

REPORT ON PROCEEDINGS BEFORE

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

**WASTE AVOIDANCE AND RESOURCE RECOVERY AMENDMENT
(PLASTICS REDUCTION) BILL 2021**

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At Macquarie Room, Parliament House, Sydney, on Tuesday 1 June 2021

The Committee met at 11:00.

PRESENT

Ms Cate Faehrmann (Chair)

The Hon. Mark Buttigieg
The Hon. Ben Franklin
The Hon. Shayne Mallard
The Hon. Mark Pearson (Deputy Chair)
The Hon. Penny Sharpe

PRESENT VIA VIDEOCONFERENCE

The Hon. Catherine Cusack

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The CHAIR: Welcome to the second hearing for the Portfolio Committee No. 7 – Planning and Environment Inquiry into Waste Avoidance and Resource Recovery Amendment (Plastics Reduction) Bill 2021. This inquiry will hear stakeholders' views on this bill, which aims to phase out single-use plastics and other plastic products that are harmful to the environment, and proposes to set targets for plastic reduction with a view to eliminating plastic pollution. Before I commence, I acknowledge the Gadigal people, who are the traditional custodians of this land. I pay respect to the Elders past, present and emerging of the Eora nation and extend that respect to other First Nations people present. Today we will be hearing from a number of stakeholders, including researchers, waste management and recycling industry organisations, retail industry representatives and New South Wales government agencies. While we have many witnesses with us in person, some will be appearing via videoconference today. I thank everyone for making the time to give evidence to this important inquiry.

Before we commence, I make some brief comments about the procedures for today's hearing. Today's hearing is being broadcast live via the Parliament's website. A transcript will be placed on the Committee's website when it becomes available. In accordance with the broadcast guidelines, I remind media representatives that they must take responsibility for what they publish about the Committee's proceedings. While parliamentary privilege applies to witnesses giving evidence today, it does not apply to what witnesses say outside of their evidence at this hearing. I therefore urge witnesses to be careful about comments they may make to the media or to others after they complete their evidence. Committee hearings are not intended to provide a forum for people to make adverse reflections about others under the protection of parliamentary privilege. In that regard, it is important that witnesses focus on the issues raised by the inquiry's terms of reference and avoid naming individuals unnecessarily.

All witnesses have a right to procedural fairness according to the procedural fairness resolution adopted by the House in 2018. If witnesses are unable to answer a question today and want more time to respond, they can take a question on notice. Written answers to questions taken on notice are to be provided within 21 days. If witnesses wish to hand up documents, they should do so through the Committee staff. In terms of audibility for today's hearing, I remind both Committee members and witnesses to speak into the microphones. That is particularly important so that people tuning in via Webex can hear. As we have a number of witnesses in person and via videoconference, it may be helpful to identify who questions are directed to and who is speaking. For those with hearing difficulties present in the room today, please note that the room is fitted with induction loops compatible with hearing aid systems that have telecoil receivers. Finally, I ask that everyone turn their mobile phones to silent for the duration of the hearing.

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JANE CORAM, Director, Land and Water, CSIRO, before the Committee via videoconference, affirmed and examined

DEBORAH LAU, Principal Research Scientist, Land and Water, Lead for Ending Plastic Waste Mission, CSIRO, before the Committee via videoconference, affirmed and examined

SCOTT WILSON, AUSMAP Research Director and Senior Research Fellow, Macquarie University, sworn and examined

The CHAIR: I welcome our first witnesses. We will go to what are usually prepared opening statements by witnesses. Dr Wilson, yours is the PowerPoint, is that correct?

Dr WILSON: Yes.

The CHAIR: We will get the opening statements from the CSIRO witnesses first. Is there just one to give?

Ms CORAM: Yes, I will give that. CSIRO welcomes the opportunity to talk to the Committee. As I said, my name is Jane Coram. I am the director of Land and Water and my background is in natural resources science, working over nearly 30 years and focused on applying scientific solutions to natural resources management, particularly in relation to water management. Joining me is Dr Deborah Lau, whose scientific background over 30 years is in material science and data analytics. She is CSIRO's submission lead for our Ending Plastic Waste mission. While we are not in a position to comment on policy, Dr Lau and I are well qualified to comment on the science that can support objectives to reduce plastics and avoid waste.

I am joining you from Canberra and I take this opportunity to pay my respects to the traditional and original owners of this land, the Ngunnawal people. I also pay my respects to their Elders past, present and emerging. As Australia's national science agency, the CSIRO's purpose is to solve Australia's greatest challenges through innovative science and technology. We have recently initiated four missions, with a further eight in development, which form CSIRO-led major scientific and collaborative initiatives for creating impact at scale. As detailed in our submission, our Ending Plastic Waste mission, which is currently under development, may be of relevance to the Committee.

The mission's objectives include dramatically reducing the loss or waste of plastic to the environment; increasing the recovery of plastic as a resource with impact-focused, scientific and collaborative initiatives; and driving Australia's systemic change in plastic pathways through data science, materials and manufacturing, recycling processes and whole of life circular solutions to reduce plastic pollution entering the environment. We have world leading expertise and experience actively deployed to support this effort in the domains of material flow, waste and recycling research, marine debris and ocean pollution research, green chemistry and environmental effects.

Some examples of the impact delivered through our work include the delivery in 2019 of a national circular economy road map, which was developed to do provide key strategies for creating jobs and reclaiming billions in economic value from plastic, glass, paper and tyres that are currently going into landfill. The road map reviewed four materials that are common waste streams in our economy and developed recommendations for key steps in achieving a circular economy. An environmental hazard assessment of biodegradable plastic bags in aquatic environments was delivered in 2016 for the NSW Environment Protection Authority [EPA].

An autonomous sensor network has been developed to provide real-time reporting on the amount of rubbish being captured in stormwater pollution traps, and we are currently working with partners in India and Indonesia to identify how innovation and technology can help achieve systemic change and radically transform plastic pollution and waste management. Further examples of our work are listed in our submission and we would be happy to provide additional details as needed. I conclude by thanking the Committee for their time and inviting any questions or clarifications for Dr Lau or myself.

The CHAIR: Thank you very much for that opening statement. We will go to Dr Wilson who has a presentation for us. Can I ask if you have an idea of how long it will be?

Dr WILSON: Five minutes.

The CHAIR: Okay, five minutes is great.

Dr WILSON: As I said, I would like to thank you all for welcoming me here today and inviting me. My name is Dr Scott Wilson. I am primarily the research director at AUSMAP, which is the Australian

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Microplastic Assessment Project. What I want to raise with you today is the issue around microplastics and how that should be incorporated as a named item within the amending bill. The bulk of the work we have been doing is through this citizen science program called AUSMAP. It is a nationwide program that is engaging the community around the issues of microplastics and plastic pollution, but it is also around gathering data on how much microplastics are out there and I will show you some information on that. So it has a dual role.

As you may be aware, microplastics come from a range of sources. Some of that is those large items that break up over time, which include your bags and bottles and things like that, but it also includes your phone packaging items, rubber and those larger items that do wear over time. Clothing is another source of microplastics to the environment. A lot of our materials are synthetic or synthetic blends these days. The nurdles, which are the common name for our industrial pellets—when plastic is first made, it is made as a pellet. You may have heard in the media in the last couple of days of this massive pellet spill on the coast of Sri Lanka. A ship had spilled tonnes of these pellets and these pellets are now washing up half a metre deep on the shores in Sri Lanka. This is a common issue. I know the Committee has had submissions from Boomerang Alliance around things like using a program such as the Clean Sweep program to control that. I urge you to consider that as a strategy. Of course there are the microbeads, which are mentioned in the amendment bill. This is one I would encourage some further work on as well. Those are the sources.

AUSMAP has been around since 2018 and we have gathered data around the country. You can see all those little different-coloured points represent the areas where we have got data points. We have got close to 400 samples. The black and the red points indicate high and very high loads of microplastics. It is very much located near our urban centres. We have found that in some instances the highest loads of microplastics are reported to be close to 40,000 microplastics per square metre. If you took a metre of shoreline—this is all shoreline sampling, what is washing up on the shore—you are getting, across that shoreline, over one million microplastics on that shoreline. It is a cause for concern.

The images you can see to the left are the examples of rubbish, mostly plastics, washing up on our shore. In the bottom photo there is an image of some spots where we have those resin pellets or those nurdles washing up as well. If you want to know what 30,000 or 10,000 microplastics per square metre looks like, that bottom image there gives you a reflection of that. To drill down closer, this is some data that we have from the Sydney area. You can see all these different-coloured points. The different colours just represent the different amounts per square metre. What you are seeing in that—and I will just raise the issue that our high and very high locations, those red and black points, are all in our waterways, our estuaries and our river systems and they are the conduits for the material entering our oceans and near-shore environments. You can see as it gets onto the coast there is microplastic still present but it is diluted—there is a dilution factor there—so they are not as high as in our river systems. In terms of a potential ecological effect, the harms are mostly in our enclosed or semi-enclosed waterways.

I will finish off by showing you that we are also working at tracking back up catchment to the sources of this microplastic. When we find a hotspot we try and move back up catchment and we do netting. You can see the images in the top right there of some nets in stormwater drains and some baskets that we actually apply to the streetscape to measure what is coming off the street. Unfortunately, what we are seeing is there is a lot of microplastic already in the micro form before it enters the waterway. It is already either created or in the process of being micro. The map to the left shows you what we are finding as an interesting trend. The catchment types—the different colours in that map represent land-use types. If you can see that mauve colour in the top left of that map where it says "foam and pellets", that is a light industrial area where there are some plastic manufacturers. We are getting those resin pellets appearing there and a lot of foam from foam packaging being the dominant microplastic type. When we move to the bottom—that kind of blue area, which is the commercial zone where there are shops and high-density residential—you see a predominance of soft films: your bag and wrapper fragments, generally.

The graph to the right shows you each individual trap. The colours just represent the different types of microplastics. The high bars to the right of that graph are in the industrial zone in this particular area. You can see there is a predominance of, once again, film, foam, glass and pellets—we are also seeing non-plastic items as well in that data set. This is all micro; this is anything less than five millimetres in size. Interestingly, what we are seeing is a predominance and growth of—that image of little black specks is actually rubber crumb. We see this in some of our sites on the beaches where we are finding synthetic grass and rubber crumb now increasing in our sample loads. I urge the Committee to consider some discussions and mention of those synthetic playing fields in the bill. Those two bars to the left are right next to a synthetic playing field and that orange-yellow colour is rubber. There are close to 200 rubber items washing off that site at that time. It is really showing us that there is a site-specific source of these plastics. The Committee should consider microplastics specifically as an issue. I urge

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the Committee to consider including that in the definitions under the broad plastic scheme. I will leave my submission there.

The CHAIR: Thank you very much for that. That was very—

The Hon. MARK PEARSON: Terrifying.

The CHAIR: I was about to say interesting, but it was terrifying as well. I will ask a few questions and then throw to other members. I just wanted a few points of clarification or expanding upon things if you could, Dr Wilson, from that presentation. Firstly, with the synthetic turf, where you indicated 200 of the little rubber balls I think were found—could you expand? Found where and over what time? I just wanted a bit more detail on that.

Dr WILSON: Yes, sure. We have put out traps that are in the drain pits immediately around these fields. It is material that has either been walked off, washed off, blown off—there is a range of different pathways off the field. That 200 is in one basket—one individual drain pit that is from that field. The time period that was collected over was about a month. It is generally reliant on rain when we empty them.

The Hon. MARK PEARSON: Could I just get a clarification there? When you say "blown off", how far have you detected that the particles travel when they are blown or moved by wind or air?

Dr WILSON: That is a good question. There is very little actual information on those pathways. That is something we are now investigating. Recently we have been sampling at different distances away from the field in, say, the creeks and grass areas. We are seeing it just as a movement—not a waterborne movement—but we are thinking it is wind-blown up to four to five metres away from the field. I think water and walking off. When people play on these fields—I do not know if you or your kids have been on them—they get stuck to your socks and your shoes and they get walked off. We are actually seeing the gates or the pathways off those fields are the major transport route, but we think wind is definitely a factor as well.

The Hon. SHAYNE MALLARD: Just following that same synthetic field discussion, is the black dust as you called it coming from the black underlay underneath the green? Is the green providing pollution as well?

Dr WILSON: Yes, the general make-up of synthetic fields these days is the synthetic grass and then they have an infill of loose rubber crumb. It is all recycled tires, or predominately, and so they just sit loose. It is like artificial soil, if you like, to provide some cushioning and so that just is loose.

The Hon. SHAYNE MALLARD: It is a more complicated environmental assessment. In isolation synthetic fields are very concerning, and the industry and scientists like you need to develop a way to make it more environmentally sustainable. But it is also the issue of maintenance of playing fields that are natural—

Dr WILSON: Of course.

The Hon. SHAYNE MALLARD: —and population pressure on open space and the use of fossil fuels to maintain traditional grass fields. There is sort of a balancing act that is going on, too.

Dr WILSON: Most definitely, I agree. There are a range of issues around natural versus synthetic fields.

The Hon. SHAYNE MALLARD: Open space pressure.

Dr WILSON: Yes, I am just raising the one—

The Hon. SHAYNE MALLARD: I am just saying it is a balancing act; I have been involved in it. But nonetheless, it is a very valid point you have raised. Thank you.

The CHAIR: Thinking about the bill itself, I am just looking at the type of plastic waste within the phase-out and we get to suggestions and recommendations like the polystyrene waffle pods used in construction to be phased out 18 months after the date on which the Act commences. But going into recycled tires or rubber pollution is a different step for the bill at hand. It becomes a slightly bigger beast, does it not?

Dr WILSON: It does indeed. It is another can of worms, I suppose. The plastics issue, as you are all aware, is a very diverse topic. Including rubber in that is definitely one for consideration, but it will add an extra element to it that would have to be well considered.

The CHAIR: I might just ask a question of the CSIRO in relation to the *Circular Economy Roadmap*, which you briefly mentioned in your opening statement and of course provided a good comprehensive submission. You said that it outlines the key steps and I was just wondering if you were able to give the Committee an overview

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of what the New South Wales Government has done to date in terms of meeting any of those steps that you have identified. I am not sure which witness to direct that to—maybe Dr Lau?

Ms CORAM: Shall I just give a very high-level response to that and then Dr Lau can help fill in some of the details that I may omit? As you are well aware, it is a really complex problem to tackle and it needs to be tackled from a number of different ends. There are six elements of a circular economy that have been outlined in the road map and I would characterise the first one as being around innovation and connecting supply chains:

1. Retain material through use and collection
2. Upscale and innovate recycling technologies
3. Innovate and collaborate in design and manufacture
4. Develop markets for secondary materials and the products that use them

But there are two other really important and essential parts of this. One of those is around the governance, but at all levels of government and all players in this. There is a need for streamlining nationally consistent governance but also for jurisdictions to take the lead. There are some very good examples already in play but part of the challenge is working across different systems. The final piece of that puzzle is very much around moving to a zero-waste culture, and that speaks to the need for education and for information as well as building confidence in communities that there is actually a supply chain from creation to ultimate end point of the materials that they use. Those three different parts are really connected in transforming the whole system. Dr Lau, I might hand to you to speak more specifically around that if that is okay.

