



**LEGISLATIVE ASSEMBLY FOR THE
AUSTRALIAN CAPITAL TERRITORY**

**STANDING COMMITTEE ON ENVIRONMENT,
CLIMATE CHANGE AND BIODIVERSITY**

(Reference: [Inquiry into the ACT environment's bushfire preparedness](#))

Members:

**DR M PATERSON (Chair)
MS J CLAY (Deputy Chair)
MR E COCKS**

PROOF TRANSCRIPT OF EVIDENCE

CANBERRA

TUESDAY, 2 APRIL 2024

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**Secretary to the committee:
Mr J Bunce (Ph: 620 50199)**

By authority of the Legislative Assembly for the Australian Capital Territory

Submissions, answers to questions on notice and other documents, including requests for clarification of the transcript of evidence, relevant to this inquiry that have been authorised for publication by the committee may be obtained from the Legislative Assembly website.

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Amended 20 May 2013

The committee met at 10.02 am.

GENTLEMAN, MR MICK, Minister for Business, Minister for Fire and Emergency Services, Minister for Industrial Relations and Workplace Safety, Minister for Multicultural Affairs and Minister for Police and Crime Prevention

VASSAROTTI, MS REBECCA, Minister for the Environment, Parks and Land Management, Minister for Heritage, Minister for Homelessness and Housing Services and Minister for Sustainable Building and Construction

SCOTT, MR ROHAN, Chief Officer, ACT Rural Fire Service, ACT Emergency Services Agency, Justice and Community Safety Directorate

BURKEVICS, MR BREN, Executive Group Manager, Environment, Heritage and Water Group, and Conservator of Flora and Fauna, Environment, Planning and Sustainable Development Directorate

FOLEY, MR JUSTIN, Senior Director, Parks and Conservation Service Fire Management Unit, ACT Parks and Conservation Service, Environment, Planning and Sustainable Development Directorate

THE CHAIR: Welcome to the second public hearing of the environment, climate change and biodiversity committee inquiry into the ACT environment's bushfire preparedness. Today we will hear from the Minister for the Environment, Parks and Land Management, and the Minister for Fire and Emergency Services.

The committee wishes to acknowledge the traditional custodians of the land we are meeting on today, the Ngunnawal people. The committee wishes to acknowledge and respect their continuing culture and the contribution they make to the life of this city and this region. We would also like to acknowledge and welcome any other Aboriginal and Torres Strait Islander people who may be attending today's hearing.

The proceedings today are being recorded and transcribed by Hansard. They are not being broadcast live but will be available online after the hearing. When taking a question on notice, please say the words, "I will take that as a question on notice."

I remind witnesses of the protections and obligations afforded by parliamentary privilege and draw your attention to the privilege statement. Witnesses must tell the truth. Giving false or misleading evidence will be treated as a serious matter and may be considered to be a contempt of the Assembly. Can I ask you all to confirm that you understand the privilege implications?

Ms Vassarotti: I have read and understand the statement.

Mr Gentleman: Yes, I understand the statement.

Mr Scott: I understand the statement.

Mr Burkevics: I have read and acknowledge the privilege statement.

THE CHAIR: We will now go to questions. I want to start by having a chat about the bushfire operations plan. How many staff are directly involved in that? What is the knowledge base that the staff rely on to execute that plan?

Ms Vassarotti: I will ask Justin to speak about the bushfire operations plan, which is actually under review right now.

Mr Foley: I have read the privilege statement, and I am comfortable with it. The bushfire operations plan is our annual operations plan in legislation. It allows for a two-year plan, but we find that it is far more effective as an annual plan.

I will jump back a bit. It sits as the annual operational delivery arm of the Regional Fire Management Plan. That is an important document because it is the process of developing a regional fire management plan that actually sets the priorities for us—the prescribed burning priorities in particular.

Through the Regional Fire Management Plan, we are using the Phoenix modelling, and we are looking at where we get the maximum risk reduction in terms of property and now environment. We set the overarching objectives, we identify the areas that we want to be actively working in, and burning in, and we deliver that through the annual bushfire operations plan.

In terms of the fire management unit, I am happy to check, but we have in the order of 58 staff who are actively engaged. We have a crew of around 30 officers who are general service officers. They are the doers on the ground. They are all fire trained. They are fire trained to a number of levels, which I will speak to in a moment. They are our active workforce. They are the ones on the ground.

By way of a really simple example, we have a burn on Cotter Hill, at the back of Tidbinbilla, planned for this year. They have been putting in a four-kilometre fire break by hand for the last month. They do that sort of work, and they are actually out there making the burns happen.

