY: Thank you. You have spoken already a little bit about the way that urban and development encroachment on habitat is worsening this problem, and I think you said in response to Ms Purcell's questions you are therefore supportive of the existence of healthy wildlife populations being taken into account in the planning stages. I would like to understand – another thing that has come up in other inquiries from Field and Game's evidence is the impact of climate change and drought, in particular on wetlands. Do you see that as a problem that is contributing as well to where animals can healthily be in the wild and what is driving them towards peri-urban areas?

Lucas COOKE: It is certainly a problem – I talked before about these beautiful-looking but not particularly functional urban wetlands, which are definitely an issue for our ducks and waterfowl population. If you are a duck at 5000 feet flying along looking for somewhere to land and live and you see a beautiful green wetland in the middle of a bunch of houses, you are probably going to head on down there and check that out, because it is an amazing-looking wetland. What we find in the studies we have done is that the water quality issues and those other sorts of side impacts of urban wetlands are that they are not actually as healthy wetlands as they look, and they do not tend to support bird life. As I said before, one of the problems we have certainly been considering is what you do about the fact that ducks are definitely going to nest in those urban environments but then that is not actually a suitable environment for them to raise young. We have not got a magic answer to that, unfortunately. The climate is certainly a big driver of our wildlife and why they move and where they move, and it is the same with kangaroos. If you are on one side of a fence and there is no grass and it is all dry and you are looking through a fence at a lovely green golf course, of course the kangaroo is going to do everything it can to get through that fence and eat that lovely green grass. Climate is certainly a part of it, but just the environment in general is definitely a driver for animals. They will be very, very determined to get to where they can see conditions that look inviting to them.

Katherine COPSEY: So we need to invest in habitat conservation and climate change prevention?

Lucas COOKE: Hundred per cent. That is right, yes. As I said, our goal would be: you can spend a lot of money and time and effort on trying to save those ducks that are crossing the road, or you can go and spend that same time and effort making a beautiful wetland out of the town that is then likely to invite them to live and thrive out there anyway, and that is probably the better solution.

Katherine COPSEY: Just going to the example you discussed in Banff, it is my understanding that a lot of the wildlife protection measures that have been executed on that road are best described as sort of retrofitting – trying to fix a problem because of the siting of the road that bisects a national park, I am pretty sure it is.

Lucas COOKE: Yes. A national park and two or three different major migration corridors.

Katherine COPSEY: And so the figures that you were discussing before around the cost of retrofitting a solution to that road versus what they potentially could have avoided had they taken that cost into account at the time of planning the road – do you think that is a better approach for governments to be working towards?

Lucas COOKE: Hundred per cent. It is much achievable to do it in the first place than come back and fix it later.

Katherine COPSEY: Yes. You mentioned a code of practice, and I just wanted to understand. There have been some submitters who have also argued for better driver education, recognising that, I think, basic driver education across the states perhaps does not take into account some of the significant things that we know contribute to road strike, like dawn and dusk conditions, identification of wildlife. Is that sort of thing something that Field and Game would be supportive of?

Lucas COOKE: Yes. Wherever we can get better education in, I do not think that is a bad idea. Just a funny little side note: one of the signs I saw while I was in Canada was a sign saying 'Five bears have been struck on this road in the last fortnight. Please try not to hit a bear.' And I went, 'I wonder what training you get to deal with the fact you have just hit a bear?' Because presumably jumping out of the car and going and checking it is probably not a good idea either. So again, if you are looking at world's best practice, I do not think driver education happens well anywhere. Could we improve it? Yes, I think so.

Katherine COPSEY: In terms of whether that should be led at a state or a national level, do you have a preference, or should it just be done by whichever level of government can actually action it?

Lucas COOKE: Wherever we can make it happen.

Katherine COPSEY: So Victoria should proceed with trying to improve driver education?

Lucas COOKE: I think that would be a good goal, yes.

Katherine COPSEY: I just had one more, but it has gone out of my brain, so if someone wants to –

The CHAIR: Ms Broad has a follow-up, so if it comes back to you, we will come back.

Katherine COPSEY: That would be great. Thank you.

Gaelle BROAD: Thank you. I am just interested in fencing. You mentioned that earlier on. But how effective is fencing – I mean, particularly in the Victorian situation?

Lucas COOKE: Fencing alone is not very effective – I think that would be the point. As I just said in relation to Ms Copsey's question, if you have got a kangaroo standing on one side of a fence, it does not matter how good a fence that is. If there is lovely green grass on the other side, they are going to do all sorts of things to get on the other side. They are very mobile. They are very good at finding the ends of fences if they are not continuous. They are also, quite surprisingly, very good at digging under fences. So yes, I think fencing is more of a temporary measure, in my mind. A fence is great as a way to stop a kangaroo accidentally coming in contact with the road. But if you are using a fence and you are relying on a fence to keep kangaroos – possibly an abundant or particularly mobile population of kangaroos – on one side of a fence, they are not going to stay there if they can see a really good reason to want to get to the other side. They are amazing at finding a way in, around, over or through whatever they need to.

Gaelle BROAD: I have just one other question on data. You mentioned the importance of data collection, and VFF's submission talks about the need to standardise incident reporting across police, insurance companies, local councils and wildlife rescue groups. Have you got any insights from your work from overseas of where perhaps data collection has been improved?

Lucas COOKE: There is one that is done really, really well. It is an acronym, and I am afraid I cannot remember what it stands for, but I will take it on notice and come back to you, perhaps. There is a Californian data collection model that is fantastic. It has been done really, really well and it has been designed really, really well, and it has got inputs from police, citizen responders, emergency services and all of that. That is being used really well in California to identify hotspots and then, yes, take appropriate mitigation steps in those hotspots. So there is an example of where it has been done really well, and I can supply that to you later as well.

Gaelle BROAD: Thank you.

The CHAIR: Great. Thanks, Ms Broad. Ms Copsey.

Katherine COPSEY: Thank you. I remembered what my query is. I would guess that Field and Game members would clock up quite a few kilometres across Victorian roads, and I wonder if you are aware, either anecdotally or from any kinds of reports that you get, of hotspots – geographic hotspots – where wildlife strike is commonly reported by your members?

Lucas COOKE: Again, I do not have it before me, but yes, I would be able to provide examples of roads we regularly hear of.

Katherine COPSEY: Fantastic. Would you be happy to take that one on notice?

Lucas COOKE: Yes, I can do that.

Katherine COPSEY: Great. Thank you.

The CHAIR: Great. I think that is all we have from members today. Thank you so much for appearing before us and making the time.

That concludes the public hearing.

Witness withdrew.