LEGISLATIVE ASSEMBLY FOR THE AUSTRALIAN CAPITAL TERRITORY

STANDING COMMITTEE ON ENVIRONMENT AND TRANSPORT AND CITY SERVICES

(Reference: Inquiry into nature in our city)

Members:

MS S ORR (Chair)
MISS C BURCH (Deputy Chair)
MR J MILLIGAN

TRANSCRIPT OF EVIDENCE

CANBERRA

WEDNESDAY, 10 APRIL 2019

Secretary to the committee:
Ms B McGill (Ph: 620 50124)

By authority of the Legislative Assembly for the Australian Capital Territory

WITNESSES

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Amended 20 May 2013

The committee met at 3.06 pm.

ARMSTRONG, MS JULIE HAZEL, Founder, ACT for Bees

THE CHAIR: Good afternoon, everyone, and welcome. I declare open this third public hearing of the Standing Committee on Environment and Transport and City Services inquiry into nature in our city. The committee announced this inquiry on 6 December 2017 and has received 71 submissions, which are available on the committee website. This is the third of seven hearings that will be conducted between March and May 2019. Today the committee will hear from ACT for Bees, Friends of Grasslands, the Field Naturalists Association of Canberra, Friends of the Pinnacle, SEE-Change, the Lyneham Commons and Friends of the National Arboretum Canberra.

On behalf of the committee, I thank all the witnesses for making time to appear today. Before we begin, on behalf of the committee I would like to acknowledge the traditional custodians of the land we are meeting on and pay my respects to their elders past, present and future.

Our first witness today is Julie Armstrong from ACT for Bees. On behalf of the committee, thank you for appearing today and for your written submission to the inquiry. I remind you of the protections and obligations afforded by parliamentary privilege and I draw your attention to the pink-coloured privilege statement before you on the table. Can you confirm for the record that you understand the privilege implications of the statement?

Ms Armstrong: Yes, I do.

THE CHAIR: Thank you. I also remind you that the proceedings are being recorded by Hansard for transcription purposes, although they are not being webstreamed or broadcast live. Ms Armstrong, thank you for providing your opening statement in advance of this hearing. Due to the brief time that we have with witnesses today, we will go straight to questions. Just to mix it up, we will go to Mr Milligan for the first question.

MR MILLIGAN: I will keep it brief, thank you, chair. I have a couple of questions more or less around bee-friendly trees and shrubs to be extended across our nature reserves in the ACT. What are the other trees and shrubs that are supportive of birds as well for nectar seeding and so forth? Can you elaborate on that now? What could be adopted around the territory and how can we educate the public?

Ms Armstrong: Thank you for asking me in. We commented on the MIS 25 planting list that is given to developers. It is an extensive list of about 140 pages of trees, shrubs and ground covers. Basically, it is what trees are allowed by the ACT government to be planted in new developments but also for the street tree replacement scheme. We added three columns to those. They were the nectar pollen seed resources, the flowering times and also the species of pollinator bees, birds and butterflies, and habitat for small animals. Off the top of my head, I could not tell you what—

MR MILLIGAN: Yes, that is okay.

Ms Armstrong: SEE-Change, with their small bird-scaping project in Turner, also invited us to comment on those plants that were ideal pollinators as well. When you plant for small birds you are also planting for pollinators and we can add a few more species in. I am actually not talking about nature reserves. I am talking about street planting. It is really looking at what trees, shrubs and ground covers can be used in new developments and replacement schemes to make sure that there is flowering for biodiversity throughout the year.

Often there are European trees. They flower in spring and then there is actually nothing in the summer, which often is when pollinators have built up their nests, have young or whatever. The summer is a really difficult time for many animals because there is not much around and it is blazing hot.

MISS C BURCH: We have spoken with some other groups about public education and awareness around what plants and trees people should be planting in their gardens more generally. Would you like to see that kind of thing extended not just to developers in new developments but also to residents more broadly?

Ms Armstrong: The education for residents is absolutely crucial because unless we have got people with us there is not going to be a change. Really, we have to commend the ACT government because it has taken neonics from this huge area of ovals. Thank you so much for that really proactive work. But the public is really behind.

THE CHAIR: In respect of that example you referred to, could you elaborate on it for the record so that we are clear as to what it is?

Ms Armstrong: We understand from Minister Gentleman that the ACT government a number of years ago took out the treatment of most of the ovals in Canberra that were treated with neonicotinoid pesticides and replaced them with a pesticide that was an alternative and less toxic.

THE CHAIR: Yes. Please continue.

Ms Armstrong: So definitely, particularly through nurseries, the plant issue scheme and also big hardware stores. Bunnings are going to take neonics out of their plants by 2020. But many of the nurseries still do not know what we are talking about. The education is so crucial, and minute amounts of these pesticides really affect not only bees but also the water, the soil and other wildlife.

THE CHAIR: You have mentioned one pesticide that has been taken out. Are there any other pesticides that you think should be considered for removal?

Ms Armstrong: Yes, sorry—

THE CHAIR: You can take that one on notice.

Ms Armstrong: I cannot tell you off the top of my head. But there is one that is particularly toxic and it is not seen as a neonicotinoid. With the neonicotinoids, there is imidacloprid, acetamiprid—there are about seven different names. Basically, they are a class of pesticides that have been completely banned in France. Four out of seven have been banned in the European Union. There is reams of information about that.

THE CHAIR: Just to clarify, the ACT government has moved on those, but you are saying it would be good if people within the community and other organisations could also act on them?

Ms Armstrong: Yes, and actually if the ACT government could publicise that it has moved on them.

THE CHAIR: Can you clarify this for me? When we talk about pollinators for plants; there are native bees and there are non-native bees. Should we be looking at particular plantings to support different types of bee populations?

Ms Armstrong: Basically, there are a range of plants. When you go to the botanic gardens, there are so many native plants. There are at least 65 different species of native bees there. It is just extraordinary. The honey bee is one species but these are 65 of 1,200 different native bees known in Australia. I could say preferably the native plants because that is what is here. But there are herbs—the blue banded bees love the salvia here and they love the rosemary and lavender. Many of the herbs are medicinal for bees as well. So it is not exclusively native plants. That is in the list—basically, the MIS 25 list. When we say bees, we mean native bees and honey bees.

THE CHAIR: From your recollection of the MIS 25 list that you reviewed, how many of the plantings on there were appropriate as pollinators, as in supporting bees?

Ms Armstrong: Most of them. What is happening is that it is under review, and it has been under review because it needs climate tolerant plants as well. The thing is to have this information in that list and to say to developers, "Use it, and plan for flowering throughout the year," because that is what is needed.

THE CHAIR: Flowering throughout the year is one consideration. Is it also a case of having a mix of plantings and not becoming too reliant on one type because they support different bees?

Ms Armstrong: Definitely, yes. You are looking for shade, in terms of climate resilience. You are also looking for food. When you look at some of the new developments, there is just not enough there. Particularly when we are looking at new housing that is all house and no garden, it really means that the biodiversity is reliant on the street trees. Of course, there is public education, too. Even people in apartments can have a few herbs on their balcony, and that is a snack. It is a snack on the way to somewhere else.

THE CHAIR: It always begs the question: how do bees feel about coriander? You do not have to answer that one. It has been put forward by the Australian Institute of Landscape Architects that a detailed landscape strategy should be prepared for the

ACT. Is this something that you would support? How would you see it helping the bee population, if you do support it?

Ms Armstrong: Detailed landscaping?

THE CHAIR: Yes, they said a landscape strategy and a landscape plan. I think the two words get used a bit interchangeably. Essentially, it is about having something that directs how the public landscape will be implemented in Canberra.