Dr LAU: Thanks, Ms Coram. In terms of addressing the circular economy, I think it is widely acknowledged and accepted that addressing plastic waste as an issue is a systemic change. A circular economy approach is the preferred model. That really means capturing the majority of the mass flow in a closed loop and not allowing that plastic waste leakage into the environment, with the consequences that eventuate. In terms of addressing that, Ms Coram has outlined a number of different factors but there are ongoing challenges that have been identified. The focus here is addressing single-use plastics as part of that, because there is a hierarchy of approaches that are also considered when addressing plastic waste per se in the circular economy environment.

We know that the most effective and economically easiest approaches are around minimising use and reusing items. It then progresses systematically through more technologically complex approaches: developing new systems and new processes for materials flow such as feedstock recycling, where end-of-life-cycle plastics may be upcycled into new plastic materials. In terms of achieving the circular economy, there is not a single approach that can be directed towards achieving that. There are behavioural, social, technological and data management changes—reinforcing the notion that it is a holistic change and there are many elements that need to be addressed.

The Hon. MARK PEARSON: Dr Wilson, in these maps et cetera that you have showed, you have indicated where most of the plastics tend to come together or get trapped or whatever and are findable. You are saying that is a good thing in a sense because we then have an opportunity to stop it from going into the ocean. Will you just explain what actually does happen once it goes into the ocean and what are the critical points in the oceans where it is causing the main problems? Obviously the harm to wildlife, but what other things is it doing? What might we not completely know now but you fear could be happening?

Dr WILSON: Thank you for the question. You are right that identifying the sites of high concern gives us a point of reference to control that—to find those hotspots and reduce those inputs. As it moves through the waterway, it disbursts. We know plastics travel and you have probably heard of the Great Pacific garbage patch in the North Pacific. There are actually many garbage patches around our planet. Once it gets out into our more coastal and ocean environments, it continues to spread and continues to break up. As you are probably aware, plastics break up but do not break down necessarily. The issues are that it is being found in all aquatic life; pretty much all species have it.

The Hon. MARK PEARSON: What causes a garbage deposit in a particular part of the sea, then? Why does it go there rather than elsewhere?

The Hon. SHAYNE MALLARD: Currents.

Dr WILSON: That is a good question. There are ocean currents and large circular patterns—gyres, they are called. It is like a centrifugal force and so the rubbish kind of gets drawn to these conglomerations in different parts of the oceans. There are small ones and some are more constant than others and some disappear, so it kind of moves and then comes together again. But the evidence we are finding is that in everything, from plankton through to whales, there is evidence of microplastic ingestion. For me, as a scientist, ingestion does not always

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equal impact, okay? There is a certain level that is going to cause harm. We know that for some species but not a lot of species, so in terms of research we are still trying to find that out and that is what scientists are doing around the world.

The biggest area of concern going forward is that, as it continues to break up and gets into that smaller size class, size fraction, there will be evidence of it being created at the nanoscale or forming nanoplastics in the future. We cannot really measure that at this stage in the environment because of the techniques available, but we know in laboratory trials that if you expose an animal to some nanoplastics then it can move readily through the tissue membranes and around that body and cause harm. We know because there is lots of evidence of plastics in humans as well.

The Hon. MARK PEARSON: Would you say that it is a poison at that point?

Dr WILSON: Yes, you are right, at that fine scale like any other chemical toxicant. There is cause for concern for that. The issue is that, with these plastics, the plastics are polymers. The polymers themselves are relatively benign, but it is the chemicals associated with those plastics that when that product is made it holds a lot of plasticisers and dyes and things like that and they can be toxic to an organism that ingests it or inhales it.

The Hon. MARK PEARSON: Does it attach itself to other pollutants?

Dr WILSON: Yes. Well, the pollutants attach to it so it is actually a great media for absorbing a whole lot of contaminants out of the waterway. People use it in the aquaculture industry to suck up the nutrients from the water and then pull it out again at their ponds. It is almost a floating cocktail of chemicals that, if ingested, can potentially cause this chemical toxicity as well as the physical harm of the plastics itself. That is where I think the real issue will lie in the future. We are only really just understanding this now. We know the chemicals, when they are ingested, leach off into the body. There have been studies around the world to show that and so that is the real issue, I think, going forward.

The Hon. PENNY SHARPE: This is a question to Ms Coram. Thank you for the CSIRO submission, which is, as usual, very good. I suppose I have two questions. One is: What is the status of your road map in relation to the State and Territory governments? That goes to my second question, which is the very clear point that has been made loud and clear throughout this entire inquiry—the need for harmonisation across the States and Territories. I am interested in you letting the Committee know what the kind of decision-making architecture is. I assume there is a ministerial council. Which Ministers fall in with it federally? Which State Ministers then join up to that? I could hazard a guess at that but I am interested in where you see that going. What is the status of your actual road map?

Ms CORAM: I can have a go at that. I am not sure that it is actually in our domain because our focus is on the science. The circular economy was developed for the Federal Department of Industry, Science, Energy and Resources and the Federal Department of Agriculture, Water and the Environment. But it was developed in collaboration with 83 different business and government participants. That was a piece of work to sort of scope out what the challenges were and what the useful steps might be. As a science agency we can make recommendations for what the next steps might be, but we are not involved in actually implementing them. I guess at this point it is with those departments.

The Department of Industry, Science, Energy and Resources is probably the primary driver in that, although Dr Lau may be able to give more of an update on that. As to the implementation, particularly around harmonisation, I think that is well and truly outside our visibility at the moment, although we continue to be involved in consultation around that. But Dr Lau is leading the development of the Ending Plastic Waste mission, which is really relevant to this, and is actively involved in conversations at the moment. Dr Lau, this is where I will hand over to you to see if you can update that any further.

Dr LAU: Thanks, Ms Coram. You are exactly right: The circular economy road map was really to identify the challenges and opportunities in translation to a more circular economy for plastics. We have been in conversation with a number of different State governments and Federal Government departments and, as Ms Coram said, it is not a regular role of the CSIRO to coordinate or implement that, but we certainly see our role as supporting that and drawing together the relevant stakeholders in business industry groups in government departments to have that conversation and share the information across those different stakeholders to better inform the harmonisation and identify the issues that, I suppose, will create impediment or slow down the harmonisation.

We are currently sitting on the ACT task force that is looking at implementation of the legislation around restrictions around single-use plastics, and it is really useful for that information to be shared more broadly.

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I suppose one of the next focus areas for us will be to look at how we can bring the different stakeholders together to share that learning and feedback that has come from community and from business around the issues that they see around single-use plastic restrictions so that when other jurisdictions may be implementing their plans, maybe that can be helpful information to inform how that goes forward.

The Hon. PENNY SHARPE: Thank you. Dr Wilson, I have a couple of questions for you. One is that on your slide for the Sydney area where you show obviously very significant deposits of microplastics, a lot of it is in waterways where it just seems to be mainly coming straight off land pretty much from what is going on there, so are there particular tidal impacts in Sydney in relation to deposits of plastics? There might be an area on the Central Coast or something—there are some industrial areas pretty close to waterways there—that they are actually ending up on the beaches in Sydney? Are you able to tell us that?

Dr WILSON: Yes. What we know with our plastics and microplastics, most of what we see washing up on the shorelines is very much localised. There is some dispersal of course, but what we see on the beach is predominantly—I would say probably 90-odd per cent. In estuaries, it is closer to 99 per cent of that. In our rivers, it is very much localised. On the coast, we do get influences of deposits from other areas. We know, for instance, on the coast of Sydney that the shoreline current goes northwards so anything coming out of, say, the Georges River-Botany Bay area will end up on, say, the northern beaches and eastern suburbs beaches as well as the Sydney Harbour deposits. There is a northward migration near shore that would influence those near shore beaches.

The Hon. PENNY SHARPE: From the work that you have done, given that it is so localised—I am familiar with the local government having done an incredible amount of work, particularly around waterways, such as the cleaning up of the Parramatta River and there is a lot of really great joint council work happening—have you been able to actually see the difference in the data about where those councils are active and are doing a lot of work? Is there less plastic there? Is their work worth doing? That is what I am really asking you.

Dr WILSON: Yes.

The Hon. PENNY SHARPE: And can you see it in the data?

Dr WILSON: I suppose at the moment our dataset is not showing that immediate change. That is the simple answer to that. I think the work they are doing is great and I definitely encourage them to continue on, particularly in the Parramatta River. There is just so much of it. They clean it up and have management strategies in place, but there are other sources. When you have got a large urban area to manage, it is difficult to control all those sources. In a smaller catchment, I think we are seeing evidence of that, and I will point to the northern beaches area where we are seeing reductions in some of our microplastic types. You can target, have strategies for, certain types of plastic even in the microsphere and it works. So pellets, for instance, in terms of industrial controls and management of that, that works. There are bigger issues obviously around just general single-use plastics and that breaking up. So having some legislative controls or strategies in place that are going to reduce that, I think, in the future will see that, and our dataset has really set us up now to monitor that over time.

The CHAIR: Interesting.

The Hon. MARK BUTTIGIEG: I suppose this is just to follow up on that theme, Dr Wilson, because it was very concerning evidence that we heard about the nano nature of that. I just want to explore that a little bit. Is the creation of a nanoplastic where it actually—to use my colleague's term—even without attracting the other chemicals, it in itself becomes poisonous because it breaks down to a chemical form, I guess?

Dr WILSON: Yes.

The Hon. MARK BUTTIGIEG: Does that happen by virtue of it eventually just breaking down and wearing down to a nano part? This is quite diabolical, isn't it, because what you are saying is the technology is nowhere near, in terms of monitoring, catching up to that, which means we do not actually know how much of this stuff is out there?

Dr WILSON: Correct.

The Hon. MARK BUTTIGIEG: So it gets to the point where, aside from other animal life, humans will start to ingest this and the effects will be manifest, and we will be way behind the eight ball. Is the logical conclusion that government has to get really serious about this at the source end? We are not going to be able to monitor it and capture it. That is kind of the conclusion that I am implying from your evidence.

Dr WILSON: Correct. Once it is in the environment, it is near impossible to clean up totally. We can have some efforts, but the best strategy is to stop it before it gets into the environment and have controls in place.

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I think the legislation—the amendment bill—is definitely one and the Plastics Reduction Commission that is mentioned in that is definitely a step forward, I think, for managing this waste, but we definitely need more effort in this space because it is a sleeping issue.

The Hon. SHAYNE MALLARD: I think no doubt the source issue is probably most important. In my 12 years in local government, we did a lot of rain gardens around street catchments and drains, bioswales and wetlands back into parks and rivers on the foreshore of Blackwattle Bay, for example. I am just worried now that they are capturing these plastics but they are sitting in the sandy—the root system of these plants. Is that going to be addressed as well?

Dr WILSON: Well, you are right. We know those type of rain gardens and other devices are capturing microplastics.

The Hon. SHAYNE MALLARD: They are dealing with oils and things like that too.

Dr WILSON: Correct. So they will be stored in there in the sediments. We know that there is evidence that it is actually being taken up by plants of that finer scale as well. You are right—all those devices and management strategies still need maintenance and control. What you do with plastic-laden sediment once you have collected it? You have still got to treat that in some regard.

The Hon. SHAYNE MALLARD: That is a challenge in itself. One other question from your slide presentation. On that slide "Microplastic Sources", under personal hygiene products you have toothpaste, shower gel and facewash. Within those products, toothpaste and face wash, there are microplastics?

Dr WILSON: There has been in the past. A lot of that is now removed. There has been a voluntary industry removal of those microbeads from those products. The latest figures I heard, close to 99 per cent of the products that did have them for sale in the Australian market are now being removed. To me, I see that as an issue that we have got under control. It is a voluntary restriction and so some legislative control around that would definitely enforce that further.

The CHAIR: Unfortunately, we are out of time. Thank you very much to all of you—Dr Wilson, Dr Lau and Ms Coram—for your excellent work and presentations today, leaving us rather overwhelmed, I think, by the scale of what we have just found out.

(The witnesses withdrew.)

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TONY KHOURY, Executive Director Waste Contractors and Recyclers Association, sworn and examined

GAYLE SLOAN, Chief Executive Officer, Waste Management and Resource Recovery Association Australia, affirmed and examined

ROSE READ, Chief Executive Officer, National Waste and Recycling Industry Council, affirmed and examined

[Audio malfunction from 11:46:05 to 11:49:52]

The CHAIR: We are having technical difficulties, but continue where I stopped you. Sorry, Ms Read.

Ms READ: Sure. That is fine. There are commercial issues because the value and volumes are low, and there are technical issues because there are problems in trying to sort the complexity of plastics. There is also the lack of demand for recycled materials. These are some of the key factors driving why the recycling rates are so low. From the National Waste and Recycling Industry Council's perspective, what we want to see is consistency across States. We do commend the member's bill and its intent. What we do also support is the ban of single-use plastics and problematic plastics because controlling those plastics at source is the most efficient and effective way to manage that. The council is very supportive of mandatory product stewardship schemes. We see these as the most effective, clearly identifying those responsible and making them responsible for those actions—the manufacturers, the retailers and those companies that are putting these plastics onto the market. They are the ones who can make the significant changes in design, in systems to collect and to recover and to ensure that they can be recycled.

There are some great examples out there. There is the oil stewardship scheme—the national scheme—and there is also the National Television and Computer Recycling Scheme [NTCRS]. The container deposit schemes [CDS] are a great example as well, where the responsibility is clearly set with those companies putting the products on the market. You can see significant change quickly. The CDS is a great look at how it has affected litter in New South Wales, for instance. The council is also concerned about PFAS and PFAS in products. While it is being addressed in terms of fire retardants, it is ever present in many products and we would want to see phasing out of PFAS elements sooner rather than later to help ensure cleaner streams and better recovery of materials. In terms of one of the other key areas is we want to see cleaner input. We see a real focus to need to start phasing out polystyrene and PVC packaging. This causes many issues in the municipal and kerbside recycling. We want to see single-polymer packaging, and we also want to see mandated labelling.

From a market creation side of things, what we want to see is mandated recycled content in plastics. While there is an intent with Australian Packaging Covenant Organisation [APCO], that is not mandated or required under law. We would like to see that to ensure that the companies do achieve these recycled content and create markets. The other issue I wanted to flag is that the National Waste Recycling Industry Council is currently working with many manufacturers and recyclers to further enhance resource recovery specifications so we can drive greater recovery and re-use. We have worked with APCO recently in enhancing specifications of materials coming out of material recycling facilities in bale form, and then materials coming out of secondary processes in pellet or flake form to ensure that they can be used properly by manufacturers. We are also working with the Vinyl Council of Australia to look at PVC coming out of commercial, industrial and construction demolition sites to try to look at what are the barriers and problems to recovering these materials and how can we keep these materials in the economy?