We have the on-ground staff; then we have a range of professional officers in the office. We have a planning team, which is a combination of all fire-trained people, with a range of natural resource management and forestry backgrounds. In terms specifically of fire, they are trained in fire behaviour analysis; a number of them have significant fire behaviour analysis qualifications, and they are the people you need when you are planning to go to implementation. They are actually reading what is happening in the weather and understand what windows are open to you.

We have a significant body of expertise in the team around burn planning. What I am talking about here, just to be clear, is what we do as a land management agency. We have a significant investment in burn planning. Every burn—and I referred to the Cotter Hill burn—requires significant planning, from a risk management perspective, to make sure that we deliver a burn that not only delivers the risk benefit but also manages all of the intended consequences that can occur from an ecological perspective. That is one example. So we have significant investment in burn planning.

We also have one particular position that is absolutely focused on looking forward and engaging in research utilisation—tapping into the research that is happening in terms of bushfire delivery, looking at some of the new technologies and methodologies that are coming on board. They also work closely, as part of our team and through AFAC,

the Australian fire and emergency committee, to make sure that we are as well placed as we can be to bring new technologies and new ways of doing things to the fire management unit. Hopefully, we will get a chance to talk about that later today. There is that skill set there.

If you move over into what we call the AIIMS, the incident management environment, you have quite specific skill sets there.

THE CHAIR: But they are not fire specialists?

Mr Foley: They are fire specialists. When you are talking about fire behaviour analysts and burn planners, they are all part of the planning and decision-making. When you go into an incident, you have a number of positions within the AIIMS structure that are all about helping you to deliver.

From our perspective, it could be about managing prescribed burning or feeding into a suppression incident. You have an incident management team; you have an incident controller, and you have a series of functions under the incident controller around those roles—planning, operations and logistics. We have values officers now, which is a new position that has been created and an initiative of EPSDD. There are a number of roles that sit within the actual incident to make sure you are bringing the right information into that incident, and you are managing and balancing all of the risks that you can actually balance.

Those positions tend to sit in an incident room. We have one open at the moment, covering the burn planning program, and you have a number of specific field positions as well. You are looking at divisional commanders, who are the commanders on the ground and communicating with the incident team. There are crew leaders. We have people who have particular air operational skills, both in the incident team and outside.

There is a really broad array of long-term planning skills in the fire management unit, as well as really specific, incident-based skill sets.

MS CLAY: That was an excellent, detailed explanation; thank you. I am not sure who this would be directed to. We had hearings before, and I want to touch on some commonalities mentioned by a few witnesses. I will do my very best to represent them accurately. We heard from some concerned Weston residents about building in the western edge. They were concerned about building there because of bushfire risk, full stop. They also said it was too close to the Murrumbidgee; they said there was no evacuation point. A number of them said that a shared services facility was now being put into what had been a bushfire buffer zone after 2003, and that had to be rezoned, so they were not happy about that.

We spoke to Dr Sally Troy, and she also had a few concerns. She said that we were spreading our resources thinner to protect an expanding western edge. She said that the planning system did not have disaster risk mitigation as one of the first things; that came in afterwards, and we were making lead planning decisions that were not properly covering that risk.

We spoke to Dr Bartlett, and his was probably the pithiest evidence. He said:

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I also mentioned the western edge. You asked about that. That bushfire risk assessment was atrocious. It made false assumptions left, right and centre. For instance, it said that the major risk would be from a fire burning downhill towards the Murrumbidgee. In 2003, anyone who was here in that year knows that the major risk was a fire coming from the west and then burning angrily uphill. It said Mount Stromlo was low bushfire risk. Well, we saw what happened on Mount Stromlo. It was prepared by people who do not understand bushfire risks.

We had a number of witnesses who were concerned about encroaching development and the urban perimeter moving out, and that government was not doing appropriate risk management with those, and appropriate resourcing to go with those, to manage bushfire risks.

Ms Vassarotti: I cannot make any comment around the planning decisions and the data that goes into the planning decisions. With Parks and Conservation, we can speak from an operational perspective, regarding managing areas of the western edge—how that area is managed currently and potentially any changes to management that come from more development in that area.

Mr Foley: There are probably people who are in a better position to talk about the detailed planning arrangements. Certainly, from a fire management operational perspective, we get involved in the planning decisions, inasmuch as we are there to make sure that the asset protections are in the bushfire management standards that sit under ESA—in planning, and that they are maintained, so that they provide the buffer that they need to provide. At the end of the day, Parks and Conservation is an operational agency, and we work within what we consider to be pretty clear standards. In terms of bushfire risk, that is an issue that sits—

MS CLAY: If we can hear about the risk assessment, that would be good.