Ms Armstrong: I think that sounds like a good idea but it would obviously depend on the details.

THE CHAIR: The devil is in the detail, yes. From your perspective, as someone who advocates on behalf of bees, what would you like to see considered as part of a strategy?

Ms Armstrong: It is about making sure that there is food for pollinators and making sure that those plants do not contain pesticides that are toxic. Basically, stop planting the elm trees because they need systemic pesticides to keep them going. They actually need three injections of neonicotinoids. There is an alternative, which is diatomaceous earth. It has been trialled by the federal government. It is not toxic and it feeds the tree as well, but it does need applications every year.

The systemic pesticide is very easy to use; it lasts for years and years, but it is toxic to everything that goes near it. It is about changing the way we work with the landscape and seeing that having healthy landscapes is really important for humans as well. That is what I wanted to include in my opening address—that nature has a very positive effect on us, and how important it is for children from nought to 10 to be close to nature. The psychiatric health effects that have been found in this huge study of 900,000 people over 30 years are quite profound.

THE CHAIR: You have put the references in there; that is quite useful.

MR MILLIGAN: With the additional research into what can be used to replace the neonicotinoids, should that be commissioned by the government, to find out what could be used as a replacement?

Ms Armstrong: That sounds like a very good idea. Basically, the ACT government is using alternatives. You already have alternatives in place. Bunnings has far fewer toxic products in place, and you do not need the big guns to kill the aphids. It is really about looking at how we can create biodiversity. When you have small birds there, they take care of big insect populations that are not positive. It is about encouraging all the animals to live together, including us.

MR MILLIGAN: There are adequate replacements out there to be used?

Ms Armstrong: As far as I know. The difficulty, which I have not gone into, is the weed problem. What do you use instead of glyphosate? We are not going to go there because it is a herbicide; it is not directly for insects but it is obviously being used in very large quantities around the place.

THE CHAIR: On behalf of the committee, I would like to thank you, Ms Armstrong, for appearing today. When available, a copy of the proof transcript will be forwarded to you, to provide an opportunity for you to check the transcript and identify any errors in transcription. We did ask you to provide a little bit more information on notice, on pesticides.

Ms Armstrong: Do you mean earlier today?

THE CHAIR: Yes, earlier in the day.

Ms Armstrong: Fipronil.

THE CHAIR: Does that mean the question has been answered?

Ms Armstrong: Yes. I think there was another one that I saw today.

THE CHAIR: Okay. If you are aware of any particular pesticides that are in use that you would like to bring to the committee's attention as ones to consider as alternatives, please let the committee secretary know. Thank you once again for coming in today.

ROBERTSON, MR GEOFFREY JOHN, President, Friends of Grasslands

THE CHAIR: We will now move to the second witness appearing today, Geoff Robertson from Friends of Grasslands. On behalf of the committee, thank you for appearing today and for your written submission to the inquiry. Can I remind you of the protections and obligations afforded by parliamentary privilege and draw your attention to the pink-coloured privilege statement before you on the table. There is one just in front of you and one to your left.

Mr Robertson: Right.

THE CHAIR: If you can just take a moment to read that.

Mr Robertson: Yes. I have read the other statements. I assume that is the same.

THE CHAIR: I do not believe it has changed. Would you mind just confirming for the record that you understand the privilege implications of the statement?

Mr Robertson: Yes.

THE CHAIR: Can I also remind you that proceedings are being recorded by Hansard for transcription purposes. Thank you for providing your opening statement in advance of this hearing. Due to the brief time we have with each witness today we will go straight to questions, but we have had a chance to review that opening statement.

MISS C BURCH: In your submission you talk about the need for further tourism initiatives to help promote the ACT's assets and natural environment to visitors. Are there any particular tourism initiatives you would like to see rolled out?

Mr Robertson: I would like to congratulate the committee on this inquiry, because I think it is very important. I mentioned one. When I look at tourist literature put out in the ACT it seems to be very much devoid of anything on biodiversity. We have a fantastic network of grasslands and woodlands and other places throughout Canberra, and I think a little bit of investment in promoting tours of those places would be highly appropriate.

MISS C BURCH: There is nothing else beyond that that you would like to see?

Mr Robertson: There are a whole lot of things around signage when people go to these sorts of places. It really needs a group of people to get together—it would not cost very much—just to nut out what sites, what information is provided to people and where that is promoted.

MR MILLIGAN: Tours to local grasslands and so forth?

Mr Robertson: Yes.

MR MILLIGAN: Is there adequate access to these grasslands in the current state, do

you think?

Mr Robertson: Some of the grasslands are not well designed for community access. That would be another matter that would need to be considered if a selection of sites were chosen. Another thing I mentioned there was that there would have to be proper access for people and perhaps some pathways and things like that.

THE CHAIR: In your submission you noted the north Mitchell grassland reserve and how this serves as a good example of environment protection in urban areas. How could that grassland be better realised and made accessible to the community?

Mr Robertson: At the moment it is essentially closed off. It is an 11-hectare site surrounded by medium density housing on three sides. We have been working on a submission to turn that into what we think of as conservation and recreation. It could also be used for scientific inquiry and education. That could be done. The paramount importance of that is to keep intact the high biodiversity values that are there.

For a long time this site has been neglected. It would need weeding. There are mown strips inside for fire protection and they could be readily earmarked for walks and things like that. Longer term we would propose some sort of design of the whole thing, with marked pathways. Initially you would not get huge numbers, but in time if you did you might have to upgrade some of those sorts of things.

In our submission we have got lots of different ideas for increasing the biodiversity—getting more insect activity, small bird activity into there—but you can also have some passive play equipment for children, possibly barbecues, demonstration gardens about traditional plants that were used by Aboriginal people and things we call seed orchards, all with the aim of educating people about our biodiversity. They are some of the things in that.

MR MILLIGAN: What would you have to introduce into that particular area to add more activity, in a sense? Would you introduce more species?

Mr Robertson: You could do that as well. When we talk about natural temperate grasslands, they are very poor remnants of what once existed in that area. Again, we would have to proceed with some care. Back when I got involved in grassland conservation, they were sacred things that you did not disturb. Now we have a much more interventionist sort of policy, but you would want to make sure that you did not destroy any plant communities or threatened species of animals. Whatever we do, we have to work around that.

But, having said that, we could introduce a lot more plants. I have got some radical ideas about throwing kangaroo carcasses in there, for example, to encourage birds and the breakdown of those animals, which will include a lot more biota, maybe introducing some soils with a rich mix of biota. There are a whole lot of ideas, all of which have been tried elsewhere.

THE CHAIR: Is it fair to say that—correct me if my understanding is wrong—in theory it is moving away from this idea of preserving it by locking it away to preserving it by actively managing it?

Mr Robertson: Yes, that is very much the theme.

THE CHAIR: For the record, because I was just having a flick through and I could not quite see if we have it here, with the temperate grasslands my understanding is that there is about one per cent left for the majority of Canberra.

Mr Robertson: It is more than that in Canberra.

THE CHAIR: Can you confirm the statistics?

Mr Robertson: The statistics are guesses. South-eastern Australia used to have about 11 per cent natural temperate grassland. Of that, one per cent, maybe a little bit more, survives. In the ACT it is running at around seven per cent of what was originally here.

THE CHAIR: So we have a significant amount of what is left?

Mr Robertson: Yes. Through the broader region of the Monaro there is reasonable cover, but some places have just been turned into wheat farms.

THE CHAIR: So it is fair to say that we have a unique opportunity here?