More specifically, in response to the member's bill, we do support the intent. However, we do want to ensure that there is great consistency with other State regulations in this area. We would encourage the Committee to consider that to align as much as possible because it makes it so much easier for the manufacturers and also for the various players in the supply chain to participate and engage. It is also easier for the community. There was a question about the products, and there is a mention about being able to ban products in the bill. I just wanted to clarify on notice: Does this relate to products just made from plastics or is it about all products? In terms of the commission, the only question we have is: How effective can the commission be in compelling change? In terms of creating priority, the commission is very effective in doing that. We also support that having the Premier being responsible really brings it front and centre. Thank you.

Ms SLOAN: I am CEO of the Waste Management and Resource Recovery Association Australia [WMRR]. We are the national peak body for the waste and resource recovery industry throughout Australia. We have over 2,000 members and individuals and 500 companies represented within it. We represent the breadth and the depth of the industry, not just one small part. In principle, we support the bill. We would stress very much that it is not just about plastic but any single-use items. We should be focusing on avoiding the creation of these at first instance and looking at how we improve material management. In my role as CEO of WMRR, I have sat on

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the South Australian ministerial advisory group and the ACT, looking at the implementation of this. I would support that it should be harmonised and we should be putting PLA if this bill was to progress in this.

The CHAIR: Sorry, PLA?

Ms SLOAN: The plastic—the plant-based alternative. Queensland is determined to leave that out of their single-use bill. However, under the National Plastics Plan it is proposed to be phased out. So for consistency—because it is very confusing for the public what is a PLA and what is a PT, for example; but we can talk polymers later. I think it actually has to go beyond just plastic to other single-use items like we have seen in the EU, where they have done 10 single-use items, including cotton buds and others, because they are readily available and can be replaced with re-use items. We would encourage the thinking of that. Unfortunately, we would say that the commission is an overkill. Just focusing on one material stream seems unnecessary. We would again submit that the New South Wales Government needs to look at a market development agency similar to Green Industries SA to pull the supply for all materials through the chain and look at how we approach material management in New South Wales more generally.

Unfortunately, in New South Wales we are still in a policy vacuum since 2018. We have seen very little action, as mentioned in the second reading speech. We actually need a radical rethink of material management in New South Wales that includes focusing on the waste management hierarchy, avoiding the creation of problematic materials at first instance and moving towards a circular economy. I absolutely echo some of the sentiments of the CSIRO that we need to focus on design and how we design materials at first instance for the purpose of re-use and repair, and we do material selection to avoid problematic materials such as the polymers we have discussed and even PFAS. We have seen some great examples overseas as to how to manage that and put responsibility on generators around the REACH program and the CLP program where we let consumers know what they are actually purchasing because we are not doing a very good job of that at the moment.

The CHAIR: What is the CLP program?

Ms SLOAN: The classification and labelling program in the EU. You have to say it contains BPA or PFAS or similar. We need to really empower our consumers about what they are buying and the potential impacts. It is a real challenge for us as an industry. We are the recipients of material; we are not the generators of material. We really need to think about the obligation on the generator as to what they do bring to market and how it is managed through the life of the material. We are very keen on focusing on that. I will probably just leave it there for now. Thank you.

Mr KHOURY: Our association is the oldest association representing waste and recycling anywhere in the world. We have been continually registered with the New South Wales Industrial Relations Commission since May 1948. We have got 208 members that operate across the whole breadth and depth of the industry. Many of those members are involved in plastic waste and the recycling options associated with plastic waste, either through kerbside collections, commercial collections or the operations of material recycling facilities. In recent years our industry has had to deal with many issues, such as the banning of imported recyclables into China and the recent ban on export of unprocessed plastic recyclables out of this country by the Morrison Government. The introduction of the CDS Return and Earn scheme has affected the revenue stream and the volumes on domestic collection contracts and materials recovery facilities [MRFs] as well. As my colleague Ms Sloan just mentioned, we have been patiently waiting for a long time for the New South Wales 20-Year Waste Strategy.

The Hon. PENNY SHARPE: It is imminent.

The CHAIR: Any week.

Mr KHOURY: In our view, the current New South Wales structure where we have a Minister for the environment who is also the Minister for energy is negatively affecting our waste management sector. For the past two years we have continuously and repeatedly been told that the priority is for him to deal with the Energy part of his portfolio. We have been very, very patient. There has been very little time dedicated to the waste management issues affecting our sector. The New South Wales waste management sector is the largest waste management sector in this country. We need a dedicated, standalone New South Wales Minister for the environment that can deal with our issues. We are running out of patience on this issue.

The Hon. SHAYNE MALLARD: It is outside of our brief.

Mr KHOURY: We have a waste levy of \$775-odd million a year that this Government is collecting from across the State. Very little of that is hypothecated back to our sector for waste management and recycling purposes. Many of the issues that are before you in the plastics bill can probably be addressed by funding out of

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the waste levy. As detailed in our recent letter to this Committee, I am happy to elaborate further through the Q and A. Chair, I have handed up to you a copy of my speaking notes for today.

In relation to MRFs and plastics and recycling, MRFs are not able to cope with plastic bags, toys, hoses, plastic wrappers, straws, coffee cups, coffee cup lids. All these items plus many other plastic items and any items that are smaller than a credit card are very likely to end up in residual waste. MRFs report that up to 50 per cent of their residual waste is plastic waste. Small plastic items that are variable in size and plastic composition are just uneconomical to recycle generally. The future for these MRF waste residues is likely to be as inputs into energy-from-waste facilities.

Polystyrene and kerbside recycling is an issue that our members have asked me to highlight. In kerbside recycling, polystyrene creates major cross-contamination issues. The issue of plastic waste and the threat to the environment via litter—plastic waste is not the problem. It is the irresponsible and thoughtless actions of human beings that creates litter and there should be a focus through the bill on greater levels of education to minimise the amount of litter. Microplastics and microfibres in the bill at proposed section 48D (c)—I would ask the question, what is Sydney Water doing to upgrade its filtering capabilities at its sewerage treatment plants to filter out these microplastics and these microfibres?

Proposed section 48D (d) to the bill states that "by the end of 2024, all packaging used in the State is recyclable, compostable or reusable." We ask the question: Who will regulate and how and what will be the penalties for non-compliance? At proposed section 48D (e) there is an emphasis on using recycled content. We say that should be "use Australian recycled content". If we want to close the loop, we have got to emphasise Australian recycled content. Division 4 notes a plastics reduction commission. If there is to be a commission, we would love the opportunity of being represented on that commission. For a long time now our industry has not had a voice with government on these various panels and commissions. On behalf of our members, we would like to have a seat at the table on that commission because if there is going to be discussion on waste management, waste avoidance, product design for better recycling outcomes, you need experienced industry personnel at the table.

Proposed section 48H to the bill and washing machines—New South Wales is one of six States and two Territories. In terms of population, Australia is quite a small nation. If we are going to have standards relating to washing machines and the manufacture of washing machines and the importation of washing machines, they need to be national standards. Proposed section 48K to the bill states that "the regulations may create offences". The wording is not strong enough. For the best investment outcomes, industry wants certainty and we need regulators to regulate and enforce regulations.

I have some other comments from members. The community does not understand plastic recycling. There is a frustration with the complexity of plastic formats and people often feel angry if they find out that items that they have diligently separated end up in landfill. Information sources are deficient in accessibility and quality. Most plastic recycling education is very generalist and/or often inclusive of industry jargon to the point of being misleading to the community and in some instances is lost upon the community as to what that jargon means. Greater transparency is needed post China Sword and the negative media coverage. The community questions where all its plastics are ending up and whether plastics are in fact being recycled and whether they are being recycled locally. There is a desire by the majority for greater transparency and honesty when it comes to plastic recycling.

The definition of "recycling" is broad and does not reflect the value of end markets. There is not enough emphasis in transitioning to simplified and higher-value plastic formats. The recycling industry knows the value of end markets, however the complexity of plastic formats is often driven by marketing departments and is not necessarily related to functional requirements. This results in a variety of colours, tints and formats entering the market with no consideration of the value of the end market or in fact whether there is an end market for that material. Thank you, Chair. They are my opening comments.

The CHAIR: Thank you very much for those very comprehensive opening statements. Ms Sloan, I have a couple of questions for you to expand on some of your comments in your opening statement. You mentioned the plant-based alternatives and the bill. What was your concrete suggestion in relation to that?

Ms SLOAN: For abundance of clarity, PLA as well as oxo-biodegradable should be included in the definition of "single-use plastic".

The CHAIR: Okay, that is clear. With PLA, plant-based alternatives—

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Ms SLOAN: A lot of compostable packages promote PLA as an alternative to recyclable. It causes a lot of confusion as to where it belongs. We debated this long and hard in South Australia, for example, and for consistency we agreed that anything that could be used once—and particularly compostable packaging is only used once and then goes into a food organics and garden organics [FOGO] stream for compost—should be treated as single-use even whether it was compostable or recyclable. PLA is very confusing for the general public.

The CHAIR: Does that include compostable bags that are the compost bin liners? Just to be clear, are you saying that they should be included in the bill and they are not good or am I getting confused?

Ms SLOAN: No, you are not getting confused but you are highlighting the complexity. The challenge is the single-use bin bags for the FOGO bins actually do serve a purpose when it comes to assisting with getting that material in a bin. We tend to focus on single-use plastics as being items from takeaway that will litter at first instances to get this started, and that has been the experience in SA. We are not saying no to all bags. Compostable bags within a FOGO bin do play a useful role. There is a bigger issue about the 100 per cent compostable packaging in the sense of, there is no allowance in New South Wales for packaging to be within FOGO bins at scale because it affects the resource recovery orders and the product output. That gets into another realm of challenge with breakdown of material. Experience has shown in other jurisdictions to have the first class of material as very easy to understand so that you can actually see how it is implemented. It has been the straws. It has been the stirrers. It has been often the lids. Having that standard list but making sure it goes to the oxo-biodegradables and the PLAs at first instance for clarity is really important I think.

The CHAIR: With the target in the bill to ensure that "by the end of 2024, all packaging used in the State is recyclable, compostable or reusable," are you challenging the "compostable" part of that?

Ms SLOAN: I have concerns about it—

The CHAIR: We do not have the infrastructure for a start.

Ms SLOAN: We do not in Australia, and we have got a bit of a tail wagging the dog with the APCO target of 100 per cent compostable by 2025. Generally compostable is used with a food and take-away environment. It is often going to end up in a public place and we do not have FOGO in a public place in New South Wales and we also do not have the regulatory regime to support it. We have to be cognisant of what goes in a bin before packaging determines the system. There is no issue with, for example, having a compostable packaging CDS scheme—extended producer responsibility scheme—because we are at an interesting tipping point in my mind at present. There are a lot of businesses absolutely trying to do the right thing and use compostable, particularly in a food base, but there is not the public place infrastructure for it. Again, we cannot have councils and my industry meeting the cost of the packaging poor design. We need to align that and have that difficult conversation too I think.

The CHAIR: That is very useful. I think what you are saying about the plastics reduction commission, and why you would have something so nice and why would you not expand it to green industries, ties in with the fact that we do not potentially have the infrastructure for compostables. Could you expand upon what the South Australian body Green Industries is? That is potentially something that the Committee could explore too.

Ms SLOAN: Yes—2017 submission. I will resend it again. Absolutely. It is a market development agency but it also focuses on material and resource efficiency. In 2017 South Australia actually looked at how they could reduce carbon emissions and they came up with a circular economy strategy for SA that they are currently updating. They forecast a 40 per cent reduction in carbon emissions and 27,800 jobs by 2035 by going circular and thinking about how you do those materials streams management from design all the way through to development and re-use. We need a similar body. We have got Sustainability Victoria that does some of the similar work and so it is much more targeted investment in industry and industry development. As a result, we have seen \$300 million in Victoria recently enter the industry and last week in South Australia we saw \$110 million. We are not seeing the size scale investment in New South Wales. In fact, we are haemorrhaging that investment to other States because of our policy deficit in New South Wales at present.

The Hon. MARK PEARSON: Mr Khoury, you seem to be stressing the responsibility of the community to not litter and to separate plastics, et cetera, yet we had evidence yesterday when I think the concept of mandatory stewardship was discussed. We came to the conclusion that, at the end of the day, the community can only do so much considering the complexity of the various plastics. At the end, the responsibility was turned around and put back on the producer of the product and the distributor. Do you think it is possible that we are expecting too much from the community? So rather than separating three different types of plastic and trying to work out which can be put into the garbage and which can be put into the bin, should we just let it be, "Just put

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the plastics in the bin" and the industry who made those plastics should be responsible for separating them into the various uses? Long question, sorry, but there it is.

Mr KHOURY: That is okay. If the plastic was to just be thrown away in the bin with a red lid it would currently end up in landfill. That is the fact of the matter. We do not have alternative waste treatment technologies here in New South Wales anymore since the Government banned the land application of mixed waste organic outputs. Currently the only pathway for the bin with a red lid is landfill. So I am not surprised that many householders are confused when it comes to their plastic waste recycling. There is lots of information out there. There are 128 councils across the State that have a multitude of different marketing and education programs in place. But the overall message I would be giving a householder in relation to their plastic waste is, if in doubt, do not put it in the bin with a yellow lid, throw it out in the bin with a red lid.

The Hon. MARK PEARSON: Why should that be on the shoulders of the consumer, and should the producer of that plastic not take the responsibility of separating the plastics and no plastic go in the garbage bin?

Ms SLOAN: Can I respond to that, with respect?

The Hon. MARK PEARSON: Sure.

Ms SLOAN: I think the key point that could be missing in this is the generator is not taking the material back through the kerbside. The kerbside is being funded by local councils and not generators. If there was more obligation on the generators to take responsibility for end of waste—if they were funding that kerbside scheme—I suspect we would see a lot less polymers in that bin and we would have standards around international standards. We have been talking since 2015 new plastics economy with Ellen MacArthur about only having high-value plastics in our bins—polyethylene terephthalate [PET] high density polyethylene [HDPE] and probably polypropylene, all of which we can do onshore. They are the glasses and tubs. But at present, because it is an external cost that is picked up by councils, we are absolutely not saying the generators take responsibility for improved design. Instead we have a lot of discussion about "By 2025 everything will be fine."

Ms READ: Which it won't.

The Hon. BEN FRANKLIN: I have a direct follow-up.

The CHAIR: A direct follow-up?

The Hon. BEN FRANKLIN: I am very concerned about the statement you just made and the general tenor of where you are heading. You talked about the fact that we do not have the infrastructure in Australia—

Ms SLOAN: No, I did not say no infrastructure.

The Hon. BEN FRANKLIN: Well, we did not have appropriate infrastructure in Australia—not just then, but beforehand.

Ms SLOAN: Policy in New South Wales.

The Hon. BEN FRANKLIN: You actually said infrastructure—that you were concerned that we did not have the right infrastructure in Australia. That was in answer to something that the Chair was saying. I was just going to follow-up on that. Do you think we do have the infrastructure in Australia?

Ms SLOAN: It depends which stream we are talking about. So plastics?

The Hon. BEN FRANKLIN: I will go back. Please discuss this issue.