Mr Gentleman: I will make an overarching comment. We have learnt historically that our risk does mainly come from the western edge. The 2003 fires and the 2019-20 fires all began on the western edge. We see fuel load as well as breezes and wind coming from that area, so our preparedness does concentrate on the western edge.

There were recommendations from the 2003 bushfire team about preparedness for the western edge. As you indicated in your opening statement, there is commentary about future planning for that, as we build residential areas towards the western edge. Those areas, of course, are well within the boundary of the ACT and do not go past the river. The river is a good line to draw when we look at bushfire risk. I will ask Mr Scott to give you some more detail.

MS CLAY: I will direct you to a specific thing that one of the witnesses said—that there had been a shared services facility put in what was promised after 2003 to be a bushfire buffer zone. Is that something that you can either answer or take on notice?

Mr Scott: Do you know what facility they are referring to? It is just a shared services—

MS CLAY: A shared services facility, yes. This was from Weston Creek residents. You are welcome to take that on notice and come back to us. That was one of the specifics.

If you could take that bit on notice, that would be great.

Mr Scott: Without knowing the exact building, I will take that one on notice. Following on from what the minister opened with, since the 2003 fires, which had a significant impact on the ACT—and I was there on the front line in those days—there has been significant improvement in our planning, in looking to that risk management, and not only regarding the way that we now develop those western edge perimeter suburbs. We have edge roads, bushfire management standards, better building standards that are built to BAL ratings, and we have better fire modelling now, too.

Using the fire modelling predictions, our fire behaviour analysts have a better way of determining any fire run that potentially may happen with the fuel loads that are monitored regularly. Also, we are looking at our bushfire prone areas, which then lead into our Strategic Bushfire Management Plan, which was established after the 2003 fires. It is a five-year plan, a whole-of-government plan, which looks at all aspects of preparedness, response and recovery, and planning elements, research and climate change are coming into the next version as well.

MS CLAY: In terms of the specific criticisms made by witnesses on the first day of hearings, about those risk assessments—again, you might like to take this on notice and look at the transcript—could you review the specific criticisms about the assumptions made in those bushfire risk assessments and come back to us and say, “Yes, here’s why those assumptions were made,” or “No, that’s the wrong reference in the report,” or whatever the response is? We heard from Dr Bartlett, and we also heard evidence from Dr Sally Troy about spreading the resources thinner. Could you review the transcript?

Mr Scott: Yes, we can take that on notice.

MS CLAY: That would be great; thank you.

Mr Scott: In relation to the evacuations, there was a comment made about evacuation centres. We deliberately do not pre-identify evacuation centres to the public. The reason is that, if we do ask them to relocate during an emergency, we determine which is the safest location to go to. If we pre-determine and publicise that, people may not get the message that they may be under threat if they go to that location. That is why it is not pre-identified. We have them pre-identified in our incident management teams. We do not actually verbalise that until the event of an incident.

MS CLAY: I did not know that. That makes perfect sense because it depends on where the fire is.

Mr Scott: Correct, yes.

Mr Gentleman: And the access and availability to get people moving.

MR COCKS: One of the specific issues that came up at the last hearing was around the red stringybark forest which is going to adjoin the development at Stromlo Reach. Clearly, since that last hearing, Minister Steel has used his call-in powers to approve the Stromlo Reach development next to Bluetts Block. How will EPSDD and ESA be able to work together to treat the extreme fuel hazard in that area?

Mr Gentleman: From my point of view, they would work with government agencies to ensure that you can put risk provisions in that, as EPSDD go forward with the planning and any construction that happens after that, as we do with any other residential construction in the ACT.

MR COCKS: The challenge is that there is no clarity at this stage from EPSDD around those approvals or the active management of the forested parts of Bluetts Block. I am trying to understand how we will be able to be reassured that that very clear risk will be appropriately managed.

Ms Vassarotti: That decision has been made. Certainly, it is a really fair question in terms of bushfire risk, particularly with the land managers, now that this decision has been made.

Ms Foley: That is right. Again, as an operational agency, we are working with the proponents at the moment, around the siting and the approach to putting in the asset protection zone and ring roads. From an asset protection perspective, we are working directly with the proponents at the moment.

We are also working at the moment and have a blueprint for a containment approach on Bluetts Block, acknowledging the very real risk. You talked about the stringybarks. I have to be careful about what I say, but I think we have pretty much landed in terms of what our containment approach would be—an approach that would deal not just with the risk associated with stringybark and the fuel loads on Bluetts, from a prescribed burning and land management perspective, but also with managing the critical ecological assets and critical ecological communities that are present there.