Mr Robertson: Yes. We talk about Canberra being the bush capital; I would like to talk about it being the grassland capital. That would have a very potent tourism message.

THE CHAIR: What do you mean by that?

Mr Robertson: Obviously it is a slogan, but the message around that is that large parts of south-east Australia were once natural grasslands, which a lot of people do not even contemplate. They were very rich in their biodiversity, and Canberra is the only capital city which retains a large proportion of that. Melbourne could also lay some claim to that because it has a network, but relative to the size of the city they are much smaller and they are certainly not as extensive as what we have in the ACT.

THE CHAIR: So there is quite an opportunity there for us?

Mr Robertson: Yes, and if you could extend that to the grasslands and woodlands capital, because they are both significant. One of the interesting things about Canberra is that because of the way it has developed it retains larger areas of grasslands and grassy woodlands. This is the only place where you have grassland and the earless dragon, apart from areas around Cooma and Nimmitabel. We have striped legless lizards in high proportions. We have the golden sun moth. While they exist elsewhere they are not in high numbers, so that makes Canberra special in that regard as well.

MR MILLIGAN: I am interested to know the economic benefit investing in grasslands will bring to the territory. You mentioned tourism and research and development. Can you elaborate on what advantage we can get by investing in our grasslands?

Mr Robertson: If you look at it more broadly than tourism, this is a natural asset that people can enjoy and learn from. People talk about the spiritual benefits of an affinity with nature. Just getting that feel about nature would have a fantastic impact on the whole population. That is the experience we have—when people start to learn about these things a whole new world opens up to them. If you start to learn something about art or wine, the more you learn the more you appreciate. So there are a lot of benefits there. I am an economist but it would be a bit hard to quantify those things.

From a tourist point of view a lot of people go to places to observe nature. If Canberra promoted itself as the grassland and grassy woodland capital we would get a lot of interest. The Friends of Grasslands have had a number of forums, in partnership with other people, and they attract people from interstate and attract the press. Last year I was talking to people about the wildflowers in Canberra.

It is also not just who comes in but who stays here. When I first came to Canberra I was involved with the native plant people but never saw anything in Canberra; they went to the coast or, better still, Western Australia. I think we have got stuff that can compete with those things. When you look at economics, it is what you keep here and then what things you attract in.

MR MILLIGAN: What links could universities or other institutions have with grasslands? Can they have courses?

Mr Robertson: They already have a lot of links. The Fenner School at the ANU is doing a lot of research around nature, grasslands and various reptile and bird species; the same with the University of Canberra and several other universities. The name of the one managing St Mark's grassland escapes me.

THE CHAIR: Is that the Catholic university?

Mr Robertson: No, it is not. I can supply the name when it comes back to my memory. A lot of networks and partnerships are already occurring and a lot of study is going on. We get new insights from that study all the time and that attracts a lot of students. A lot of students who want to learn about biodiversity come to Canberra.

THE CHAIR: You suggest in your submission that the ACT should consider developing a conservation strategy to protect its grasslands. Can you elaborate on the benefits of that to what you would see as being incorporated into that strategy?

Mr Robertson: There is a strategy, and when the first strategy came out we were somewhat critical that it underplayed the importance of grassland and the research findings. The ACT government is doing a pretty good job in its management of grasslands, but a bit more resource, a bit more vision and a bit more promotion of what it is doing would be good.

THE CHAIR: The Australian Institute of Landscape Architects has recommended that a detailed landscape strategy be prepared for the whole region. Would you see grasslands as being something to incorporate in that?

Mr Robertson: Yes, definitely.

MISS C BURCH: You were talking about partnerships with universities and also a bit about public education. What about schools? Do you think there would be the opportunity to expand partnerships or educational programs with schools in Canberra?

Mr Robertson: Yes, definitely. There are a number of restrictions in schools because of OH&S. A lot of impediments are put in the way, and education areas in government should pay more attention to having access to these areas. There are only so many things a group like ours can do. I was at a school earlier this week talking about snakes, for example. All those things are important and this is why we need to have more imagination and more vision. This committee can make some pretty good recommendations about some of these things.

THE CHAIR: On behalf of the committee, thank you for appearing today on behalf of Friends of Grasslands. When available, a proof transcript will be forwarded to you to provide an opportunity to check it. Thank you for appearing.

BLEMINGS, MS ROSEMARY, President, Field Naturalists Association of Canberra

THE CHAIR: On behalf of the committee, thank you for appearing today and for the association's written submission to the inquiry. I remind you of the protections and obligations afforded by parliamentary privilege and draw your attention to the pink-coloured privilege statement before you on the table. Can you confirm for the record that you understand the privilege implications of the statement?

Ms Blemings: Yes, I do.

THE CHAIR: As our time with each witness is quite limited today, we invited any opening statements to be submitted in writing in advance of the hearing. If you have brought a statement with you, I invite you to table it now by handing it to the secretary.

Ms Blemings: I do not think it is in a fit state to table.

THE CHAIR: The Field Naturalists Association submission calls for greater conservation and biodiversity in the ACT. In your opinion, how could this be achieved?

Ms Blemings: By listening to a lot of the other submissions.

MISS C BURCH: What kinds of additional government resources do you think are required in order to achieve that?

Ms Blemings: A great deal more consistent, long-term funding for the nature reserves and for the upkeep of urban open spaces, all the green areas and even natural areas. The funding seems to be rather hit and miss and a lot of it is subject to grants, which is very inefficient. People with ecological training seem to spend a lot of time pen-pushing rather than actually being out helping people in the reserves, the volunteers and so on.

THE CHAIR: The Australian Institute of Landscape Architects recommended that a detailed landscape strategy or plan be developed. If there were such an overarching document, do you think it would help with some of these issues you have just raised, in the sense of looking at the work that is being done and having a priority list to invest in?

Ms Blemings: Is it not time that we accept the nature that still exists, accept what we have here, rather than trying to impose other ideas onto what is already there? It has come from the landscape architects. Some of the work I have seen is not very convincing and it certainly does not necessarily replace the natural species that would be or are in our area.

THE CHAIR: If such a plan were taken forward—I have asked this question of quite a few people to get different perspectives, and most have said it is good idea—would it be right to assume that you would want to see any plan focusing on the natural

environment and what is already here?

Ms Blemings: In my experience as a volunteer land carer and in keeping an eye on what is happening, there are a great number of strategies, action plans, reports and surveys done but they tend to end up on a shelf. They do not necessarily get into the implementation phase or, if they do, they do not necessarily last the duration of habitats' life cycles and lifetimes. That sounds a bit negative. It is all very well to have these plans but we need to draw all of our inspiration and possibly our actions from what is already out there. There is so much data now being assembled, produced and recorded by citizen scientists. That seems to me to be where the inspiration and the initiatives should come from: knowing what is there and working from that rather than imposing something else, perhaps.

THE CHAIR: When you say "seeing what is there and working from that", I am not sure I quite follow what you are saying. Could you elaborate on what you mean by that and perhaps provide an example so that I can better understand?

Ms Blemings: Many of the government's own scientists have spent many years sending in material and surveying the open areas and the different habitats. That is the material that should inform any strategies for change or any maintenance strategies. I do not know if that answers the question.

THE CHAIR: It is still not quite clear in my mind, but that is fine. I might just think about it while someone else asks a question.

MISS C BURCH: You note in your submission:

> … attention needs to be paid to the significant effects of suburban heat islands, stormwater management, pollution, loss of urban trees on natural resilience …

What other initiatives would you like to see to help improve natural resilience in the ACT?