Ms SLOAN: Sorry, I do not recall saying that, that is all.

The Hon. BEN FRANKLIN: I am not having a go; I just want you—

Ms SLOAN: FOGO public place infrastructure. It was the public place infrastructure for the FOGO.

The Hon. BEN FRANKLIN: I want you to talk about what we need in more depth, please.

Ms SLOAN: Okay. I think the CSIRO roadmap is a really interesting document, even if you just read the exec summary because it is quite long. The plastic stream—it talks in there that we need \$150 million just to make the current recovery rates of investment for secondary processing for infrastructure in order to reach the 2030 target of 80 per cent. It is a \$600 million or 600 per cent increase to get to where we need to. I believe we have sufficient sorting capacity in Australia. I do not buy into, "We need additional special sorting." The challenge is the design of the material and the multi-polymer levels. One of the things that is in the CSIRO roadmap as well is the fact that we should only have single polymer plastic. So if you think about when you go through your

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supermarket, you are seeing multiple layers of meat trays of different polymers. No MRF in the world can sort that. Our biggest challenge and our deficit of infrastructure that we seeing in plastics currently is secondary processing because we do not have onshore markets so we lack the required demand to utilise Australian recycled material in Australia at this time.

For our packaging targets and packaging we have got about two million tonnes of plastics on the shelf just for packaging. Currently the Australian Packaging Covenant Organisation [APCO] aspirational target is 20 per cent by 2025 so it is not even the international 30 per cent mandated. So because our industry is not any different to any others, we do not build facilities on spec. We need to know there is a market demand to pull that material through. So our big shortfall—and what we are going to see with the 1 July commencement of the plastic licensing for the mixed plastic—is that we do not have sufficient processing capacity to make secondary products. We are doing a great job with things like making street furniture and playground equipment but there is absolutely no requirement for anyone to buy that back. So until we see mandated government procurement at all levels to create those circular economies or closed loops in their precincts, we are going to struggle to deal with some of those stockpiles, unfortunately.

The Hon. PENNY SHARPE: Thank you for coming in. It is always good to hear from you three. I have a couple of questions. I know there has been a lot of frustration about the lack of a waste plan in New South Wales and I think we have been waiting since 2018. The issues that you talked about today, are you confident that they are going to be picked up in that plan? Do you have any line of sight into that?

Mr KHOURY: We really do not have a line of sight into it. We were promised a meeting several months ago with the Minister to review where we were at with the 20-Year Waste Strategy. The three of us were at that meeting. That follow-up meeting never took place. We are just waiting patiently at the moment.

The Hon. PENNY SHARPE: So you do not know.

Ms READ: No.

The Hon. PENNY SHARPE: We have asked the Minister and it has become a joke in this Committee.

Ms SLOAN: We are optimistic because, to be fair, the strategy—not optimistic on timing but optimistic that the creation of DPI last restructure has added a level of ability that was not previously and is not available in EPA, which is very much regulatory focused. You do not regulate your way to success. By having the creation of DPI, we have started to get at least the concept of material management and the link to the carbon and energy. The 2018 document that was exhibited was very much a kerbside strategy and reflected probably very traditional linear EPA thinking of "We take, make, dispose, and it only happens in the household." We know 70 per cent of the material that is generated is in construction and demolition [C&D] and commercial and industrial [C&I]. So we are optimistic with some of the conversations that we are having but we have not seen a document in over 15 months.

Ms READ: Yes, a long time.

The Hon. PENNY SHARPE: Obviously our recycling rates are terrible and plastic recycling rates are terrible for all of the reasons that you have outlined. Who is doing it best internationally and what is it that they do that works better than what we have got?

Ms READ: I think, firstly, who is doing it best in Australia is South Australia. We have some great experience locally as well.

The Hon. PENNY SHARPE: So what is it that they do? What is it that they have done? I know South Australia is very proud of its waste policy.

Ms SLOAN: They have taken much more of a strategic approach to material.

Ms READ: They have just invested in it.

Ms SLOAN: They have a statewide education campaign about what goes in the bin. I would not necessarily agree with all the elements but at least it is consistent and statewide. They also have—

The Hon. PENNY SHARPE: Sorry, just to be clear: All of their councils has the same material in their recycling bins?

Ms SLOAN: Yes.

The Hon. PENNY SHARPE: If we could do that, that would be a start.

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Ms SLOAN: They have a "Which Bin" strategy. They have a very strong education piece that goes with it that goes across the State. They have very, very strong industry engagement. My association has a branch there and we are actually funded by Green Industries and we meet with Green Industries monthly. There is very strong communication, so that means we get to all elements. Through the Green Industries approach, which was previously zero waste, they have had a continued emphasis on solving material streams and infrastructure in a holistic manner. They have just recently released their food waste strategy for the whole State, obviously, after extensive consultation. As we know, they have picked off problematic materials to take out of the stream. So, they were a 43-year CDS. They were the first to ban the bag. They were the first to ban single-use items. They very much take a systemic approach to solving problematic materials so that we do not end up wish-cycling through the yellow bin.

The Hon. PENNY SHARPE: And are there any international ones you would point to?

Ms READ: I do not know. In Europe it can range from—you go to the Netherlands and Germany and places like that, and it is high end, but they also have a much stronger regulatory approach through the Waste Electrical and Electronic Equipment Directive, through the Batteries Directive and through the Packaging Directive. The UK has had a massive shift and uptake of recycling practices and all sorts of things. With WRAP UK, bringing in WRAP UK and the impact it has had on changing the UK scenario—both great examples. Even Western Australia with its new strategy that has been out for a couple of years now—seeing the swing and the focus and the change that is happening there, and getting that State consistency in what is going in the bins, in driving resource recovery and so on. Seeing in Victoria the major BuildVic agency really being very proactive in looking at all of their builds and—where can we put recycled materials into this? They are the examples. By simply being proactive and focused and having a holistic material focus, you can do so much.

Ms SLOAN: I would really encourage you to look at the Packaging Recovery Note [PRN] system in Europe. You are actually linking the generator to the cost of the recycler and giving tax incentives through Value Added Tax because you have genuinely got to demonstrate that it is recycled and where. One of our shortfalls with the green claim system here is that, in theory, you have got to be able to not only prove it is recyclable but demonstrate how it gets to the recycling facility—I do not think even the Australian Competition and Consumer Commission realised that second part was in their own document on page 13, by the way—whereas there, you actually have to demonstrate it and you get tax refunds. Now, with the virgin plastic tax coming in as well, you have actually got a holistic system towards looking at how you recover and manage, and placing obligation. While we continue to—

The CHAIR: Where is that, sorry?

Ms SLOAN: In Europe—England, in particular.

The CHAIR: Okay, so that is a tax on new plastics coming in?

Ms SLOAN: Two things: There is the PRN, which is the Packaging Recovery Notes. That is the recycling piece. It also links to their tax for the virgin. If you look at the English waste strategy, it is a really strong one. It has only got five elements, but it is very clever.

The Hon. MARK BUTTIGIEG: But they are tax credits, not—

Ms SLOAN: There is both. There is both a credit for recycling and a cost for using virgin, so it is a system and it is quite comprehensive.

Ms READ: They are all different forms of implementing product stewardship, basically, in different ways, and having financial incentives in the right place. The container deposit here in New South Wales just illustrates how clearly a financial incentive can change behaviour.

The Hon. MARK BUTTIGIEG: It sounds like the evidence we have been hearing—this is a consistent theme. Unless you get this piece embedded in the circular—

Ms READ: Yes.

The Hon. MARK BUTTIGIEG: —you are not going to solve the problem.

Ms READ: No, because you want it long-lasting and sustainable, so you have to have a systemic change.

The CHAIR: Everybody talks about consistency and urging that this is nationally consistent, yet we have got the example of South Australia doing something very good. With labelling, for example, and education to South Australian residents in terms of recycling and things, have they done anything State-based in terms of

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labelling on products coming into that State? No. And so, in terms of education, it is just very good education campaigns, obviously; that is one thing.

Ms SLOAN: Yes, behavioural-led, and obviously the CDS—so, it was linked to the CDS from early days.

Mr KHOURY: Probably the single biggest thing that we can do in New South Wales is to have a Statewide education campaign that really targets the householders so that there is no doubt at the household level as to what is or is not recyclable.

The Hon. SHAYNE MALLARD: You need consistent council approaches, too, though.

Mr KHOURY: You need consistent council approaches, too.

The CHAIR: What do the other panel members think about education being the most important? I would just be interested to know, in terms of behaviour change, how much that does cut through. Ms Read?

Ms READ: I think regulation is far more effective. The plastic bag ban, you see the switch in use of plastic shopping bags—instant change. Container deposit—instant change. National programs for oil stewardship and the National Television and Computer Recycling Scheme—you have seen the recycling of e-waste go from 18 per cent to 60 per cent over five years, funded \$25 million to \$30 million a year by the companies who are putting those products on the market, creating new recycling capacity, greater access and so on. It happens more quickly and more effectively. But in all of those ones, to be successful you need to have strong education to run in parallel. That is perhaps one of the weaknesses of the NTCRS; there has not been as much strong community education as there could have been. Container deposit—there has been an amazing level of investment in education. It has to run parallel.

The CHAIR: Thank you. Any other questions from members? I will jump in and ask one, if not. I just wanted views around—if we do not start looking at phasing out single-use plastics, recycling more and moving into a full circular economy, there is also the potential that some communities are getting concerned about in terms of waste-to-energy incinerators. Do any of you have views on those and whether they are part of a circular economy solution or whether they impact the ability for governments to move towards a full circular economy?

Ms SLOAN: Waste-to-energy absolutely has a role to play in our waste and resource recovery infrastructure. They should only be used for residual and that is where they sit on the hierarchy, above disposable to treatment. What has to happen is not to ban material to waste-to-energy. We actually have to have a systems-based approach to material management so that we walk through the hierarchy of avoiding recycling before we get to treatment and disposal. In the policies that we are seeing, one of the things that SA has done recently with its waste-to-energy policy—it has linked the 70 per cent diversion in their overarching waste strategy to how much can be disposed to waste-to-energy.

We absolutely support it—it is very safe and appropriate—but it is only for residual. Limiting the amount that goes into waste-to-energy with a cap, which is being contemplated in Victoria, will not increase recycling. What is going to increase recycling and recovery is having the appropriate materials designed that are capable for recycling and re-use. The challenge we have got at the moment is that there is too much linear thinking. "We will just keep putting to market without any consequence and hope that somehow this can be turned into a product." We need much more emphasis on taking responsibility for what goes to market to be designed properly so it can be re-used, repaired, refurbished and recycled, and we are only dealing with those residual elements that have not got a home in energy from waste.

Mr KHOURY: In terms of energy from waste, we absolutely have to maximise the amount of material that goes into the bin with the yellow lid and into the bin with the green lid, including FOGO. If we do that, the contents of the bin with the red lid should be able to go to an energy-from-waste facility. Modern energy-from-waste facilities that are designed with sophisticated air pollution control equipment that are well located—they are part of the solution in just about every other modern economy around the world. That is an area that New South Wales in particular lags behind. There are a couple of applications out there at the moment that are there for consideration by government.

Ms READ: I do not have anything further to add. Ms Sloan and Mr Khoury have covered those points exactly.

The CHAIR: Thank you. We will go to another question from Penny Sharpe.

The Hon. PENNY SHARPE: It was really just a follow-up on the waste-to-energy because I think one of the concerns from people who are opposed to waste-to-energy is that it ends up being the default in terms of

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getting rid of a lot of stuff, rather than the focus up-front. Just following on from your contribution, Ms Sloan, South Australia seems to have found the lever that would be able to allay those fears in terms of being very clear about what ends up at waste-to-energy. I have been on an inquiry about waste-to-energy and been quite involved in that discussion over the last several years. Can you just take us through how that mechanism in South Australia works? You went through it pretty quickly. I am very interested because I think it actually is very important in terms of gaining more acceptance around this as a small but important part of the whole picture.

Ms SLOAN: Yes. I would really love to add that we are not necessarily chasing household material for energy for waste. Often it is the C&I stream. What comes out of not an office block but a factory is not very homogenous as a stream. What comes out of a household and goes into a bin is pretty stock standard: It is food, it is containers, it is paper. So it is not often, given the volumes, that we want that material. But one of the things that has been done in SA with their strategy is that you cannot, as a council, contract for any more than 30 per cent of your red bin residual into an energy-from-waste [EFW] facility. That is a very public statement. We have done some work with European nations. I am very happy to send to you a letter we did recently for Victoria that talked about how you maximise diversion from your household bins.

One of the first things you do, potentially, in a 20-year strategy is require FOGO, for example, so you are taking the food waste out. Part of the challenge for councils is the ambiguity, is what is expected of them and managing their kerbside material to get diversion. Once you have worked out in a systems-based approach—"How do I avoid? Do I put in compost caddies at home? Do I do community gardens? Do I then put through a FOGO system that I am required to so that I can only be left with residual?"—that takes a lot of the conversation and the concern out of what is an emotive debate. We do know that there are many types of energy for waste. There is fuel. We have got RDF facilities in western Sydney at present. We have got anaerobic digestion. All play really good, positive parts in a circular economy by getting the energy before we go to landfill.

The CHAIR: What was the RDF?

Ms SLOAN: That is refuse-derived fuel. We actually use that for cement kilns at a number of facilities in Australian and overseas. Again, that is material of high calorific value that does not have a home, cannot be recovered, that we use to take off the grid. There are many good things we can do.

The Hon. SHAYNE MALLARD: We heard yesterday that 50 per cent of landfill is organic material, that that is the biggest challenge for landfill—timber, paper and organics.

Ms SLOAN: The figures vary, but yes.

Ms READ: A large percentage of what goes to landfill at the moment is organic material that could be diverted and recovered for an energy, compost, a whole variety—

The Hon. SHAYNE MALLARD: It seems like low-hanging fruit.

Ms READ: Yes.

Ms SLOAN: It is. We need certainly as to what the policy expectations are for diversion in New South Wales. Then we need infrastructure funding, because it is very difficult. The same conversation we have been having about yellow bin markets we are going to have for FOGO. But we have got a brilliant opportunity, because our soils are the most depleted they have ever been, to actually use that compost in a circular manner. But it means councils need to actually start using compost.

The Hon. SHAYNE MALLARD: Are we talking about a third bin?

Ms SLOAN: We already have three.

The Hon. SHAYNE MALLARD: A fourth bin, then.

Ms SLOAN: No. We are not talking about four bins. Try getting that through the planning department.

The Hon. SHAYNE MALLARD: My lane has got no more room for bins.

The Hon. MARK PEARSON: Mr Khoury, there could be good news. The Minister may think it is more imminent now that it is connected to energy production.

Mr KHOURY: Let us hope so. Look, above all, what we want is certainty. I am not sure of whether this Committee is well aware of what has taken place a couple of years ago, when the resource recovery orders for the land application of organic outputs were removed by the Government, by the EPA. That has created shockwaves across the industry. Investors are nervous. We want certainty. We certainly do not want a repeat of

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what happened with the alternative waste treatment debacle that the industry has had to face for the last couple of years.