We are working on the asset protection front, and we are also working to identify the appropriate containment strategies. Those containment strategies are about access and movement through the block in a way that does not impact upon the range of values that sit on that block. There is work underway to try and address the risk that you are identifying.

THE CHAIR: We heard evidence from Weston Creek residents and others that there had been quite a lot of community education with Weston Creek residents after the 2003 bushfires. However, people have moved, and that knowledge has dissipated in the Weston Creek area. We also have a whole new area, and new residents, in Molonglo Valley that are on the western edge. I am wondering about the level of community education for those who are in the high-risk areas.

Mr Scott: We ran a pretty comprehensive community engagement campaign. We identify where the risks are. For this particular season, just gone, grassfires to the north were our greatest risk, so our community engagement focus was on that. We had a community hub at Moncrieff, we had some community pop-ups, and we also had a community hub down south, in the Tuggeranong Valley.

We have had some community engagement activities in that Weston Creek area in past seasons. As the risk evolves for the coming seasons, we will increase that as well. There is an increasing demographic out there. We look at all of our community engagement

activities holistically and see where the greatest risks are for the community at any given time of the season.

Ms Vassarotti: Dr Paterson, it is a really useful reflection. With the community, whether it involves new people coming into the community or people who have been here since 2003, there is a bit of a community culture around fire, and some real anxiety and fears around fire. It is a reflection that I have had over the last week, as I have engaged with the community, given that we have some prescribed burning going on at the moment. There has been a bit of community feedback and discussion in terms of that program.

It is an ongoing thing that we need to do, and not just for people that are in particular risk areas. It is about building community understanding about not only risk but also the work that we are doing around the prescribed burning. It is not only about asset protection or reducing fire load; we are actually using fire in the environment in relation to managing ecological communities and engaging with traditional custodians. It is an ongoing piece of work.

I have been talking with members of the team in relation to this over the last few weeks, in terms of our engagement strategies, and we constantly discuss what we are doing and why we are doing it, and the range of reasons that we are doing it. It is not just about asset protection. It is a really important piece of work that will never be finished—tweaking and reviewing where we are at with that.

Mr Scott: As a multi-hazards agency, the ESA is also responsible for storm and flood, and warnings that we try and incorporate into the community by taking a holistic approach. It is not just about preparing for fire, but being prepared for that hazard season, which runs from approximately October, all the way through to the end of March.

MR COCKS: One of the key terms of reference in this inquiry is about the way that bushfire activities are coordinated between the different agencies and different parts of government—not just those fighting fires and not just those in land management.

I was a bit disappointed to see that the government's response in the submission—and it is noted in the submission—was just a rundown of the PCS element of bushfire. We have heard again today from Minister Vassarotti about not making any comment on planning decisions in relation to bushfire. Can you tell me why the decision was made to address only the PCS elements of bushfire in the government submission? What degree of engagement was there between agencies in preparing that submission?

Ms Vassarotti: From the government's perspective, we took the terms of reference and we tried to address them. The government submission went to the key issues. Some of the challenges in pulling that submission together were noted, particularly given the fact that agencies were in the midst of bushfire readiness, and it was in the middle of the bushfire season.

Certainly, the submission tried to respond to elements of the terms of reference. I am speaking from the point of view of the portfolio that actually pulled the submission together, and we tried to respond to the issues. I am not sure whether Minister

Gentleman has anything to add on that. If there are specific elements that you feel have not been addressed, we can certainly take those questions and try and get answers for you.

Mr Gentleman: If you look at the terms of reference that the committee has, the government has responded to those in a triage manner. The first relates to the environmental factors contributing to bushfires, and the role of weather, drought, climate change, fuel loads and human activity. That tends to be the lead agency—the one that Parks and Conservation works in, under Minister Vassarotti’s portfolio. That would be the lead that government takes, depending on the hierarchy of the terms of reference, I suppose.

MR COCKS: I would note that there is no hierarchy in the terms of reference. Every item in there is very important when it comes to looking at bushfire. The other thing that I would note is that the ACT government, surely, has more resources than anyone else that has contributed to this inquiry, and an extension was provided to the ACT government as well. But when it comes to—

Ms Vassarotti: Mr Cocks, if there are things that you do not feel that we have responded to, please put them on notice and we are very happy to respond. That is why we are here.

MR COCKS: Certainly, I will have a fairly lengthy list of questions on notice. In terms of coordination across organisations and parts of the ACT government, I wonder if you can speak to how the planning and bushfire operations sides of the equation interact before an area is developed or approved to be developed, and perhaps the Stromlo Reach example is a useful one. Is there any input that comes from that bushfire perspective when that sort of development is being considered?