Ms Blemings: I do not know that it is something the field naturalists would necessarily be able to comment on, because it is all very technical. Although we have a broad range of interests among the members, I am not one of the people who would probably be able to answer that.

One of the things I am most interested in, and it builds a bit on what Geoff just said, is the education factor. One thing that we could really spend money on, to great advantage, is making sure that everyday people, people out in the suburbs, actually realise that they are surrounded by nature, the benefits of being surrounded by nature and the fact that it is there and that they can learn from it, enjoy it, get a great sense of wellbeing and improve their own health from the vibes from nature, and keep their curiosity and sense of observation going. That would be our main ask.

We do not necessarily need big events. They have their place and so do places like Mulligans Flat and Jerrabomberra. They have fabulous resources, but for a lot of people they are totally inaccessible. They cannot get there by car; they cannot get the transport. So we can turn things around a bit and say, "Nature is all around you." The

field naturalists and many other groups around Canberra have produced brochures, but they also run guided walks. If there is a piece of open space near people's homes then they can interpret that for the locals and explain what is there, the interconnectedness, all the different habitats and how all the different organisms, including people, can benefit from being close to those areas. Once you get people who appreciate nature then they are more likely to jump up and down when there are threats or the need to protect it.

MR MILLIGAN: Educating the public on our reserves, wetlands and grasslands in the ACT, on what we have here, is important and hopefully would drive further interest from the public in getting involved. There would have to be significant investment, you would think, in access to these reserves for people to go and experience them. Does that cause an issue with over-usage?

Ms Blemings: Yes.

MR MILLIGAN: How would you manage population, then? How would you manage people accessing it, and who would be responsible for that? Would you need to open up more reserves, more grasslands, for people to access if you ran a heavy education program and got people interested?

Ms Blemings: That is a very difficult and fine line to try to tread. In a lot of cases our special places, even the national ones, are being loved to death. They have far too many visitors, and that is a problem. This is partly the reason to think that nature begins at home; you do not need to go to these special places necessarily to learn from and appreciate them. The other thing is to turn the whole education system around so that a great deal more education, many of the aspects of the curriculum, can be done through open-air outdoor classrooms. That is using the reserves, using the open spaces, but doing so in a respectful manner.

As you do that then you teach people about why you do not turn rocks over and take lizards from underneath or, if you do look to see what is under a rock, then you put it back exactly as it was because there will be ant colonies and hundreds of other invertebrates in the area. It is: "Do not disturb. Do not take away anything other than photographs and memories from our open spaces." Bush etiquette is a thing that is very important in the management of these reserves. People do not always understand that they do not have a right to trash it, throw litter in it, ride their motorbikes through it and that sort of thing.

THE CHAIR: We will conclude there. On behalf of the committee, thank you for appearing today. When available, a proof transcript will be forwarded to you, to provide an opportunity to check it and identify any errors.

BRANNAN, MR JOHN BERNARD, Coordinator, Friends of the Pinnacle

THE CHAIR: On behalf of the committee, thank you for appearing today and for your written submission to the inquiry. I remind you of the protections and obligations afforded by parliamentary privilege and draw your attention to the pink-coloured privilege statement before you on the table. Can you confirm for the record that you understand the privilege implications of the statement?

Mr Brannan: Yes, I understand.

THE CHAIR: As our time is limited today, we invited any opening statements to be submitted in writing before the hearing. If you brought a statement with you today, I invite you to table it now by handing it to the secretary. No? As there is no opening statement, we will move straight to questions.

MISS C BURCH: Mr Brannan, in your submission you describe that reserves are becoming refuges for declining and threatened flora and fauna species. What government measures would you like to see introduced to help reduce the decline of these species?

Mr Brannan: Government measures? I think that task is largely, in practical terms, being carried out by "friends of" groups like ours. The resources available from the government to take on that sort of work are pretty much limited to the ParkCare rangers, the PCS rangers, and to the people from CPR, the conservation and protection area of the government.

One thing we would very much like to see is better resourcing of the ACT government PCS rangers, particularly to relieve them of some of the duties that take them away from their core jobs. They spend an awful lot of time dealing with wildlife and helping with fire management. These are often exceedingly well-qualified people, and it is a bit of a waste of their time to have them dragged away from what they should be doing to go off and deal with problems with dogs off leash or kangaroos that have been hit by cars.

It would be really nice to see a group or an arm of government set up specifically to deal with wildlife management so that the rangers are then free to focus on their core jobs, which would be protecting the natural and ecological values of the reserves or helping us to do that, helping the ParkCare groups to do that. I cannot off the top of my head think of anything else.

THE CHAIR: A theme emerging is the importance of environmental education. How can we better encourage environmental education?

Mr Brannan: Earlier I was watching the submission made by Maxine Cooper and the catchment group representatives. It came up there that it was about getting schools involved. I think that is where you have to start. At the Pinnacle we have had contact with local primary schools and with Belconnen High School and we have taken groups of students up there. The high school had a class that was involved in ecological studies, and we assisted them with that. Getting small groups of kids up

into the reserve is a bit more problematic. It is labour intensive, I suppose, from the schools' point of view. Having a program that would facilitate schools getting kids up into the reserves and using them as an educational resource was, I think, in my submission. I think the reserves are under-utilised in that way. That is a fairly non-invasive way of getting kids involved and spreading the word to the community more broadly, because kids go home and talk to their parents, so the word gets out that way. That would be one. I do not know if you would have to include that in the curriculum or just encourage teachers to get involved, because it always has to be through the teachers that we work.

THE CHAIR: I know that within my electorate up in Evatt there is a Junior Landcare group. Are there any opportunities outside the schools—I am just thinking of that as an example—that you could see, potentially, for continuing to spread the word?

Mr Brannan: There are others. Junior Landcare obviously is something that should be encouraged. But things like scout groups and other youth groups could be other avenues. We have had scout groups come up to the reserves. I suppose another way could be facilitating contact between the catchment groups or having the rangers themselves involved in that sort of work—having them go round to schools or youth organisations to talk about the reserves or about the natural values that the reserves offer.

THE CHAIR: You say in your submission that it is crucial to strike the correct balance between social amenity and the environmental values offered by those reserves. Is there anything that you could elaborate on in that statement to give us a clear idea of where we can draw that line and get that balance?

Mr Brannan: It is difficult to give a blanket answer to that. As Rosemary was saying, it is a very fine line you tread between public amenity and conservation. Obviously, particularly with the Canberra nature park reserves, the primary purpose is conservation, so any incursion by people is arguably negative. But obviously there has to be some. It simply has to be channelled correctly. People have to be made to understand that it is not okay to take stuff out of the reserves. It is not okay to go down and cut down a dead tree and use it for firewood, which has happened. It is not okay for BMX bikers to go in there and dig their own bike paths through the bush.

Depending on the reserve—and some reserves are more sensitive than others, and some areas of a given reserve are more sensitive than others—it has to be a slightly more nuanced approach; you cannot just give a blanket answer. Reserves like Bruce Ridge have been given over entirely to the bicycle riders, and that is fine. But other reserves need more careful protection. In some cases it may mean going in and hardening certain areas, like at Mount Ainslie, where the path to the top has been hardened. In other reserves maybe it means closing some areas off. I think it is the sort of decision that has to be made in consultation with the local ParkCare group if there is one, people who know the reserve, and the rangers who have managed the land in the case of the Canberra Nature Park. It is hard to give a one-off answer to that question.

MR MILLIGAN: How do you identify reserves for different activities, like biking, hiking or tracking or whether you just go there and observe and walk through a posted

area, a walk track? What sorts of areas do you look at to identify, "This would be suitable for a bike track or recreational activities, and this area's only really good for observing"?