The CHAIR: Just explain what that was again, Mr Khoury. You just went through that very quickly too.

Mr KHOURY: Over about the last 14 years, the Government and the EPA encouraged a number of operators to invest in alternative waste treatment facilities, where the bin with the red lid was taken away and it was processed. All of the material that could be removed from the bin with the red lid was taken out, whether it be plastics, whether it be metals. Then what you were left with was some organic fractions that were turned into a soil conditioner. There were resource recovery orders that the EPA developed over a long time for the land application of those soils. Then a couple of years ago the EPA announced that some scientific studies had revealed that there were contaminants in that recycled product and they banned the land application of that product from, I think it was, December 2019 onwards.

Ms SLOAN: It was 2018.

Mr KHOURY: It was 2018.

The Hon. SHAYNE MALLARD: Let us be clear: Those contaminants were plastics that did not—

Mr KHOURY: We have never seen the reports there, Mr Mallard. So it would be hard for me to comment.

The Hon. SHAYNE MALLARD: Certainly, it was reported at the time.

Ms SLOAN: That is correct. It was concerns about some glass, plastic and bromides, which is why we have to make sure that we set the regulatory regime correctly for FOGO because, again, if we have got packaging and others in that stream, we do not want a recurrence. You have got to get that reg right.

The Hon. SHAYNE MALLARD: It just goes back into the environment. It is a legitimate concern.

Ms SLOAN: Back to Mr Khoury's point. That was an overnight revocation of significant millions of infrastructure, which makes it very challenging for people to invest in New South Wales. We have not had a review of that resource recovery orders and exemptions process to give us certainty that we could invest in technology in New South Wales without it being revoked overnight.

The Hon. SHAYNE MALLARD: Yes. We heard about stranded recycling assets.

The CHAIR: When it was banned at that time, was there a commitment and promise by the Government to undertake investigations and find out and come back to industry, or was it just banned—"That's it"?

Mr KHOURY: It was banned, and there was some support given—some financial support provided in the short term—and the facilities and the councils were given relief from paying the waste levy, because that material had to be sent to landfill. In terms of going forward, I think the Government provided some funding for some studies but certainly not for infrastructure, as I am aware of. Ms Sloan, you have been more heavily involved in that in recent times.

Ms SLOAN: The order was revoked. So you could no longer apply to land. There have been levy exemptions for one year, recently extended to three of the four facilities to the second year. The total funding package for the transition that was offered for councils and industry was only \$24 million. Consider a couple of those councils, for example, did not even have a third bin. So we have got significant issues to try and move those towards FOGO. It is just really not that simple in the absence of markets. So the funding is a significant shortfall for what is required to update those facilities.

Mr KHOURY: The revocation of those orders had an immediate impact upon our levels of diversion from landfill.

The Hon. SHAYNE MALLARD: An impact on the environment.

Mr KHOURY: We had a target of about 70 per cent. I think we are somewhere sitting in the mid 40s at the moment.

Ms READ: Precisely. The recycling rate has not changed since 2016. We are still at 46 per cent, thereabouts.

The CHAIR: We are out of questions, I think, and almost out of time. Thank you very much for appearing before today's inquiry and for your very good evidence.

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(The witnesses withdrew.)

(Luncheon adjournment)

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MICHAEL ROGERS, Australian Fresh Produce Alliance, before the Committee via videoconference, sworn and examined

IAN McALISTER, Chief Executive Officer, Consumer Electronics Suppliers Association, sworn and examined

DAVID STOUT, Chief Executive Officer, National Retail Association, sworn and examined

The CHAIR: I welcome our next witnesses. There is the ability for you to make an opening statement if you wish. Mr Stout, do you have an opening statement?

Mr STOUT: I do. The National Retail Association [NRA] is a not-for-profit association which represents over 28,000 outlets from every category of retail including fashion, groceries, department stores, household goods, hardware, fast food, cafes and services. The Australian retail sector accounts for 4.13 per cent of GDP and 10 per cent of employment, which makes retail the second largest employer of the Australian people. The NRA supports the New South Wales Government's decision to ban lightweight plastic shopping bags and selected single-use items. Plastic in our environment has proven impacts upon marine wildlife, including birds and other wildlife. We have been working with all State and Federal governments across Australia to obtain clear and consistent directions needed to support proactive action. The NRA has a great track record when it comes to proactive initiatives that bring industry, government and community together not only to protect our environment but to deliver beneficial outcomes for all.

Retailers have been leading the way in sustainability, phasing out lightweight plastic shopping bags, committing to national packaging and food waste targets, developing product stewardship schemes, implementing world-class energy reduction and investing in cutting-edge innovations. Retailers, large and small, are actively addressing sustainability across their businesses. It is not a simple task and it is easy to get overwhelmed by the shifting policies. When laws vary by jurisdiction, sometimes even at council level, it does lead to confusion and hesitation. Retailers need a consistent policy approach across States across all retail businesses in an effort to reduce complexity and produce targeted communications that address the litter issue.

Businesses must use packaging materials that are fit for purpose and, in some cases, meet strict health, safety and hygiene needs. However, these needs are often contradicted attempts when it becomes more sustainable. This means that there is a place for plastic and messaging around plastic needs to be carefully managed. While some national chains are already complying with similar schemes interstate and have their own proactive environment and waste policies, for many businesses in New South Wales the new measures proposed will potentially cause significant impacts, including customer inconvenience and higher costs. It is well known that many small businesses, especially in the retail sector, are struggling to maintain margins and viability in the face of new economic challenges. It would be very important for these small businesses to learn that it is possible for them to manage their response to the schemes in a commercial way and actively improve rather than detract from their margins.

The CHAIR: Thank you very much. Mr McAlister, do you have an opening statement as well?

Mr McALISTER: I do, yes. Who is CESA—the Consumer Electronics Suppliers Association? CESA represents the major suppliers of consumer electronics to the Australian market. Our members are largely global suppliers. Major brands you would all be aware of include LG, Samsung, Electrolux and so on. CESA members have a strong commitment to sustainable products and circular economy principles. We support and participate in a number of the Federal Government's product stewardship programs, such as the National Television and Computer Recycling Scheme, the battery stewardship scheme and MobileMuster.

CESA members are members and participants in the APCO—Australian Packaging Covenant Organisation—arrangements. They are all members of APCO and meet the APCO targets. CESA members support the Federal Government's plastics plan and are working with the Federal Government and APCO on a phase-out of plastic packaging and a pathway to more sustainable use of expanded polystyrene—EPS. EPS is CESA's main focus in our submission. Moulded consumer packaging plays an important role in ensuring products get to the consumer undamaged. For small appliances, such as kitchen appliances, coffee machines, audio equipment, laptops et cetera, CESA members are phasing out EPS in favour of alternatives, such as honeycomb cardboard. However, there is currently no alternative to EPS for the protection of large appliances, such as refrigerators, large-screen televisions, photocopiers, ovens and so on.

EPS provides the strength, shockproofing and waterproofing enabling the effective transport of these products without damage. APCO and the Federal Government recognise this and have advocated alternative approaches, such as product stewardship and EPS collection schemes. As EPS is 100 per cent recyclable, it makes

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sense to get them out of landfill; it should be a priority. What would CESA like? We would welcome New South Wales legislation and proposals to complement and reinforce the Federal Government's plastics plan and the proposed product stewardship arrangements to reduce EPS going to landfill. Of particular interest to CESA members is the introduction of improved EPS collection arrangements and recycling facilities by local government. For example, some local councils are doing excellent work on this in New South Wales—the Shoalhaven and Eurobodalla councils have excellent recycling and collection of EPS. However, this is not consistent across the State or the country.

That is what we would like to see come out of this—Federal Government arrangements and APCO arrangements for a product stewardship arrangement. CESA members would not wish to see more stringent regulations introduced over and above Federal requirements as differing State-based legislation can seriously impact national supply chains and adversely affect consumer access to product. We have encountered this in the past where State governments have gone off and introduced more tougher regulation and that has had a severe impact on supply chains and, in the end, consumers because in some cases the consumer has been denied access to product. That is all I wish to say.

The CHAIR: Thank you so much. Mr Rogers, did you also have an opening statement?

Mr ROGERS: Yes. Thank you, Chair. The Australian Fresh Produce Alliance is an organisation representing the interests of 30 large fruit and vegetable growers who account for about half the turnover of the fruit and vegetable industry nationally. Importantly, there are about 1,500 suppliers—growers—in the supply chain. So the critical part of the industry moving forward—and I am based in Melbourne so my apologies to the Committee that I could not leave today to attend in person—in terms of where we are coming from, Australian consumers are concerned about the impact of plastics from all sources and the relative impact of their different purchasing decisions.

For fresh produce, packaging plays an important role in the integrity and protection of food as it travels through supply chains from farm to plate. Critically, product protection should be the primary goal as food waste generally accounts for a larger proportion of the life cycle environmental impacts, specifically emissions, of the food packaging system. In order to meet the public policy objectives of supporting Australians and increasing our overall sustainability, governments can work with industry on developing environmentally friendly packaging solutions, encouraging the reduction of non-essential packaging and supporting the collection, processing, recycling and re-use of packaging materials.

In the context of the discussion today, the AFPA does not support the elimination of fruit and vegetable packaging as outlined as it will lead to a significant increase in food waste and an overall detrimental outcome for the environment. The AFPA asks that all parties ensure that any action to improve current practices fully considers the complexity of current arrangements and ensures that those actions are of overall environmental benefit over the long term. I will leave my comments there. Thank you very much.

The CHAIR: Can I say from the outset it is great that you all have agreed to attend because we specifically, in terms of witnesses, wanted to get the viewpoints of the industry and to work through some of these issues in a genuine way. It is great that you could all be here. I might kick off. It is Cate Faehrmann here. Firstly, I will let you know that we do have the Hon. Catherine Cusack from the Government who is online dialling in via videoconference while the rest of the members are present here in the Macquarie Room. Mr Rogers, I am interested to know—and, fair enough, we have received a lot of evidence about the situation with the product life and longevity of fruit and vegetables, in particular in terms of plastics but obviously other food as well—what research has the Australian Fresh Produce Alliance undertaken? What work are you undertaking to have a look at the plastics that are used and the alternatives available? We are very interested to know what research is going on in that space that you are involved in.

Mr ROGERS: Yes, I am happy to give you an overview. We did some initial research from our perspective about two years ago around the role of packaging in fruit and vegetables. Royal Melbourne Institute of Technology undertook that work for us and that report is available on our website. It confirmed what was known and is known probably privately and commercially around the world in retail after trialling a number of materials, that packaging does play a key role in reducing food waste and particularly extending freshness. The next bit of work we did was around consumers in homes and it was about 38 households. We looked at how consumers used fresh produce in the home as well. Even there it was clear that packaging plays a key role in ensuring freshness for consumers to ensure that they have more use opportunities, effectively, to use that product so it does not wilt and then they throw it out.

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Moving from there, where we were going prior to COVID was looking at some quite targeted packaging initiatives potentially working with retailers. Unfortunately, COVID resulted in significant pressure in the supply chain, particularly with panic buying, so some of those things were put on pause. At the moment where things are up to is a range of entities in the supply chain are trialling a wide range of packaging solutions and the key challenge with these packaging solutions is the economics of them. If someone is producing a relatively small number of a new packaging type, the cost is quite high. So where we are right now is a critical phase where a number of supply chain companies are trialling packaging from around the world. And those things are obviously being held very closely, understandably—the commercial trials.

We are quite encouraged that, while there have been challenges in overall industry solutions, I suppose, the market is definitely working towards trialling different materials. I will just end, to give an example, is some parties have shared with us before that they have tried things like cardboard for berries and without a liner the cardboard simply soaks up all the moisture and results in food loss. Once you put a liner in it becomes difficult to recycle. For us, these are some of the practical challenges around fruit and vegetables but I can share with the Committee that there are trials being undertaken on new packaging types using materials developed from around the world.

The CHAIR: Thank you. Your video did cut out a couple of times there and I think we will keep monitoring it for Hansard, who may have missed a word or two. If your video does keep going like that, Mr Rogers, I might see what it is like if you turn your video off. Maybe we will do that from here on. Thank you. My next question is to Mr McAlister. I would be interested to know, you were talking about the product stewardship in terms of the EPS. Remind me again what EPS stands for.

Mr McALISTER: Expanded polystyrene. The moulded white plastic.

The CHAIR: That is over your TV or whatever you buy.

Mr McALISTER: It comes with your fridge.

The CHAIR: So product stewardship, that is the retailer taking responsibility? Say the EPS comes out of your TV, for product stewardship would the consumer then be having to take it to somewhere, back to the retailer? Is that what is being considered?

Mr McALISTER: It could be. There are many things under consideration. I should add that APCO and the Federal Government are working on a road map for dealing with all of these issues. For EPS, the road map is looking like a product stewardship arrangement. Now how that would work is still under consideration. There is already a substantial amount of activity taking place. For example, the retailers—the JB Hi-Fis, Harvey Normans and so on—when you get your fridge or washing machine delivered they will take back the old one and they will also take back the polystyrene EPS packaging. They have arrangements with local councils. They are doing that voluntarily without any funding, of their own volition, at the moment.

The problem with EPS comes from what do the consumers do if the retailer does not take it back. How do the consumers get the EPS to some collection point where it can be recycled? How do they avoid that EPS going to landfill? The product stewardship scheme, I do not know what the final one will look like, but I would imagine it would be some part funding by suppliers—my members, who have indicated they are willing to participate in this—and retailers. It would involve some sort education program for consumers of where to go. An important part of it would be establishing the infrastructure for collection, which varies throughout the nation and throughout the State. So we need more collection points for consumers to take the product to. I mentioned on the South Coast you can go to your local council and they will take it and they even press it and make it ready for recycling to a recycler. Whereas other places, I know on the Central Coast is very difficult for suppliers to find where to take it.

A product stewardship arrangement will encompass collection, logistics, getting it to recyclers and then the actual recycling itself. I imagine it will take the form of similar product stewardship schemes run by the Federal Government. Some of them are voluntary, such as MobileMuster or the battery stewardship scheme, where all the stakeholders play a role and, in fact, pay levies upfront to cover it and those levies are passed on to consumers, to point of sale. But they seem to be very successful schemes. This is in lieu of a ban on EPS or a phase-out of EPS. All of our major players are working on alternatives to EPS as we speak, particularly in larger jurisdictions such as Europe and California. California has just passed some legislation exempting EPS from banning or phase-out for another two years. Other jurisdictions are also looking at this and our members are global suppliers so whatever is happening in other jurisdictions will filter into here as well.

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So there is a lot of research going on into alternatives right at this very minute. I did a straw poll of our members and for the big players who supply the major white goods and large screen televisions there is still no alternative to prevent, particularly the corners of large appliances being damaged in transport. So that is where we are at. Hopefully, a product stewardship scheme will come out of this governmental APCO stakeholder arrangements starting on 8 June as a major webinar of all stakeholders. Minister Evans has put his stamp of approval on this, so it looks like it will happen.