Ms Vassarotti: Yes, there is, and that is why you will see things such as the development of a bushfire containment zone. Again, I might look to officials in terms of the process and the input into that process.

Mr Scott: From the ESA’s perspective, all four services have input to any development applications—so ambulance, SES, fire and rescue, and the Rural Fire Service.

MR COCKS: Is that development applications for a building or for a suburb or for both?

Mr Scott: From what I understand, it is predominantly for the building side of it. I will have to take it on notice for the development side of it, as in each suburb. I know we do have input into the bushfire management standards, like we do for every other land tenure around the ACT, to make sure that they actually are following the standards as set out in the Strategic Bushfire Management Plan.

THE CHAIR: I was wondering if we can talk about the priorities of EPSDD in terms of whether they are right in terms of environmental management versus risk management for bushfires.

Ms Vassarotti: I think it does speak to the fact that, when we are a land manager, we

are responding to a whole lot of different priorities in relation to risk and also in relation to protecting the assets that we have, whether they be the importance of human life or ecological values. I think the hierarchy also changes depending on the specific piece of land that we are looking at. I might look to Mr Burkevics to speak to some of the ways that those priorities and those different risks are managed as we look at different parts of the landscape—like how close a piece of land is to a suburb. It certainly takes into account specific ecological values in particular parts of the land. It is a pretty tricky matrix, but we have people who are working on it each day to ensure the hierarchy of priorities is appropriate, particularly given the particular piece of land that we are looking at.

Mr Burkevics: Dr Paterson, from a clarity point of view, are you interested in specifics around during an operational response, or more the lead up, the hazard reduction protection of the environment?

THE CHAIR: Can I put to you a statement, and that might clarify: the views of rangers with no fire experience trump fire unit staff for priorities in completing works?

Mr Burkevics: I am not aware of that statement. I think what is most important is that it is a very, very balanced and considered approach that follows the approval mechanisms for burn programs. So all of the burn programs or the hazard reduction burn in the EPSDD's BOP is authorised by the Commissioner for the ESA.

In submitting that for approval to the commissioner, it is endorsed by myself in the capacity of the Conservator of Flora and Fauna. So having both the Parks and Conservation Service and senior fire ecologists from the Office of Nature and Conservation in recommending a BOP program, I do take a very balanced look, and if there are any environmental concerns, they are addressed, and vice versa, ensuring that the hazard reduction, or ecological, or even the cultural aspects of the BOP are addressed.

It is very much a case-by-case basis, and I think it is most important that everybody's opinions and voices are heard in that decision-making process to ensure not only that the BOP objectives are achieved from cultural, hazard reduction and ecological perspectives, but at the same time that those necessary safeguards are in place to protect ecological assets of high value.

THE CHAIR: Does it feel conflicted? Does the feedback in terms of the protection of environmental assets often conflict with the burning?

Mr Gentleman: Probably for only about 60 years, I would imagine! There are certainly views, and I will use the term "old-fashioned" fire ecologists in the ACT have, in regard to the removal of hazardous material and the safety of our environmental infrastructure in the ACT. There is a long-held contest between different groups across the ACT. I think it is important, as Bren said, that we take onboard all of those views when we have a look at preparing and delivering bushfire hazard reduction across the ACT. It is good that it is a contest. It is good that we have those different views.

Ms Vassarotti: I was just going to really highlight that. I think there is an important healthy professional debate in terms of how we do this work. I think it is really

important, and I think we have the mechanisms in place, that there is that discussion and there is a decision-making process that means it is not one person making a call because of a particular position or place in the hierarchy. I think we have a really good system. These discussions will continue, and I think we should encourage these discussions because we are constantly learning. We know we are facing new challenges with climate change and extreme weather. We have to amend how we are doing things, and we should not be doing things that we were doing 50 years ago because things have changed very significantly. We want to encourage this discussion but have the right processes in place to get to a plan that makes sense and balances up all of those different priorities.

MS CLAY: We have heard more consensus on fire management than I have ever heard before, and I think all of our witnesses were in favour of ecological burns, cultural burns, patchwork burns, slow burns. All of those have slightly different meanings but broadly speaking are similar technique.

I think there was a view from many witnesses that we were not doing enough of all of those and that there should be more of that type of slow cool burning. There was a view from some of our witnesses who have been working in the field for quite a long time that there were fewer days that we were burning on than we used to. Can you comment on that?

Ms Vassarotti: To pick up your comment, Ms Clay, it is very interesting; I have spoken to a lot of people who are working in this space that have different perspectives on this issue, but there is a lot more commonality. I feel like there is a good consensus about what is happening.