Mr Brannan: The ACT government, through parks and conservation, is running its landscape assessment program at the moment, which I think is finished now or is close to being finished. Jasmine Foxlee is running that. They have fairly good criteria for determining the suitability of a given area for certain different purposes. It comes down to the quality of the vegetation, essentially, particularly the ground cover species. If the ground cover is largely native and sufficiently diverse then everything else will pretty much follow from that. If you have got the right flora you will get the right fauna.

It is a question really of saying, "Does this particular patch tick the boxes for, say, EPBC grassy box woodland? Is it dry sclerophyll woodland? How sensitive is it? Are there orchids in here? Is this grass just introduced pasture grasses? Is it just clapped-out sheep paddock, as some people call our reserve, or is it genuine natural temperate grassland that needs to be preserved?" It is not that hard, I think. It is a learning process for all of us, but I have learned a lot about how to identify what is worth keeping, what is worth protecting and what needs to be remediated. It takes time and it takes getting your eye in. I do not have a background in botany or any of this. I am a translator; I am a linguist. I have come late to this but I have learned a lot in the past 10 years.

THE CHAIR: A lot of the discussion we have had with you has been focused on the Canberra Nature Park and the reserves area.

Mr Brannan: My focus is there.

THE CHAIR: That is fine; I am not begrudging you that. What I am interested in, though, is the other side to the story, which is the more urban environment within the city. Do you have any observations or comments you would like to make, particularly on how the interface between the two can be managed or if there are any considerations to—

Mr Brannan: I am so glad you asked me that question. Our group is a member of the Ginninderra Catchment Group, so I hear a lot from the urban landcare groups, the urban reserves, and I live next to an urban park. The thing that dismays me most—and I am sure you have heard this already—is the advance of African lovegrass through just about every bit of open grassland in the ACT. Particularly where what is called TCCS land or TCCS territory adjoins a reserve, particularly anything that has any real ecological value, the current management regime is not working. The mowers come in and they just spread the African lovegrass seed around. They are a clear vector for a lot of the advance of African lovegrass into other reserves. For us and for anybody who is trying to maintain the ecological values of a reserve, keeping lovegrass out—

THE CHAIR: Because it just takes off and goes.

Mr Brannan: Yes.

MR MILLIGAN: It is quite difficult to identify, though, particularly for anyone who has not been trained or educated in that area.

Mr Brannan: It takes people a while to get their eye in. But, again, I have learned to identify it and I have no botanical background. It is not that hard. And when it has all of its seed heads sitting on it is very distinctive; it is very clear to see. I would really like to see a proper strategy. It is a genie and a bottle sort of situation: it is too late to get rid of it. But it could be limited. The existing reserves could be protected by having areas around them which are currently managed by TCCS redesignated and managed in a more sensitive way, in a more considered way that actually protects—

THE CHAIR: You have identified the mowing, which we have had raised with us previously. I cannot quite remember if it was in this inquiry. Are there any other practices that you can identify apart from the mowing, or is the mowing the key?

Mr Brannan: It comes down to vehicle hygiene. Mowers are not the only vehicles that move from infected to uninfected areas.

THE CHAIR: So it is also cleaning tyres and—

Mr Brannan: It all comes down to vehicle hygiene, ultimately. Any strategy has to involve both. It has to have vehicle hygiene and spraying, to spray out all the grass. And the spraying has to be continued for at least two or three years consistently, several times a year, because otherwise it is just not going to get rid of it. It requires a determined strategy, and I am not seeing any signs that the ACT government is adopting that so far. I would very much like to see that happen. It is not unstoppable. It can be stopped. But it is not being stopped.

THE CHAIR: It is just one of these weeds that takes a big effort to—

Mr Brannan: Yes. It requires significant resources.

THE CHAIR: I know that the ACT government has put more into African lovegrass, but I take the point that it is a big task. Unfortunately, on that note, our time has come to a conclusion. On behalf of the committee I thank you for appearing today on behalf of Friends of The Pinnacle. When it is available, a proof transcript will be forwarded to you to provide an opportunity to check the transcript and identify any errors in the transcription.

MS EDWINA ROBINSON, Executive Officer, SEE-Change

THE CHAIR: On behalf of the committee, thank you for appearing today and for your written submission to the inquiry. I remind you of the protections and obligations afforded by parliamentary privilege and draw your attention to the pink-coloured privilege statement before you on the table. Can you confirm for the record that you understand the privilege implications of the statement?

Ms Robinson: Yes, I do.

THE CHAIR: Thank you for providing your opening statement in advance of this hearing. We will go straight to questions. Your submission mentions that there is a lack of innovation when it comes to city landscape plans. What kinds of innovations would you suggest the ACT government consider when planning for the future?

Ms Robinson: In terms of lack of innovation, when they are designing spaces they are very much looking at very easy to maintain spaces, but they lack structural diversity or any level of excitement whatsoever. There is also a lack of infrastructure like green walls, green roofs and that sort of thing, which I think the government—

THE CHAIR: So we are talking very much about the urban environment?

Ms Robinson: That is my focus in this presentation, yes.

THE CHAIR: Sorry to cut you off. Is there anything you wanted to add?

Ms Robinson: Not really. It is just that it is pretty much mature trees and a few shrubs but very few other structural layers at all.

THE CHAIR: What is the reasoning for wanting to see that change? What are the outcomes you are trying to promote?

Ms Robinson: There are multiple outcomes. If you can have a range of structural categories, you are much more likely to be able to provide habitat for native species. But also we need to be thinking about creating delight for people and cooling our outdoor spaces. At the moment we are falling short of that, particularly with our bike paths. We really need to be thinking about installing shade trees as well as water really quickly along those places if we are going to be coping with events like we have just had over summer.

THE CHAIR: You mean the extreme heat?

Ms Robinson: Yes, record-breaking heat.

THE CHAIR: We all had to live through that, yes.

MISS C BURCH: In your submission you describe the process of obtaining approvals to plant native grasses as being a "bureaucratic minefield". What changes would you like to see in that space to make it—

Ms Robinson: My suggestion is a greatly simplified process. I draw your attention to the City of Bayswater Council in Perth, which has streamlined the process if you want to plant edibles in public spaces. I am suggesting that we look at that not only for edibles but also for locally occurring native plants that might provide habitat. But we really need a facilitator to facilitate between the community groups. If that role for approvals stays within city services, I think that that is going to be really necessary.

THE CHAIR: I have put a question to everyone, because I think it is an interesting proposition, about the landscape plan that the Institute of Landscape Architects has put forward. On the whole, most people have been receptive but the main question that has come up is: what would that include? From your perspective on some of the issues you have raised, do you think that, particularly in the urban areas of the environment, a landscape plan would be helpful in starting to address some of these issues and providing guidance?

Ms Robinson: Maybe it would to a certain extent as an overarching document. But I work with community groups, and a community group may come up with an idea that perhaps somebody who is a planner or a landscape architect has not thought of, because they are the people who are living in or visiting those spaces. So I think we cannot be too rigid. There has to be a degree of flexibility introduced into what we allow people to do.

THE CHAIR: My understanding—correct me if I am wrong—is that you would be open to this idea of a landscape plan but you would like to see enough room in there for the community to still have a bit of agency over the area and to record their ideas.

Ms Robinson: Yes, correct.