The Hon. MARK BUTTIGIEG: Just following up on that point, Mr McAlister, where you said that you are involved in international supply chains and you are sort of aware of what is going on in overseas jurisdictions, has the emphasis been on what has been repeatedly referred to in this hearing as product stewardship, which is just another way of creating a market mechanism to price the cost of alternative solutions or the cost of recovery, which then presumably creates an incentive to come up with alternative products? Has the emphasis overseas been on that or mainly regulatory bans? I guess the question is: Which way are they going overseas?

Mr McALISTER: There is a bit of a mix, I suppose, between jurisdictions. Initially, our Federal Government came out with that there would be a phase-out, a black-and-white ban in 2022: no more EPS. That sent shockwaves throughout the global industry because it was a precedent of a federal jurisdiction saying a ban—the B word. Other countries and larger jurisdictions now, like California, are doing the same thing. They are going down this—Well, if we cannot ban it we have to get it out of landfill. This stuff is 100 per cent recyclable. It is perfect for the circular economy. The collected EPS compressed goes into the chain for the production of new EPS. That is quite a circular arrangement and that is what they think the solution will be for EPS. That is if they do not come up with some alternative product that might replace it. But they have tried many different avenues and different technologies to come up with something with the shock absorbent nature and strength of EPS but also waterproofing. If these things get wet in transport—if you have a number of fridges stacked on top of one another, it is a disaster.

The Hon. MARK BUTTIGIEG: Can I ask you on that point, is it a function of cost? In other words, is there an alternative product that just costs way more or is there just no alternative product full stop?

Mr McALISTER: I imagine that there are alternatives. You could have wood or other solid materials, but what would happen would be that the packages would be much bigger. They would be very large products and much more expensive to transport and difficult to get rid of and they would have to be recycled as well. There is definitely a cost issue here as well. But I have found through our members and suppliers of smaller devices—coffee machines and things like that—that they have found alternative cardboard arrangement packaging to replace EPS for small devices. Our members have been very successful in getting rid of the plastic beads—you used to have lots of plastic beads in packaging. That was an initiative of the Federal Government not long ago and they are completely wiped out of this market; you do not see it anymore. So, yes, things can develop.

The Hon. MARK BUTTIGIEG: How did the plastic beads get wiped out? What was the incentive for that?

Mr McALISTER: That was a government—

The Hon. MARK BUTTIGIEG: Decree? Just no more plastic beads. So in that case a ban did work?

Mr McALISTER: In that case it did.

The CHAIR: That was Federal, was it?

Mr McALISTER: Federal, yes.

The Hon. BEN FRANKLIN: What was the solution? What was the alternative? What do they do instead?

Mr McALISTER: They are using cardboard or paper. Because plastic beads are small, they were not for strength; they were just for protection of the device. So they use pillow cardboard or honeycombed cardboard and other sorts materials that were quite adequate for that purpose. We are talking small machines. Even in some of the small appliances some suppliers I doubt will move quickly from EPS either. There are some in the IT industry who will stick with EPS for the foreseeable future. It is a wave, they see it coming and so companies are moving that way.

The CHAIR: Just to keep with this, it is a big expectation, is it not, of consumers? You can think that a certain number will—like they always would—make sure that they try to recycle everything and drop their e-waste off. I think e-waste is almost a different thing entirely. But to find somewhere to store all that packaging in your house after you buy a couple of big appliances or even just one and to then just bother—and I will say that in

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terms of for most people—to put that somewhere to then take somewhere. I am looking at the website now for EPS recyclers in New South Wales and there are like two in Sydney or something. I am assuming that even then you cannot just rock up in your car and give them what you have just had your TV in. It would require a lot of changes, would it not, to ensure that that was successful?

Mr McALISTER: It is early days in the design of a stewardship program, but there will be a requirement for collection places where consumers can go. I was very closely involved in NTCRS for e-waste for TVs and computers. Initially, there were massive problems there, but as the community was educated and as drop-off points were allowed in local waste collection sites it became part of life. If you have an old TV you take it away and it does not cost you anything because you have a special place you can put it at the landfill site. I cannot see why EPS could not be the same. The retailers are taking back EPS in much larger bulk in very large containers to the recyclers. So I see it as definitely feasible and possible. It needs the support of all stakeholders in the game but consumers are a very important part of that because we have to educate them. You do not just crush it all up and stick it in your recycling bin or your waste bin; you leave it as it is and take it to the collection site.

The Hon. MARK PEARSON: But that is if you can. I imagine almost 30 per cent of people would have difficulty doing that. What do you say to them? What would be the system that could work for them?

Mr McALISTER: Well, there could be some sort of collection—the local government could have a collection.

The Hon. MARK PEARSON: Who would be responsible for that?

Mr McALISTER: Again, you would have to store it.

The Hon. MARK PEARSON: That is the problem.

Mr McALISTER: There are a lot of problems to be resolved but—

The Hon. MARK BUTTIGIEG: Can I ask you just on that point as a follow-up—sorry, I interrupted. I do not know if you had finished answering the question. I should not have done that.

The CHAIR: It is pretty free-form at the moment and that is okay. I think we are managing.

The Hon. MARK BUTTIGIEG: This is a philosophical question in a way. If a product is being produced and the consumer does not have a lot of say over how it is packaged but they pay a price for a product including the packaging, then there is a debate about whether or not the cost should be shifted, in effect, to the consumer. In other words, someone has to stick it in a car, find the place and drive it to the place. Is it the view of your members that they accept that, to a degree, industry has to work it into their cycle of recycling? In other words, can you see a point in time where you will get acceptance that, particularly—I guess this is a question of whether we mandate that supply is responsible for the recycling. Like you said, some of these big mobs do it now. Can you see that becoming the solution across the board?

Mr McALISTER: I can see suppliers taking responsibility for their packaging at some point, as they have done for batteries, e-waste and all of the other things. At some point they will get the message. I definitely would not be advocating anything mandatory at this point. Like the Feds, I would go for voluntary in the first instance to see how it goes. For example, with the Battery Stewardship Scheme people thought, "How are we going to get people take all their batteries back? They are so small." The trick is to explain or educate consumers that we have a collection arrangement. These things can be recycled. They are better out of landfill. It is a matter of getting all the stakeholders on the same page. But definitely suppliers are aware that they are responsible for their products. It is part of the price at the retail point. If it is very, very costly for them those costs will be passed on. The e-waste or television and computer scheme—those levies that the consumers pay at input are passed on to consumers. The batteries—for every battery, 4c will be passed on to consumers for the recycling.

The Hon. MARK BUTTIGIEG: I suppose the concern from my perspective, from what I have heard over the last couple of days—and particularly the evidence we heard this morning—is that when we get to a situation where the plastics and the packaging material can actually break down into a nano form it becomes impossible to deal with and you cannot take it back. It starts to become poisonous to humans and wildlife, and then you wonder whether or not voluntary systems are enough to catch up with the problem and whether or not government needs to look at this properly and go, "Well hang on, this is just getting exponentially out of control. We are going to have to have a whole-of-industry response here where the producers actually take responsibility for the product that they are putting into the ecosystem." I am a bit concerned that it is getting away from us. What do you say to that?

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Mr McALISTER: I do not think it is. I think there are possible solutions here that industry, as one of the major stakeholders, can play a role in. An effective product stewardship scheme—if you look at the computer and TV scheme, the majority of product is now being collected and taken and recycled. The trick is to get it out of landfill before it starts breaking down into nano-fibres. Our members are also working, for example, with Standards Australia for filters on washing machines to stop the microfibres getting into the water schemes. There is a lot of work going on in every facet of getting plastics out of the environment. But given the EPS is so easily recycled, in terms of once you get it into the recycling scheme 100 per cent of it can be recycled. It seems a very good solution.

The Hon. BEN FRANKLIN: I have just firstly got a few questions for Mr Stout and then a few questions for Mr Rogers. Mr Stout, could you give us some of your thoughts on which jurisdiction in Australia you think has been most effective at taking action on plastics in the retail space?

Mr STOUT: In our experience we have worked on shopping bags in most jurisdictions, we have worked on container deposits in most jurisdictions and now we have helped form a lot of the framework for single use. What was the question again? Which jurisdiction has been—

The Hon. BEN FRANKLIN: Which jurisdiction do you think has been most effective at taking action?

Mr STOUT: Just because I am a Queenslander it does not mean I am necessarily saying this because of any alliance, but I think the Queensland Government, probably, first and foremost—and that is primarily not because of the overreach of some of their policies but the simple, clear and very succinct guidelines that they have given to business. I say that in all honesty whilst some are setting very ambitious targets and trying to obviously leapfrog over previous governments, the best thing government can do for retail is set very clear, succinct policy settings with very clear examples of what "good" looks like in their policy settings. That gives retailers an understanding of exactly what is expected of them.

In most cases in our education, how that plays out is that when a business knows exactly where the rules are they know what they need to do to comply, first and foremost. In our experience, 30 per cent to 40 per cent of the businesses that we engage with want to exceed the expectations—or they do not want to do it twice. For example, when we were working on the bag bans there was a prescriptive in the bag bans of a certain thickness in plastic. Most of the significant retailers exceeded that quite a lot; they did not just barely comply. In some categories, like takeaway and restaurants, they understood that the best practice for them was probably paper, so they moved straight from mere compliance, understood what they had to do but futureproofed themselves and moved straight to paper. When the guidelines are clear I think retailers not only want to, when they can, meet but far exceed the expectations.

The Hon. BEN FRANKLIN: You have actually answered my second question, which was "What is the most important thing for government to do when engaging with industry and business in order to make this process as achievable and as efficient as possible?"

Mr STOUT: In reverse, we are still struggling with clear definitions about "single use" and "re-use". A re-usable bag was defined by its thickness. It was very clear to determine what was and what was not single use by its thickness. We can measure that and we have got pretty good at doing that across most jurisdictions. When it comes to single use versus re-usable it is a very, very subjective test. Unfortunately we still have not got to that point yet where we could clearly explain, especially to the small or medium businesses, what exactly the intention of the legislation is. It is too ambiguous. Of course, it depends what jurisdiction. Sometimes it is subjective based on the circumstance—whether you are eating at home, whether you are eating out, whether you are in a restaurant or whether you are in an aeroplane. You have got the exact same utensil, for example, but because it is in a different environment or a different outlet it is treated differently, which is just outrageous. We can't have it. We need to target the individual item.

The Hon. BEN FRANKLIN: Mr Stout, my final question to you is whether you would like to comment on the cost to businesses of taking action on plastics and how that should be borne.

Mr STOUT: Our first approach, and it always has been since working on the bag bans—the very, very first option, because every business looks for a substitute for what they have currently got—is we take them back a step and ensure that they are actually having a look at whether they need that instrument at all. Do they need a bag? Do they need cutlery? Do they need X? We try and avoid, where possible. If we can avoid, there is obviously a significant commercial benefit for them because they are not giving things away. Even merely putting things behind a counter and not, for example, offering cutlery or straws free with every particular purchase will probably reduce their consumption by 70 per cent because most people will just not bother to take one. If they need one, they will look for one or ask. In our view, there are a lot of ways that you can mitigate your losses. In most cases,

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the replacements are at least five to 10 times more expensive. You do not want a one-for-one replacement—that is problematic. On the flipside, if you have got businesses that want to promote their sustainable credentials they have no concern in actually going from something which was considered single-use right up to maybe a bagasse or a very significant proposition, which is a lot more expensive. But they are proud of that, they want to promote it and they change their whole business model based on the fact that their strategy is now X rather than single use.

The Hon. BEN FRANKLIN: I will move on to Mr Rogers. Are you there, Mr Rogers?

Mr ROGERS: Yes, still here.

The Hon. BEN FRANKLIN: Wonderful, excellent. I wanted to pick up on your comments about food safety requirements and longevity as well. My particular interest is in getting food to regional New South Wales. To me, it seems like it would be an even more difficult challenge when you are going to need food to stay fresher longer, obviously because of the distance it needs to travel. I was wondering if you had any comments on that about balancing the reduction of plastics with the need for longevity, particularly when you are talking about getting into more remote regional areas.

Mr ROGERS: Just on your first point around food safety and protection, I just go to perception. There was certainly an increased perception among consumers in the peak of COVID last year that they wanted more product protection, if you like, through packaging. There was certainly a perception issue there. In terms of your question around longevity and freshness or shelf life and reducing food waste, from our perspective it is important. It can be a good example to think about berries. If they are packed in the field directly into the punnet and then they travel all the way through to the retailer and then they are sold and then go into someone's house, that packaging and product protection plays a critical role to ensure that there is not food loss and food waste through the chain.

Exactly as you say, if it is to regional New South Wales or if it is berries coming from north Queensland or from Tasmania back to New South Wales then that product protection is really critical before it gets to the consumer. As you say, it helps to ensure that the consumer has the longest possible time to enjoy that product without it spoiling and being thrown out. This is some of the really key interaction for us around food waste and packaging. When we speak to other inquiries and other conversations around food waste, the linkage is there. From our perspective, part of the challenge at the moment in fruit and vegetables is that you are looking for a whole range of different characteristics out of a material. I think replicating those has been difficult to date in a single material, so it is probably materials for different use. I hope that answers the question.

The Hon. BEN FRANKLIN: It does, thank you.

The Hon. PENNY SHARPE: I missed the beginning, so if I am repetitive then I apologise to people. Mr Stout, I just wanted to get a sense—your submission is not explicit around your support for the bill but it makes the points around whether some of the solutions being put in the bill are too simplistic or are unrealistic. Could you unpack that a bit for the Committee and talk about practically what you mean by that?

Mr STOUT: Certainly. Any particular items?

The Hon. PENNY SHARPE: No, it is more just—obviously a lot of bigger retailers are already doing some of this. For smaller retailers and small operations, I accept that for industry it is a massive logistical task to do these things. In your submission you say it is too simplistic. I am just trying to understand some practical examples of what that looks like for a retailer.

Mr STOUT: Certainly. I will start with probably the most simplistic things and something in single use that most states have adopted. That is working towards the ban on straws, stirrers and things like cutlery. I think we would all agree that the path for straws is fairly clear: We move out of plastic and head towards paper. Similarly with stirrers, we move out of plastic and head towards a compostable. Cutlery is probably not as clear. I get a lot of concern from retailers that some of the compostable options—that is the timber style or bamboo style—are almost like getting your tonsils inspected. They are not really fit for purpose yet; they are rather cumbersome. The PLA versions, which are the plant-based plastic versions, are probably more appropriate right now. In that particular case, with cutlery, I think that is a good interim step. I think eventually we will get good compostable outcomes with cutlery, but at the moment that interim step is problematic. We cannot have a blanket statement for all of these items; it is virtually a case-by-case basis. When we walk towards containers and bowls and cups, again that is exceptionally problematic because walking away from plastic is difficult.

The Hon. PENNY SHARPE: Is it difficult because there are not adequate substitutes?