I think there is a challenge in terms of our windows for doing prescribed burning. The windows have reduced because of the impacts of climate change. We have come off the back of a very strange weather pattern over the last few years that has significantly impacted our ability; we have had to do things quite differently, but it has also changed the risk profile of what we have been dealing with over the last few years.

I think it is a very fair assumption that we have been doing less, and we have certainly been doing less than we would like to. Because of the risk with prescribed burning, you have to have the conditions just right, and our windows when that is happening have narrowed. They are potentially changing. My understanding is the research and the practice is shifting a little bit in terms of times that we would traditionally have thought was not appropriate to do prescribed burning. Potentially, we can look at those now, but I think the changing climate has created some challenges.

Mr Burkevics: I think it is fair to say that the circumstances for controlled burns have to be exactly right. We have seen those weather conditions, fuel moisture conditions and resource availability just open up right over the last few weeks. So the deliverables under the BOP program are able to progress. As the minister indicated, over the last couple of years we have seen higher than average rainfall across the ACT. It certainly does not make it suitable for burning, and the Namadgi catchments were very, very saturated for a long period of time. So whether burns can proceed or not is very situational dependent.

Mr Gentleman: I will say, in addition to those comments, that you will see RFS, ESA and Parks and Conservation start to look at other ways of removing hazardous material. So there is much more strategic grazing than ever before; much more strategic slashing than ever before; and using rural colleagues as well, to ensure we can keep fuel loads down in those particular areas. So it is more than just prescribed burns, there are other avenues of keeping the safety in place.

Mr Scott: Can I just jump in there too? There was a very strong focus on the hazard reduction and as the minister said, there are other treatments to reduce that risk. Other jurisdictions are also behind on their allocation of burnt area. We actually do not have a specific target, as we have a risk residual model. To echo all the comments made here, the weather has not been in our favour for the past four years, which has been good for the community. We have had a significant reduction in fires, but also that window to burn has not been there as previously. As the minister mentioned too, where we typically would not burn, we have been burning. So we have been burning in the height of the fire season, which normally we would not do, which shows that change of the climate as well.

MR COCKS: In the context of higher temperatures and greater risk of more extreme events, are the current criteria becoming a barrier to being able to reduce our fuel loads through prescribed burns? Is there a case to re-examine those criteria so that we can make sure we are actually meeting the needs?

Ms Vassarotti: I was just going to point to the fact that we are currently doing a review of the ACT-wide Strategic Bushfire Management Plan, which is that five-year plan. It looks at what we are facing now, what we are facing into the future, and provides a mechanism to go into all of that detail. But again, I might look to colleagues to—

MR COCKS: So that is a plan. I am interested in the criteria that stops you from burning.

Mr Scott: We do have a decision tool that we use, and also too every burn has a description as to the ideal conditions to do that. Typically we have not been able to burn in the last four years due to the moisture content and the weather, which has not been in our favour. On the other hand, if it is too extreme, then it is too unsafe to actually conduct those burns as well. So there is a fine science to it. We do not want to put the community at risk, and also the environment, by doing unrepairable damage if we burn it too hot, or if it gets away as well.

MR COCKS: And that risk if it is wet? Could you explain what that is?

Mr Scott: If it is too wet then we just cannot burn. There is no chance of getting the burn to actually take place.

MS CLAY: We heard a lot about resourcing, and we had a great session with Neil Cooper. He suggested that perhaps there was not enough being spent on track maintenance. This is a common complaint that we have heard a lot. It is partly about how much money you spend on it. It is also the skills. You cannot get somebody who builds roads to go out and do Namadgi trails. The figure put to us was that five per cent of the value of the asset each year should be spent on maintaining the asset.

I am wondering if someone could tell me what percentage of the value of those tracks and trails we currently spend on maintenance each year, or each four years, or whatever is convenient? And whether it is sufficient to actually maintain them to the point where they are usable, both for ongoing management purposes and for emergency purposes.

Ms Vassarotti: We will need to take that on notice in terms of what the proportion is and what that looks like. I think in terms of the trail management work, there are probably a few things to reflect on in relation to that. As I said, the impact of the bushfires and then the ongoing floods did present us with significant challenges in relation to maintaining some of those damaged tracks and trails. I think we will go out this afternoon and have a little bit of a look, particularly, at the impact of having the river crossing out. It really did impact. So that is slightly different to a resourcing issue—as again in terms of some of the practical challenges of the ability to get out there, do the repairs, and do repairs in a way that means we are not having to come back again and again, because we want to do that in a way that builds up the resilience.

The other thing that is going on right now is that there is some additional work happening in terms of how we look at how we manage our fire trails, particularly looking at some of the strategic and structural elements. There is quite a lot of work that is being done around an asset audit, looking at the trails and understanding what we have, how we are using them and how they are being maintained. We are looking at things such as road draining assets. There has been an audit, for the first time, of over 5,000 of those culverts and engineer crossings; there is still another 1,700 to do; so it is really understanding the assets we have.