THE CHAIR: Can you provide a bit more information on the birdscape in Canberra project and what that involves? I believe that that is the project that had the reference to the bureaucratic nightmare—

Ms Robinson: That is correct. In 2017 we were successful in obtaining an ACT environment grant of $43,000 to plant a range of structural categories of locally occurring native plants. The idea was that we were going to plant them along a part of Sullivans Creek near O'Connor and that that would be the first—

THE CHAIR: Are these the ones just down from the Polo, where—

Ms Robinson: Yes.

THE CHAIR: Okay, I know the ones you are talking about.

Ms Robinson: It would be the first stage of a habitat planting. That was the idea. The idea was also to attract pollinators. Then we had a flood in February 2018 and then the minefield escalated, so it took us seven months to get approval for a permit to use the space. We ended up having to go back to the drawing board and there were multiple objections raised.

THE CHAIR: Can you elaborate? There were objections from different agencies?

Ms Robinson: No. I think it is a problem partly with the way the environment grants are done. You get an in-principle approval from city services prior to submitting the grant but nothing is resolved. The environment and planning directorate give you the grant but then it is hands off in terms of liaising with city services and actually getting something done. So there is no one person who is an advocate who will really push forward and help you.

One of the documents we had to fill in was 17 pages and was much more appropriate to a contractor doing landscape works on the site. We were bringing in some vehicles from Greening Australia to dig holes, and then the community were coming separately to plant plants. But we had to have traffic management plans. It seemed incredibly over the top. I know that is about the risk, but the interesting thing with the City of Bayswater Council is that staff argued that planting in public was actually a recreational activity, not volunteering for the government, and therefore did not need to be covered by insurances. So much of what happens in the ACT is around that insurance risk.

THE CHAIR: Would it be right, then, from what you have just said, that it would be fair to characterise the issues with bureaucracy as essentially a community group being put into a process that a standard contractor or a landscaper would follow?

Ms Robinson: Exactly.

THE CHAIR: So that process might be completely appropriate for what it is for, but not for a community one?

Ms Robinson: Yes, I think that is fair to say. And I think that there needs to be one representative from government who is your go-to person. That is not to say that there were not people who were helpful, because there were. But you had to deal with multiple emails and multiple sections of the directorate, so not only the people from the stormwater area but also the people who were looking after the mowing contracts, the people in the trees unit and all the different units within city services, not that stormwater is within city services, I think.

THE CHAIR: I think it is in a slightly different area. So you had the in-principle approval, but then it was having to work through to get the actual approvals that—

Ms Robinson: It was also because we had a flood and that raised multiple issues. They were very concerned that a flood would pick up mulch and move the mulch downstream, but at the same time were okay that the playground was mulched nearby and that it had been affected by the flood. So there was one set of rules for playgrounds and one set of rules for us as a community group.

THE CHAIR: But it was all the unknown and it kind of got—

Ms Robinson: But also, too, design issues around mowing radiuses, spade edge, having to maintain the space for two years post implementation—

THE CHAIR: So you have done something outside the box and—

Ms Robinson: But it is planting.

THE CHAIR: I know.

MR MILLIGAN: Exactly—a bureaucratic process.

THE CHAIR: But it is outside the box.

Ms Robinson: But it should not have been so difficult.

MR MILLIGAN: It is a bit of hindrance, is it not?

Ms Robinson: Absolutely. I am actually someone who had worked in the government for five or six years on urban wetland projects, so I thought, "I'm going to be able to do this easily." I was so frustrated and my colleague was so frustrated.

THE CHAIR: And it was primarily with the city services directorate?

Ms Robinson: Yes. Sorry, city services.

THE CHAIR: In your submission and also in your opening statement you put forward the Biophilic Cities program. Can I get you to expand on this and the potential you see there for the ACT?

Ms Robinson: Certainly. I came across the Biophilic Cities network last year. At the moment there are 16 partner cities. Biophilia refers to nature: how do we embed nature into design and nature into buildings? There are 16 partner cities, as I mentioned. Fremantle is the only Australian city that has joined up. There are also Wellington in New Zealand, Portland and a whole lot of other cities. I have spoken to the person who initiated the network. The idea is that we can collaborate with other cities to come up with the best examples of solutions to the multiple problems we are facing. We can roll in climate change, obesity and mental health issues. If we create great outdoor spaces with nature, we are part of the way to helping solve a whole lot of those problems. But there has to be a really strong commitment to do that. I know that we have the living infrastructure paper. My concern is that the wheels of the ACT government move so slowly. When are we going to see the actions starting to address all these issues around living infrastructure? It might help to mobilise us if we join the Biophilic Cities network.

THE CHAIR: SEE-Change is an interesting proposition, because it is quite a community-driven group and it does a lot of work. One thing that has come up as a recurring theme in submissions and in the hearings has been how the community can be better enabled to enliven the nature within our city and look after it. From your own experience, are there any learnings or insights you can provide to the committee on that?

Ms Robinson: About community?

THE CHAIR: Yes, and about how community can be better enabled to get in and actually do things with nature in our city.

Ms Robinson: I can address an example I have experienced with community and community connection through the Banksia Street, O'Connor wetlands. I was involved in the project management, community engagement and actually planting all the plants for that wetland. We formed a wetland carer group that was active for a number of years. There was a great sense of community and of ownership and stewardship of those places. It did not exactly follow the strict rules of territory and municipal services, partly because the community planted it. But I think the outcome is that you get a less sanitised and a more exciting space.

We had a lapse in that area being looked after, but some members from that community group have gotten back together and have re-instigated it. One of them is David Pope, the *Canberra Times* cartoonist. They are involved in working bees at that place again, for example, with our birdscape in Canberra working bee. We are having a working bee on Thursday night at 5.30. We are doing speed weeding. They are all opportunities for people to not only engage with nature but also engage with one another and become more connected with our communities.

THE CHAIR: An interesting element of that, which I think you have touched on, is that it does go through cycles where people will be quite engaged and then not.

Ms Robinson: Absolutely.

THE CHAIR: One of the things we hear all the time is about supporting groups and keeping them going. Is there anything you can suggest, from your own experience, as to how you can continue to keep the enthusiasm there for a project that is happening?

Ms Robinson: Yes. One of the workshops we ran last year was with a guy called Les Robinson. He is no relation to me. He runs a workshop called Passion Mashin', or Changeology. He has a website. It is about "How do you engage with volunteers? How do you make it interesting? How do you make it sexy?" We are competing in Canberra with a whole lot of other events and organisations. So not only do you have to put on sausages but also you have to go out there and do different things. We have tried yarn-bombing. We have a young woman who has just started working with us, Maddie Diamond, who is the founder of Trash Mob. It is about engaging people in different ways and enticing them in different ways. But you have to be reasonably dynamic, too, to get people to want to come along and give up their precious time to work with you.

MISS C BURCH: In relation to the community essentially doing a better job of leading these things than the government, what would you like to see in terms of government programs or government support to support community?

Ms Robinson: I think it is great that the government has the environment grants, as well as the community garden grants. That is a great starting point. It would be really great to have better representatives or advocacy within government to support the community: one person you can go to in one directorate who will actually support you. As I mentioned earlier, I think it is really important that if we are going to set up a

more streamlined process we need an independent facilitator to help us negotiate that. I do not want to speak for Lyneham Commons but I know it took them two years to get the ability to use their space.

THE CHAIR: On that note, we have to wrap up at the mention of Lyneham Commons, because I think we are starting to go into their time. Thank you very much for appearing today on behalf of SEE-Change, and thank you for your submission. When it is available, a proof transcript will be forwarded to you to provide an opportunity to check the transcript and identify any errors in the transcription.