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Mr STOUT: There are not adequate substitutes and virtually every paper-based product that you have has elements of plastic. If it is not plastic in part, it is a plastic lining or a plastic handle. You only have to look at a coffee cup, and a coffee cup is lined with plastic to stop you wearing most of it. If you look at most of the hot food that we purchase—everything from noodles to gravy—most of those containers are again fit for purpose, designed obviously to keep the product in, to keep it safe and to keep it from cross-contamination. Going to an all-paper solution is not great. If we are talking about a doughnut or a bread roll then the bagasse solutions, which are the cane fibre starch solutions, are fit for purpose. But if you are looking for something that is hot and wet and likely to leak, it is not a great solution. The types of solutions that we engage with retail are very much on a case-by-case basis: What do you sell? What does the customer expect? Will they consume it straightaway?

The Hon. PENNY SHARPE: Yes, what is the function?

Mr STOUT: Do they have to take it home? To the Minister's point, do they have to travel three or four hours to get it somewhere? In some cases it needs a whole different set of circumstances to ensure its integrity over a two- or three-hour vehicle trip versus a trip from the office to your local cafe. This posed a fairly significant problem for us in South Australia, where the definition was so vague we ended up in a situation where something was considered reusable if sold in the grocery aisle but if something was then unpackaged and given away with a barbecue chicken then it was considered single use. We ended up with this very bizarre set of circumstances where it was considered reusable if sold in a pre-pack, but if it was given away with certain immediate-consumption items then it was considered single use—which is quite problematic for us.

We know that every business has a relationship with their supplier and sometimes the suppliers of these particular products are not who you think. The small businesses are very reliant on their suppliers for a certain range of products, but sometimes the small suppliers use large supermarkets for their range. They do not normally consume a lot of these things so they go into the local supermarket, they see it on the shelf, they consider it appropriate or fit for purpose, they use it and then all of a sudden they are not compliant. This is how these things play out. They are very much on a case-by-case basis, and what is good for straws is not good for plates. Unfortunately we have yet to get to the plate and bowl scenario yet. Queensland is the first State going over in September, and to their credit we have spent a lot of time on definitions in Queensland.

The CHAIR: What are they doing? When you say they are going over, to what in terms of plates and bowls?

Mr STOUT: South Australia and the ACT have enacted legislation and it is fundamentally straws and stirrers and cutlery, which can be dealt with through compostable timber-based paper solutions. But when you head into the second tranche, which is the bowls and plates that Queensland is doing, you cannot necessarily just move out of plastic entirely. They have given us the capacity to use PLA, which is useful, but we have had a lot of discussions around the function and fit for plates and bowls.

The Hon. PENNY SHARPE: I think this is probably also a question for Mr Rogers. Again, time frames feature heavily. Within what many would argue are this bill's fairly tight time frames, what is realistic? I know that in your submission the National Retail Association actually has put that out, so I do not want you to go through that again, but I tend to agree that six months is actually too short. I think there are a few things that we could do pretty quickly. Lightweight plastic bags have been around for a long time and there are easy substitutes—that sort of thing. But if we pass this bill in the next couple of months, what is realistic? Is it July next year? Is it the year after? What is realistic, assuming that the Government did it and actually worked closely with industry as they should?

Mr STOUT: As long as we have plenty of education prior to it, I think 12 months is enough. It enables us time to get messaging to retailers, to understand exactly their specific set of circumstances and then work out a solution—remembering avoidance is always the first solution, to be honest.

The Hon. PENNY SHARPE: Yes, I think we are all in that—

Mr STOUT: So that is good for everybody; it is good for business. The consumer will possibly need a bit of education because sometimes there is an expectation, like with the lightweight bags—"I got something for free for the last 20 years. Why can't I get it tomorrow?" There is a bit of education there and I think Government needs to support business in that communication. But 12 months—as long as they have adequate time to prepare and discuss replacements with suppliers, start communicating to their customers and also have a look at what their competitors are doing. That is quite important.

The Hon. PENNY SHARPE: Mr Rogers, your submission outlined the very specific issues around food and food waste and travelling in rural and regional areas, all of which I think are very important. Your

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submission was quite educative for me in terms of thinking about—I hate all that packaging on fresh fruit and vegetables, but I actually have a much better perspective having had a read of your submission. For your industry, what is a reasonable time frame for this? Is it your view that there is some packaging that cannot be avoided and would need to stay because there is not a substitute?

Mr ROGERS: Yes, I think there are a couple of different elements to this. If we just talk about the role of PET, there is an opportunity for governments to look at increasing the recycling rates of PET as it relates to fresh produce. That was something that we were looking at prior to COVID. So, say, for drink bottles, that is something that is quite an action that we could take, but it is a recycling question and a practical one. In terms of the ability to eliminate plastic packaging on all fresh produce under a time frame, I do not think I could reasonably give you a date. The reason is not because industry is not committed to sustainability but because there is not a viable replacement at scale to meet those objectives around food wasting and getting food to consumers.

So what I would say is that if the Committee had the opportunity to look at some practical initiatives that could be undertaken as part of it and then undertake a 12- or 18-month review on particular items, such as fruit and vegetables, and see whether there is any further progress and review it with a view to moving it forward, I just point to the other State jurisdictions that considered these issues. They have not included fruit and vegetable packaging. We get often a very comprehensive list of other materials because of these public policy challenges around, you know, practically supplying fruit and vegetables to consumers.

The Hon. PENNY SHARPE: Thanks for that. You actually answered my second question, which is: How has this been dealt with in other jurisdictions? Just to be clear, you are saying that they have decided not to go down that path for the reasons that you have outlined.

Mr ROGERS: Yes. That is correct. In our engagement, in South Australia, Western Australia and Victoria there was very close consideration of inclusion of fruit and vegetable packaging, but it was excluded because of the public policy challenges around including it. So it is a consistent theme and, yes, it has been excluded, from my understanding—I might need to double-check on Western Australia and provide some information for the Committee—but, yes, this is the challenge. The last point I have is that our industry colleagues in Canada have just shared some information in the conversation they are having there, so I am happy to share that with the Committee as well, around some of the things there that are quite specific and targeted initiatives to improve sustainability while also ensuring that you do not have an increase in food waste, for example.

The Hon. PENNY SHARPE: Thank you. That has been helpful.

The CHAIR: I just want to get clarification from you, Mr McAlister, in relation to e-waste. I think you mentioned computers and TVs now being—

Mr McALISTER: Collected and recycled?

The CHAIR: But not many, according to how many are actually in the marketplace. Do you have an idea of the percentage that actually is collected and recycled?

Mr McALISTER: No. I have to take that on notice, I am afraid. I understand the targets that the Commonwealth set are being met. Whether it is up to the 65 or 70 per cent, I am not sure. I know that it has been very successful in terms of meeting the targets, according to the Federal Government. It has more or less become a kind of set-and-forget sort of arrangement—like, it is in place and the Feds are not tinkering too much or modifying it or making changes to the arrangements. There have been a couple of little problems with the producer responsibility organisations. We have lost a couple of the recyclers who have left the scheme and they had to reappoint new players to replace Sims Metal and MRI. But, all in all, the actual program itself I understand is working very successfully.

The Hon. PENNY SHARPE: Chair, can I ask a follow-up to that?

The CHAIR: Yes.

The Hon. PENNY SHARPE: It is about e-waste.

The CHAIR: So is this. Jump in in a sec because what I have in front of me—I have heard that e-waste is a growing problem and so I needed to do some research because what you said surprised me. I wonder if you could just take on notice the figures on what you can find from the Government on that.

Mr McALISTER: Sure.

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The CHAIR: In front of me I have the *Global E-Waste Monitor 2020* report that says that 88.8 per cent of the four million computers and three million TVs purchased in Australia every year will end up in landfill. You seem to have one very successful figure in your head and I have one that does not look so right.

Mr McALISTER: No, I do not agree with that figure, but I can definitely take that on notice.

The CHAIR: Could you please provide it on notice?

Mr McALISTER: Yes.

The CHAIR: That would be wonderful.

Mr McALISTER: I might add that when I am talking about e-waste, what I am talking about at the moment is confined to televisions and computers. There are moves afoot to expand the scheme to include all e-waste but at this point in time it is not all e-waste.

The CHAIR: It is interesting because again in this report it says that fewer than 1 per cent of TVs and around 10 per cent of PCs and laptops are recycled Australia-wide. So if you have different and much better statistics, it would be great for the Committee to have those.

Mr McALISTER: Much better.

The Hon. PENNY SHARPE: This is a direct question. In terms of the TV and computer waste, obviously there is a ban on export of plastics from Australia going internationally. Is that the case for e-waste? Is our recyclable e-waste going overseas?

Mr McALISTER: A lot of it is not. It did in the past, right? It was shipped straight to Korea. But the Government has cut back on that in terms of export—

The Hon. PENNY SHARPE: Yes. I was not sure whether they are included in the export ban.

Mr McALISTER: They are, but it is not the same as the plastics export ban.

The Hon. PENNY SHARPE: No. That is right.

Mr McALISTER: It is a different ban.

The Hon. PENNY SHARPE: That is good. That is what I am asking because I just do not know.

Mr McALISTER: Yes.

The Hon. PENNY SHARPE: So there is a ban?

Mr McALISTER: I can clarify that as well.

The Hon. PENNY SHARPE: Yes. If you could, that would be great.

Mr McALISTER: But there has been definitely a step back because other countries have stopped taking it, our e-waste.

The Hon. PENNY SHARPE: Yes. My interest in this is from the very large waste dumps in Kenya and other places. I have been involved with some MPs over there where the world's e-waste is ending up in toxic dumps.

Mr McALISTER: Our exporters cannot—they are not allowed to—do that.

The Hon. PENNY SHARPE: Okay. That is what I was getting at.

Mr McALISTER: And there are a lot of other issues there too—slavery and supply chains.

The Hon. PENNY SHARPE: Yes. That is where I was heading.

The CHAIR: All right. It is interesting when you have a particular bill to phase out plastics, but when you get into the issue of waste, there is so much that you want to cover. Mr Stout, do you have something else to add?

Mr STOUT: I did, if I could—if I have some time.

The CHAIR: Yes, a couple of minutes.

Mr STOUT: It is just an observation about food and packaging. I have seen several examples, especially in very regional and remote parts of Australia, where the inclusion of additional packaging has made significant

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differences to the availability of fresh produce, such as meat, bakery and vegetables. I am not talking regional Australia; I am talking extremely remote.

The CHAIR: Remote, yes.

Mr STOUT: Arnhem Land and as far north as Thursday Island. So I have seen, after seven or eight days, what you would consider produce that will sit on local supermarket shelves and how it looks after seven or eight days originally and, after a lot of work including packaging, changes to packaging and modifying that construct, what a difference it makes to those people's lives in those regional parts of Australia. I think in some cases we would probably triple the amount of produce and, collectively, fresh being sold because now they have a product which they are prepared to buy. They are paying good money anyway. So, at the moment, it was not unreasonable for them to have lettuce arriving after they had been frozen for seven days, which were just virtually black and brown in the middle. Now they are being properly climate controlled and sealed in sort of cryovac-type bags and they arrive fresh and edible. So it makes a significant difference when you shift from trying to remove packaging to trying to include things like, for example, all bread, all meat, all milk that was frozen like a brick.

In a generation, people had never eaten fresh anything. When you look at the way meat is packaged it has normally got a seven-day shelf life in a tray. To take those things and put them in what is called a cryovac-type container, which is sealed and atmosphere controlled, a lot of those go, obviously, from a seven-day life to a 21-day life. All of a sudden, you are giving people in remote parts of Australia fresh produce rather than frozen produce and it makes a significant difference. So I would not necessarily discount the value of packaging because in some places it makes the difference.

The Hon. BEN FRANKLIN: That is exactly the point that I was making as well. Thank you. That is very helpful.

The CHAIR: Thank you very much for that. We are out of our allotted time for the session. That was very informative. Thank you to Mr Rogers, who participated by videoconference. The Committee will conclude this session, break for 15 minutes and resume at three o'clock.

(The witnesses withdrew.)

(Short adjournment)

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JUSTIN KOEK, Director, Circular Economy, Policy and Markets, Department of Planning, Industry and Environment, affirmed and examined

NANCY CHANG, Executive Director, Regulatory Policy Initiatives and Advice, Environment Protection Authority, affirmed and examined

KATHY GIUNTA, Director, Circular Economy Programs Branch, Environment Protection Authority, affirmed and examined

The CHAIR: Welcome to our next lot of witnesses from the government, who are the last witnesses for this two-day inquiry into the Waste Avoidance and Resource Recovery Amendment (Plastics Reduction) Bill 2021. There is an opportunity, as always, to make a short opening statement.

Ms CHANG: I just wanted to make a short statement about the role of the EPA and the role that it plays in waste avoidance and resource recovery. The EPA, as you know, is the primary environmental regulator and we work very closely with communities, businesses and other government agencies as well as industry to protect air, land, waterways and human health. That will always remain our primary objective. Like any good regulator, we do have a number of levers that we pull in order to achieve those outcomes. First and foremost, we have our regulatory instruments, including the Protection of the Environment Operations Act as well as the Waste Avoidance and Resource Recovery Act. We also use a number of licences to ensure that those instruments are up to date and fit for purpose.

We also cannot forget the number of grant funding that we roll out. The historic and the largest is the Waste Less, Recycle More umbrella of programs. That is worth \$803 million over nine years. Those programs direct grant funding. They create partnership, support education as well as behaviour change. It also really enhances our compliance activities, including illegal dumping and recycling infrastructure as well as innovation. Very importantly, we also use the microeconomic lever of the waste levy to avoid landfill. It has been very successful at doing so. The other very successful tool that we have used is the container deposit scheme. To date, it has collected more than five billion plastic containers. In 2020 it reduced plastic bottle litter by 40 per cent. So it is a very successful program.

I am sure the Committee is aware the EPA also has very deep technical expertise, and we deploy that technical expertise in the resource recovery framework. The resource recovery framework is an application process activity where people can apply to have what is originally classified as waste to be reclassified for other beneficial use. It is with our framework that every year we avoid millions of tonnes of high-quality waste material ending up in landfill and it is beneficially re-used. One of the examples under the resource recovery framework is the very successful and collaborative partnership with Transport for NSW where plastic waste and other toner cartridges are being used in asphalt as polymer substitute. A number of other resource recovery applications are in the pipeline.

We also work very closely with our key stakeholders in the research space. One of those examples is a CSIRO-led project which aims to assess the breakdown of compostable plastic in commercial composting facilities, and the EPA assists with the physical, chemical properties and ecotoxicity of the final compost product to make sure it is safe for use. We also engage with the Commonwealth Government as well as a number of other agencies, including colleagues at the department. One of the examples of working collaboratively with our Commonwealth Government is the APCO-led workshops, where the EPA is providing guidance on compostable plastic packaging. Lastly, I would just like to emphasise that we have been working very closely with our colleagues in Department of Planning, Industry and Environment [DPIE] to provide data, evidence and our deep corporate knowledge to develop the plastics plan and the 20-Year Waste Strategy. Thank you again for the opportunity to provide an opening statement.

The CHAIR: Thank you very much. Mr Koek, do you not have a separate statement from DPIE?