We are looking at our fire trail network strategically and understanding what are the different trails that we have, how we use them and what we actually need—particularly knowing that our fire risk is shifting because of climate change. To support that work, we have put some additional positions into the trails management team. We are looking at a more strategic level, rather than a more responsive level when we realise that something has gone wrong.

MS CLAY: I might jump in there and redirect. Climate change means we are going to have more floods, it is going to be harder to maintain those trails—

Ms Vassarotti: Yes, that is right.

MS CLAY: We are going to have more severe weather that will affect them, and you may have fewer days on which you can repair them—not unlike the situation with burning days. Climate change can make all of that worse. What is the solution? Are we just going to need more people available to work on the few days when they can do it? Is that the approach?

Mr Gentleman: Can I add to that or start the answer to that? We made a decision a little while ago now to ensure that we build back better, so that the construction and reconstruction of trails and road networks are much stronger than they have been before. The investment in that has been incredibly strong.

The minister and I recently visited some of the areas up towards Coree. These are areas

that we have reconstructed where now the support of reconstruction will mean that the roadway and access point will last much longer during severe storms than it has previously, where the roadway has washed away for example. I think that is a very good decision. It means the investment is strong as well. We know we need to ensure these trails are going to be accessible during difficult times. So I support the decision that was made there.

It will mean, of course, challenges as we move to ensure that other trails are supported as well. When I say challenges, I mean basically resource challenges. Minister Vassarotti has indicated the team has increased, and we have certainly had support from the commonwealth on building back better, which means our investment into those trails has been much larger than previously. So we will continue on that work.

MR COCKS: I was a bit concerned by the government submission as it seemed to echo a concern that was raised previously around a focus on work arounds, rather than getting in and getting all these things fixed. Specifically there is a work around outlined here of using an attack dozer to clear fire trails in the event that there is a fire. Can someone tell me what is the speed of an attack dozer compared with a firefighting appliance?

Mr Burkevics: I think the point of that example was to illustrate that certainly we know, and the AFAC autumn report confirms, that the fire conditions in Namadgi throughout this summer were very, very low. The catchment was saturated. A conscientious decision was made by parks to carefully plan the repair of existing infrastructure that was damaged due to flood conditions in the previous years. Certainly, one of my areas of interest as conservator was to ensure that no further damage occurred to the environment as a result of those remediation activities.

I think in making some conscientious decisions, Parks prioritised the areas for repair and then carefully selected the best treatment. As the minister indicated, a build back better approach was taken, certainly realising that—due to the loss of vegetation, higher than average creek flows and peak flood flows—some of the infrastructure that was previously fitted is no longer up to the task. Restoring that infrastructure to as normal as possible also has ecological benefits in terms of fish movements up and down the catchment. I think that was the example. It was very much a considered risk-based approach to what was prioritised and where, knowing that in the unlikely event there was a fire, there were still mechanisms to get vehicles and access to it.

MR COCKS: I will acknowledge that you have artfully not answered the question I asked there around dozer versus fire appliance speeds. I will take it that it is significantly slower to use a dozer to clear something that would have been better to be cleared in the first instance.

Mr Burkevics: Aircraft, helicopters are a lot quicker than dozers. That is for sure.

Ms Vassarotti: Mr Cocks, I would suggest that the example was actually demonstrating a contingency for a low risk. It is not a standard operating procedure that we will not actually repair a fire trail and instead use an attack dozer. That is not what that example was saying. It was talking about a contingency that took a risk matrix in terms of a short window while we were actually doing a proper repair.

MR COCKS: The point I am trying to draw out is we have talked about building back better and ideal fire conditions for burning, and there seem to be a lot of reasons for why we are not getting to where we should be. Are we letting perfect become the enemy of the good here? Because we are behind on all sorts of measures—

Ms Vassarotti: I think that is a misunderstanding of what we are trying to say. Particularly over the last few years, in terms of weather conditions, we had a range of challenges in terms of repair, but we also had a very different risk matrix in terms of what the risk was around fire management. So it is actually about being responsive and responding to the challenges. It is not about us neglecting something because we had something else we thought was more important to do! It was actually responding to the circumstances that were in front of us. So I reject the suggestion that it is about the perfect being the enemy of the good, something that I hear a lot about. It is actually around being strategic and responding to the circumstances, and not causing additional harm for very little gain.