HNATIUK, DR ROGER, Friends of the National Arboretum Canberra
BOURKE, MR MAX, Friends of the National Arboretum Canberra

THE CHAIR: On behalf of the committee, thank you for appearing today and for your written submission to the inquiry. I remind you of the protections and obligations afforded by parliamentary privilege and draw your attention to the pink-coloured privilege statement before you on the table. Can you confirm for the record that you understand the privilege implications of the statement?

Dr Hnatiuk: Yes, I do.

Mr Bourke: I do.

THE CHAIR: As our time with witnesses today is quite limited, we invited any opening statements to be submitted in writing in advance of the hearing. I believe that you have brought a statement with you today and I think it has been handed to the secretary, so we can now say it has been tabled. With the tabling of that statement, we will go straight to questions.

MR MILLIGAN: On the social amenities that are currently available and surpassing expectations, do you see concern with visitor numbers and people going through the area, as well as the development of suburbs around it encroaching on that area? Is that a major concern? Will that have a major effect on the reserve?

Dr Hnatiuk: It is not a concern in the sense of a negative to the Arboretum to be worried about; rather, it is a very positive aspect of running such a facility within an urban area. You cater for that by planning appropriately and having a clear idea of what services you can offer and how you go about providing those services.

With the Arboretum being still a young facility in the ACT—I think it is looking at 16 years this year—it still has a long way to develop. The public has clearly adopted it wholesale. With 500,000-plus people a year, it is very much in their sights as their place. Having Molonglo developing next to it means that there are more really local, in a sense, people who are going to want to access it. It is about catering for that. How do you plan access so the public gets the best use of the site? It is a large site. It can cope with a large number of people if the planning is done beforehand and the infrastructure is put in place.

Mr Bourke: Your question is a good one because it goes to the point of the thing that I tabled. I think it is the inverse: the Arboretum is and will be more of an asset as the years go by. The pub test in Canberra would have you understand that Canberra is getting more dense. Everyone can observe that. Whether it is in Reid or in Gungahlin, you can see it with your own eyes. After we had written the submission, I came across the numbers that actually prove that. That is what I have tabled. It is at that point that you realise the impact that open space is going to have on a city where we are going from 8.6 hectares per person to 2.4 hectares per person. Think about that. That has happened in recent years. And as that happens, Canberra gets hotter and is getting drier. The impact of these last remaining wedges of green is going to be more and more significant, particularly for the people who live in Molonglo or will live in the

next 30 years in Molonglo.

MR MILLIGAN: Having these areas in the middle of the city sort of splits it, does it not? It is probably ideal to have these reserves within our city areas so that it is not all hard surfaces or concrete and temperature-contributing and so forth. Is there room to further explore this concept of more green spaces with more native plants and shrubs within our city itself, to help to do what the Arboretum achieves by, in a sense, separating Molonglo and the rest of the city?

Dr Hnatiuk: It is outside the area of the Arboretum that you are asking us about. What comes to mind immediately on that is that the ACT government had CSIRO do a study of the climate in different parts of the city, and the results of that were outstandingly clear: the suburbs which had good tree cover had significantly lower temperatures than those that did not have it.

Looking to the new developing suburbs, has the implementation of the development plans actually built in trees that are going to shade the houses and the streets, or have they hived that off to other things, as I think happened in Molonglo just recently? People are going to have to live in these places. If there is not adequate implementation of greenery—I think you heard from the person just before us that with your biophilic places it has to be everywhere. It is not just "Over there we cater for the cooling of the city". You want it where people are living as well.

MR MILLIGAN: Our blocks are smaller and there are fewer trees in our backyards, so I guess our reserves, wherever they are, should—

Dr Hnatiuk: Yes but the small blocks are a planned thing. They did not happen accidentally.

MR MILLIGAN: No, exactly.

Dr Hnatiuk: It is not a hundred years ago, when places just grew; they actually planned the suburb. How many people, how wide the streets and all of that in Canberra is detailed down to the centimetre. If we do not have it, it is because we allow it to happen.

Mr Bourke: I spend a lot of time every year in Singapore for personal reasons, and I am just astonished at the work they have done, particularly in the past 15 to 20 years. It is now being copied. The benchmark that you should think about having a look at is Melbourne. Having lived in this city on and off for 60 years, I used to think that this was the cutting edge of urban good design. I do not think that anymore. I think Melbourne has faced up to climate change, has faced up to the heat island effect, in a way that is far beyond us. Singapore, which daily suffers from huge heat island effects, has this incredible program, which the previous witness spoke about: the biophilic city idea, which is just extraordinary. I have been trying for a decade to get this government here, officials and politicians, to take an interest in the biophilic city concept, because it is important.

THE CHAIR: You say Melbourne is an example of a place that is doing quite a lot within Australia. What are some of the things that you are referring to?

Mr Bourke: For instance, their urban tree program is extraordinary. I do not mean just the funny things, although the funny things are important. The idea of giving every street—

THE CHAIR: It has an email address.

Mr Bourke: They have 10 per cent of our trees. The former Auditor-General, sustainability commissioner or whatever she was, has documented the numbers. We have 10 times as many trees in the urban area of Canberra as there are in Melbourne. But they have given them all email addresses.

THE CHAIR: This is the City of Melbourne.

Mr Bourke: That might at one level be seen as silly, but in fact it has drawn a level of attention to what those things do.

THE CHAIR: My understanding is that they set that up so that if you needed to report something to do with the tree you could, but then people just started writing in stories on behalf of the tree and saying how much they loved the tree, and it took on this whole spirit of its own, which was quite amazing.

Mr Bourke: But you can tie it in with what Melbourne University is doing and has done on green roofs and green walls, which is terrific. The work they are doing at Burnley is extraordinary. To me they are the leading edge in Australia now of dealing with what people are going to have to face up to.

THE CHAIR: You also referenced Singapore, which is an interesting example, because they have an objective to be a city in a landscape, which is actually what Burley Griffin set out for the ACT to be. We have had other witnesses speak quite a bit about this. What I want to pose to you is that the Burley Griffin legacy is one idea of landscape but we have a changing climate and a changing urban form. Do you see us being able to stay a city in a landscape? How do you see us achieving that?

Mr Bourke: I would say that we can sustain a city in the landscape but we are going to have to be really clever in thinking about how that will work. My children and grandchildren are going to see very substantial changes in species that will survive in this landscape if the climate goes up, as it will, at least 1½ degrees or, as it might, 2½ degrees. You are going to see huge changes in the species that will survive in this city. People do not think that that sounds like very much but it really has a big effect. Trees that live 200, 300, 400 or 500 years are not going to live that long. So we have got to have clever people doing what they are doing. It is not just that stuff to do with the email addresses; there is a whole program behind the urban forest thing going on in Victoria.

THE CHAIR: In the City of Melbourne, yes.

Mr Bourke: There is an extraordinary program that has gone on behind the greening of Singapore project. It is ironic that the man who leads it did his PhD here at ANU. We trained him and—

THE CHAIR: There are actually a few people in Singapore who are Australian trained or Australians.

Mr Bourke: he has gone and done it.

THE CHAIR: Roger, is there anything you would like to respond to my question with?

Dr Hnatiuk: Yes. Canberra will always be a city in the landscape. It cannot be anything else, just by definition. We live within a landscape. The question really is what kind of landscape we can produce that is something we want to have. Adapting what our cityscape looks like in relation to projected climate change is where the challenge comes. There are bright people who can do that. Picking up on James's question, you want to build that in the landscape everywhere. There are not places where you can do the old-fashioned city planning which says, "Here's an area where the climate is good. Here's an area where it's not so good." You really want to say, "Across that, how do we get it all?" We are not the only city in Australia. There are big cities much bigger than us. Perth has problems with water and planning and that kind of thing in the landscape. They have had 40 years of a drying landscape—a few bumps along the way, but the trend is very down.

THE CHAIR: And very high salination.

Dr Hnatiuk: How do Australian cities cope with the fact that this is Australia, and what are we going to do about it? Choose the right species. Make sure you build into the fabric of our city those ameliorating elements.

THE CHAIR: To build into the fabric of the city, are there any opportunities you see specifically that we could consider?

Dr Hnatiuk: The kinds of things you have heard us discuss: the biophilic city. Look at what is known right now in terms of softening the landscape everywhere to help reduce temperature, to help reduce stress on people. Where do you get your greenery? Some of it is going to be street tree planting. Some of it is going to be those rain gardens. Some of it is going to be green buildings. And how do you build public appreciation, desire and want for that? It is not just the want of the people who have lots of money, because the whole city has to be in the game.

Mr Bourke: That is where the Arboretum has played and will play a huge role, because it is a site for experimentation with tree species from around the world that might be useful here. That is one of its real functions. As someone who started what I think is one of the very few ASX top 300 companies in Australia that are based here in Canberra, I know something about serious investment. The National Arboretum has been one of the best investments this city has ever made, and I think that that will continue to show itself as the years go by. It will need nurturing but it has been a hugely good investment, and part of that is the intellectual property that is coming out of it.

THE CHAIR: That intellectual property is around which species are working within

the Canberra environment?

Mr Bourke: Exactly. We are learning a lot about what will and will not grow in Canberra.

MISS C BURCH: Going back to your answer to the initial question about not only the importance of the Arboretum but also the number of visitors the Arboretum receives every year, what would you like to see improve in terms of access to the Arboretum?

Dr Hnatiuk: A short answer to a big question: Molonglo is growing, so certainly within our active time frame of planning within the city there are going to be buildings right up on our western boundary, which is nice for fire protection but also means access. People are not going to want to drive all the way round to the east side to get in. So it is about access from the west, where it is going to be and how you stop the Arboretum becoming a rat run for people who want to also not drive around the Arboretum. There are answers to that. That is not a new question. Many of our natural areas within big cities have dealt with that. But it needs dealing with.

We need access roads within the Arboretum. At the present time there is Forest Drive, which is surfaced, so you can drive around, but two-thirds of the Arboretum is not easily accessible. Those people who can ride bikes, ride horses and walk get access to the rest of it. There is a dirt road which cannot stand lots of traffic on it. It washes out in heavy rain. It is on their long-distance plans. But put that in with the things that need to go with it—parking places, access points and "Get off here and look at this" sorts of things—that are needed to open up the Arboretum to a wider range of people.

On access to its programs and things, the staff are in temporary accommodation, and I mean temporary in the sense that they are in demountables painted black so you cannot see them from Parliament House. They are full to the gunnels. They are sitting on top of each other. Every room that used to have room for six people to have a meeting is now an office. That is not working well. It needs public access spaces. It has three meeting places: Margaret Whitlam theatre; what we call the green room, which can seat about 30 people crowded shoulder to shoulder; and the terrace room, which seats about the same. There are meetings of the public who want to meet in the place and do things relevant to the use of the site, and there is no place to go for them. The Arboretum has space to develop this. It does not all have to be in the one spot. There are places where you can spread that out, and that then removes some of that intense activity all in one place.

THE CHAIR: Did you say a lot of this is planned in the future works program? Is it just a case of perhaps the demand coming a bit faster than might have been the case?

Dr Hnatiuk: Yes, it is coming faster. Nobody predicted 500,000 people a year. I think they reached that in year 2½ or three. They were predicting 30,000 to 40,000 people a year. And the public just own the place. It is their place. We stand there and watch—

Mr Bourke: It was 40,000 and in fact there have been 500,000 a year from day one.

THE CHAIR: It is interesting. Do you think it is fair to conclude from that, then, that Canberrans and also people visiting Canberra are very keen to interact with the natural assets we have here?

Dr Hnatiuk: Definitely. The Arboretum had a survey carried out in a variety of ways—social media, on site—asking people who were coming in about 18 months ago. I am not sure of the date but it was roughly that. We all expected that people were going to say, "It's a great place to come for a cup of coffee," because it is. The view is spectacular and what have you. That was on the list but it was well down from the top. They come because there are forests. Many of them are this high. Others are big enough; they are casting shade.

People were coming because of the environment of the Arboretum now and what they saw was going to be there. They came because they saw it as a place of conservation of biodiversity and for the programs that were there. Forty per cent of the planted forests are on rare and endangered lists at some level of endangerment. They were coming there because of the spectacular views and the quality of the place that was built. I was there as those buildings were going up. The insistence of the managers of the place, from the public service managers through to the people who were doing the actual building, was, "We are building high quality here." And we get it from the public as they walk into the visitor centre. Their jaw drops. They have done that for five years. It is, "Wow." You cannot build low quality and expect it to last more than about 18 months to two years. This place as it is done now is going to last like that for a long time.

But with 500,000 people you need to build on the infrastructure of actual buildings, of staffing and of access. How do you get people into it? How do you build on the education programs? They have one education officer, who is absolutely booked full out on a yearly basis. That program has gone from nothing up to, "We can't cope with it right now."

The demand from the public as to what they perceive this place has to offer is huge. I expected it to taper off. It is not going to taper off for some time. It will taper off because of the resources that could be there, which would not overstress the site, simply not being there. And it could be a lot more. The ACT government bought into something. I do not think any of them expected what they got. But when you have 500,000 people selling what this place is about, how are you going to deal with it?

THE CHAIR: In the number of visitors coming, how much is local and how much is interstate and international?

Dr Hnatiuk: I do not have the figures to hand.

Mr Bourke: We have done a few samples at various times. Roger and I are involved, and have been for a decade, in training the guides up there. I still do a fair bit of guiding, just to keep my hand in. My guess is that, while there is still a chunk of Canberrans who are coming for the first time, it is very much international and interstate visitors who come on our tours. How they play out against the other half million—you see, we only count the people who come into the visitors centre. We now know that there is a vast number of horse riders, joggers and bike riders. There

are all those other things outside that we do not count.

THE CHAIR: They would not necessarily come into the visitors centre but are visiting the Arboretum.

Mr Bourke: Yes.

Dr Hnatiuk: Those figures can be provided by the Arboretum. I know that the majority—

THE CHAIR: It was curiosity, but if it is not difficult it would be good to—

Dr Hnatiuk: is local. In terms of the 100 per cent, the bulk of it, in the sense of the largest single group, is local. Then it is interstate and then it is international. A fairly common theme with a garden within a big city is your local people, but your local people are often bringing their visitors with them. It is one of the focal points for people. How often do you visit the national institutions in Canberra if you do not have a visitor? It is that kind of thing. This is Canberra. That is how we do it. Plus there are the regular visitors. That is the milieu you are working in.

THE CHAIR: We will conclude there. Thank you very much, on behalf of the committee, for appearing today on behalf of the Friends of the National Arboretum Canberra. When it is available, a proof transcript will be forwarded to you to provide an opportunity to check the transcript and identify any errors in transcription.

If you would not mind providing the statistics on the visitor numbers, that would be greatly appreciated by the committee. We do not have a formal deadline for responses but as soon as possible would be appreciated.

I thank all the witnesses who have appeared today. The next hearing on the nature in our city inquiry will take place on 1 May 2019.

The committee adjourned at 4.48 pm.