MR COCKS: Going to fuel loads: it has been mentioned already today that you monitor fuel loads. That is my understanding. What I have been hearing from quite a lot of people across the community is that fuel loads are the worst they have ever seen, not just since the 2003 fires but before that time as well. These loads are impacting everything from potential and capacity for fires to access the areas, right down to safety for the general public trying to use our parks. Is the monitoring and reporting available for us to see exactly what those fuel loads look like and how they have changed over time? how are we going to catch back up on dealing with fuel loads?

Mr Scott: We have identified sites that we monitor regularly coming up to the season and then during the season. They are predominantly grassland sites, and EPSDD manage the forested areas. Collectively, our fire behaviour analysts look at the current fuel loads, the moisture content, and the prevailing weather conditions to see where the risks are. That also then feeds into the Regional Fire Management Plan, and then that feeds into the annual BOPs programs as well. So the monitoring is bigger than just the short term, it is also that longer term which feeds into those respective plans for the works and the risk mitigation activities that they hold.

Again, burning is only one of the tools that they can use to reduce some of those fuels. We have talked about grazing, we have talked about physical removal, chemical treatments and the like. So they are constantly monitored and looking for where that risk will be for the coming season.

Mr Foley: I mean, it is an interesting point just to separate that you get a seasonal response in the grasslands to fuel, and I think a lot of the community concern and a lot of the risk that we have experienced in the last two to three years—in particular around bushfire risk but also access—has happened in the grassland areas closer to Canberra. So that comes down to: how do you manage your asset protection zones as a practical thing? Like, how do you slash and manage the fuel loads there?

In terms of forested areas, we focus a lot on Namadgi, and to our west. The Regional Fire Management Plan, and the modelling tool that we use to identify where the best interventions in the landscape are, focuses on fuel load. So it looks at fuel load, and it looks at the likely fire pathway into urban areas. We use that. It is a reasonably

complicated model. We can talk about it later if you like or come back with a more detailed submission.

MR COCKS: That would be useful.

Mr Foley: The PHOENIX modelling suite really helps you identify where you are likely to be able to focus your fuel management from a bushfire risk perspective. That is supported by ongoing monitoring of fuel loads, and this year we are updating the Regional Fire Management Plan.

Of course, we are using updated fuel assessments to really make sure that, post-Orroral fire, we are again assessing where the best impact zones are to manage bushfire risk. We are also considering issues like: what do we do in the fire footprint, now that it is still low fuel but fuels are growing quickly; and how do we want to re-engage and manage fuels in there, in the context of climate and the context of all the ecological values.

We are really focusing on life and property, really focusing on how we might actually use fire to manage critical ecological communities and assets like our drinking water catchments, and really focusing on how might we consider opportunities to use fire in more innovative ways in the context of climate change. So we are really trying to broaden our approach to fuel management.

MR COCKS: So I will repeat part of that question again. Is the monitoring data about fuel loads publicly available? It is very useful information to inform our consideration but also the public understanding of what the risks are. Also, this is in the context of thinking forward to the risk of a firestorm, which obviously you cannot just manage on the border, on the edge of the fire front—the real problems tend to come from ember attack, which can be a long way away. So, when we hit a firestorm scenario, we are looking at those large fuel loads that are not just grasslands, creating significant risk for a much wider geographic footprint, as we saw in 2003, than we would see in a normal fire scenario.

Mr Foley: So is the question about fire behaviour and how those fuels behave in that context?

MR COCKS: I am trying to understand what the data says about what our fuel loads are now. Not just grass, but overall.

THE CHAIR: In one minute!

MR COCKS: And is that publicly available?

Mr Foley: We can come back to you on that. We may have the opportunity to deal with that this afternoon, so we can show you.

MR COCKS: If you could take it on notice, that would be wonderful.

Mr Foley: Absolutely.

Mr Scott: Yes, just from the public facing side.

Ms Vassarotti: What are you asking though? Let us be clear what we are taking on notice. Is what you are asking what information is publicly available in terms of current fuel loads?

MR COCKS: If you can provide data on the fuel loads over the last, say, ten years, that would be wonderful.

Ms Vassarotti: Do we have that?

Mr Gentleman: There would be some mapping.

Ms Vassarotti: There is some mapping that we can do?

Mr Scott: The public facing side, that is where the fire danger rating—some of the data that is collected goes into that setting for the rating for the day. I do not think the public would have a full appreciation if we put tonnes per hectare and fuel moisture content as to actually what the context is, but that is where that feeds into the fire danger rating which is published daily during the fire season.

THE CHAIR: So on behalf of the committee, I would like to thank everyone today for your time and attendance at the hearing. I remind everyone to respond no later than five business days to the questions on notice and thank you. We will close the hearing.

The committee adjourned at 11 am.