Mr KOEK: No, I do not.

The CHAIR: Okay. We will go to questions from the Opposition first.

The Hon. PENNY SHARPE: The first question I have is, can you explain to me who has oversight? Obviously I am fairly familiar with what the EPA does, but under the new arrangements, Mr Koek, what is your role in relation to something like this bill, the plastics strategy and the waste strategy?

Mr KOEK: I am leading the plastics work and my team are leading the plastics work in the department, working very closely, as Ms Chang said, together with the EPA to develop those policy approaches.

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The Hon. PENNY SHARPE: The final strategy, I assume you are not able to tell me when we are going to see that.

Mr KOEK: That is a matter for government, as you would expect, yes.

The Hon. PENNY SHARPE: Yes. That is all right. I thought I might try.

The Hon. MARK PEARSON: We are just trying to work out "imminent".

The Hon. PENNY SHARPE: Yes, that is right, as the Minister keeps promising it is imminent. It is okay. That is not why we are here. So you are working jointly on that. That document, when finalised and released by the Government, essentially is a joint project by EPA and part of your department?

Mr KOEK: The department and my team, in particular, that is looking after circular economy policy sits within—so my branch sits within the climate change and sustainability division within the department. We work on a lot of the policy issues that are coming through in that circular economy space and work very closely with colleagues at EPA who—particularly with Ms Giunta and her teams in the circular economy programs space, but obviously there is a pretty big intersection with the other regulatory responsibilities of the EPA.

The Hon. PENNY SHARPE: Who would have ultimate oversight of that policy? Is it you or is it the EPA?

Ms CHANG: In terms of the governance arrangements for the 20-Year Waste Strategy, it is jointly signed off by the EPA as well as the Coordinator-General of Environment, Energy and Science [EES].

Mr KOEK: That is correct.

The Hon. PENNY SHARPE: Thank you. I was just unclear about how that all fit in.

Ms CHANG: It is signed off by our CEO and the Coordinator-General of EES.

The Hon. PENNY SHARPE: Thank you. That has actually been very helpful. One of the things in relation to this bill that I am interested in—and we have had a lot of comment on this—one is obviously time frames are extremely important. I have had quite close watching of how the CDS rolled out and it took quite a long time. Within this bill are sort of six-month time frames, 12-month time frames. Given the consultation that you do and the work you would be responsible for in terms of industry, what do you think is a realistic? We have heard from the retailers that 12 months at least is kind of reasonable. Do you have a view about that?

Mr KOEK: Ms Sharpe, I think in the context of the bill—and obviously I am aware of the National Retail Association and its road map as well—I think one of the important considerations with those sorts of time frames is obviously, at the outset, the availability of alternatives is one of the big considerations that obviously the industry has raised. I think that is an important consideration to keep front of mind. There is a lot of businesses out there trying to do the right thing by not only the environment but the consumers as well, and I think there is a very strong sentiment from consumers to progress to more sustainable alternatives, particularly when we are talking about those single-use items in the plastics space. I think a lot of retailers want to have certainty about what that next step is. If you look at what some of the other jurisdictions have been doing in this space, that has also been one of the big considerations for their transition away from single-use plastic items.

The Hon. PENNY SHARPE: If I can just stop you there. I assume then with the Government's plastics strategy—which I am not asking you to comment on nor provide any detail of—that the consideration of things like suitable alternatives is part of what is under consideration. That would inform the time frames around what is finally put out.

Mr KOEK: I think it is fair to say that there is—and obviously, Ms Sharpe, I cannot talk about the particulars of—

The Hon. PENNY SHARPE: No, I know. But I do not think you can come here and just say nothing. The inquiry is about a bill that is dealing with a lot of crossover. I suspect there is actually a huge amount of consensus between where the Government is going. As non-Government members, we are relatively frustrated because we believe it has taken a long time. So we are working in the dark in terms of trying to assess and look at the issues with this bill as opposed to what is coming from the Government. As I said, I do not expect you to tell me what is in or out of it, but I do not think the question that I have asked is an unreasonable one for you to answer, if I can be that direct.

Mr KOEK: Sure. Ms Sharpe, within the scope of I think what I can discuss, if you look at the examples in other jurisdictions that have gone down this path and obviously in all of the types of feedback that you would

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have heard over the last couple of days—and particularly in that last session, I imagine, with Mr Stout—there is a range of considerations for time frames when you might approach these single-use items. One of those is obviously the availability of sustainable alternatives. I think if you look at the example in South Australia where they have recently—

The Hon. MARK PEARSON: Mr Koek, could you tell us which pathway we are going down? Not South Australia, not other jurisdictions—us.

Mr KOEK: Mr Pearson, I would refer you to my earlier answer there and obviously the details of—

The Hon. MARK PEARSON: Tell us as much as you can.

Mr KOEK: I would love to give you all and sundry, obviously. But the decisions of what may or may not be in future policy are matters for Government to decide on, as is the timing of these things.

The Hon. MARK PEARSON: And it is a matter for this Parliament to consider.

The CHAIR: Just on what Ms Sharpe has been asking, for example, the Queensland Government's ban—and I am assuming the work that you have been doing is looking at the feasibility of being able to introduce or phase out certain plastics. I have had conversations with the environment Minister myself about this. Of course, he has indicated publicly that he wants to act on plastics. So within the department, that clearly would be something you are doing—looking at what is feasible in terms of phasing out plastics. Is that correct?

Mr KOEK: Certainly. I would refer you to the discussion paper that we released in March last year, *Cleaning Up Our Act: Redirecting the Future of Plastic in NSW*. That provides a framework for what—

The Hon. PENNY SHARPE: Fifteen months ago.

The Hon. BEN FRANKLIN: Then there was the little matter of COVID.

The CHAIR: So then looking at, for example, that the Queensland Government is looking at legislating banning the supply of specific single-use plastic items starting with straws, hot and cold drink stirrers, plates and cutlery in stage one, and then stage two involves single-use plastic items such as coffee cups, takeaway food containers and other things, which we have discussed a lot in the last couple of days. Let's take the timelines in the legislation. Let's just stick with stage one. Are there any barriers in your research that you see in terms of New South Wales being able to implement those stage one bans, which are straws, stirrers, plates and cutlery?

Mr KOEK: Just to clarify, Ms Faehrmann, this is in relation to the proposals in the bill?

The CHAIR: You could see it that way. Yes, it is within a bill, but it is also a question based upon the fact that other State governments are doing it and you are doing that work. Have you identified any barriers, even if there was no bill, in the Government looking at phasing out those particular items? You do not have to be political about it. It is just the facts and the science and your work.

Mr KOEK: Sure. I will talk about some of the key themes that have come through in consultation and discussions that we have had with stakeholders and, I guess, some of the concepts that we are obviously very cognisant of. As I was saying before, obviously the availability of sustainable alternatives and I think alternatives that retailers in particular can have confidence in that they actually are meeting the functional performance requirements that they need those items to perform—I think there is consumer preference that often plays into this mix as well. But I think that retailers want to have a confidence that those alternatives are there and that they are the right ones to shift to. There is also the issue of having enough time for retailers to be able to simply—the logistics of ordering enough of that material to possibly replace what they have already got and also running down inventories of the material that they might already have in stock, I think that that is something that has come through in discussions that we have had with stakeholders. I know that that is also an issue that the other States and Territories have certainly discussed. These are logistical issues that every business has to face, but they are quite important ones for us to consider and be cognisant of in the types of approaches that we might be considering.

The Hon. PENNY SHARPE: I have just got one more question. It has actually to do with something that was raised yesterday which obviously you would have done stakeholder consultation on. I am interested for you to let us know that you have had consultation with people with disability. The issue with the straws is an extremely important one and does not get much of a voice in a very crowded stakeholder space.

The Hon. BEN FRANKLIN: Hear, hear.

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The Hon. PENNY SHARPE: I am just wondering, as part of that—I am assuming they made submissions to your paper—whether you are actually actively engaging with people with disability and their advocacy organisations about this.

Mr KOEK: That is correct, Ms Sharpe. Again, I think that has been a common theme right across all of the States and Territories that have looked at single-use plastic items and what options there might be for dealing with those. In the consultation that we had post the discussion paper, we certainly did receive submissions from representatives of people with disabilities. We have certainly met with those groups a number of times. I personally have done that. There are some real issues there for people with disabilities that, again, I think we need to be cognisant of. A lot of those issues coalesce around plastic straws and the availability of particularly the articulated plastic straws.

The Hon. PENNY SHARPE: Correct.

Mr KOEK: I think these are some important issues that do need to be considered in the mix when looking at these particular options.

The Hon. MARK BUTTIGIEG: I get the sense that with a lot of these problems it is out of sight, out of mind unless you see the quite shocking images we see of the emblematic things like turtles ingesting things and fishing. We heard evidence this morning that this could realistically pose a serious health threat to human beings given the manifestation of nanoplastics and the breakdown into a chemical form and poisoning and all that. What sort of liaison have you had with the health authorities about the risk to human beings of this sort of thing happening? Presumably, it is a function of time and volume. Has there been any risk analysis on how much time we have got before this becomes a serious health threat?

Mr KOEK: I can answer this in general terms and then I might throw to my EPA colleagues. I think, Mr Buttigieg, this was one of the areas that was flagged for attention in the discussion paper: understanding better the future impact of plastics. I think it is fair to say that plastic is a relatively new material when you are looking at the intergenerational impacts of it. It is ubiquitous today, but in reality it has not been around in its ubiquitous form for that many generations.

The Hon. MARK BUTTIGIEG: Just on that point, how many years are we talking? Do we know? When you say it has not been around for that long, do we have an idea of roughly how long it has been in production? Is it fifties, sixties or earlier?

Mr KOEK: I do not have the precise dates, Mr Buttigieg, but I think we have seen a steady transition towards more plastic in our day-to-day life. There is more plastic in our appliances, in our automobiles, in our buildings, in our infrastructure now than there obviously was.

The CHAIR: In our beaches, in our oceans.

Mr KOEK: Yes, and I think undoubtedly that increasingly we are seeing those impacts being recorded amongst the scientific community and the research that is coming through. There is evidence of microplastics and nanoplastics certainly penetrating further and further into our ecosystems. I think it is fair to say that there is a collective effort required to really understand what those long-term impacts of that exposure will be, and certainly something we flagged in the discussion paper is that understanding the future of plastic is quite important. I might throw to my colleagues at the EPA.

Ms CHANG: The only thing I will add there is that I did touch previously on the resource recovery framework. One of the main things that we do is to assess the dangers to both human health and the environment when we consider any resource recovery options. That includes any re-use of plastic material. Once it becomes a recyclable plastic product, we want to make sure that that does not then leach back into the environment and human health. That is absolutely one of the considerations in a resource recovery exemption.

The Hon. MARK BUTTIGIEG: I suppose my question was a little bit more specific. You would imagine at a very sort of high level that after a period of, say, 50 years if we are on the current trajectory of production and things do not improve, you could have a situation where human life would be under threat because of the proliferation of nanoplastics into people's bodies. Has there been any discussion with health authorities, universities, academics as to that risk analysis, the trajectory we are on and how quick action is required?

Mr KOEK: I think the answer to that, Mr Buttigieg, is that that is a growing area of interest amongst the research community, particularly about those long-term impacts. As I said, there is more and more research appearing about the prevalence of microplastics and nanoplastics in the environment and in the food chain.

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The CHAIR: Is there any formal dialogue between your agencies and health authorities and universities on this subject? Is there any formal forum for those discussions to be aired and analysed?

Mr KOEK: I would have to take that on notice, Mr Buttigieg. There may very well be in other parts of our department, but I would have to take that on notice.

The Hon. MARK BUTTIGIEG: Okay, thanks.

The CHAIR: In relation to the plastics plan, is this a draft?

The Hon. BEN FRANKLIN: The discussion paper?

Mr KOEK: The discussion paper?

The CHAIR: Yes, the discussion paper. Potentially a plastics plan—*Cleaning Up Our Act*. In terms of the outcomes, if we focus on outcome 2 to make the most of our plastic resources, it states:

Proposed target: Triple the proportion of plastic recycled in NSW across all sectors and streams by 2030.

Proposed direction 5 is to "mandate 30% minimum recycled content in plastic packaging in NSW by 2025."

That is one year after what is in the plastics bill before us which proposes by the end of 2024. I think we have recognised that potentially those targets, as people have said, are quite ambitious. That is not far off what the bill is suggesting. What research have you been undertaking to suggest that that is feasible for the Government to be able to mandate that?

Mr KOEK: Ms Faehrmann, I think obviously the final decisions around where these policies are heading are obviously a matter for Government. My comments here are not meant to be indicating any particular direction. I think that if you look at the direction that the packaging sector has gone down, they have adopted targets for 20 per cent recycled plastic in their products by 2025. It is a voluntary target that the packaging industry has signed up to through APCO, and I believe you had representatives from APCO here yesterday.

I think that there are some issues around the availability of recycled content that are very real and need to be addressed. I think the issues around the quality or the quantity of the recycled content, even for the packaging sector which has voluntarily signed up to these targets, is something that I know a lot of work is being done, not only on our side but with industry as well. Some of those issues are around obviously the collection of particular plastics, either from kerbside or from commercial waste streams and being able to collect and process enough of that material to then be able to go back into the manufacture of products that use that level of recycled content.

If you look at the breakdown of the APCO target, they have specific material targets. For plastic, overall it is 20 per cent, but then they have sub-targets within plastic. I think that is generally to reflect the recyclability of particular types of polymer. PET and HDPE are polymer types that are typically found in your beverage containers, the lids on beverage containers, and obviously with the advent of CDS here in New South Wales there is a very strong clean stream of that plastic that is now available for reprocessing and remanufacturing. I think there is stronger demand for things like polypropylene, but there are a lot of other types of polymers that are quite difficult to recover and potentially quite expensive to reprocess and turn into a usable material back into the manufacturing process.

These are real issues that we need to address and we have certainly been looking to address those in a lot of our funding programs, which Ms Giunta would be able to speak to, but also in the supply chain partnerships that you are seeing start to emerge in this space. We had the partnership with Cleanaway and Asahi and Pact with their facility in Albury, and I think that is a great example of the type of partnership that can really catalyse the collection and processing of that content so that you can get more recycled content back into the products that we use on a daily basis. They are the key issues that really do need to be considered in this space, but I might refer to Ms Giunta who might be able to tell you a bit more about the types of funding that we are providing for particular activities.

Ms GIUNTA: Sure, thanks. We have a range of funding programs covering plastic, everything from behaviour change through litter and illegal dumping grants and programs to collection-type programs and then infrastructure for processing. The Asahi project is one of those that has benefited from funding through Waste Less, Recycle More. All up through that sort of umbrella program we have funded additional recycling capacity in this State of around 2.7 million tonnes. Not all of that is of course for plastics. It is for a range of materials, but plastics are certainly in there in the mix.

Many of those facilities are the MRFs—the materials recovery facilities—that are looking at all of the mixed material that comes from kerbside as well as from the commercial industrial sector and some from C&D.

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In total, the programs have provided a good number across the State of more processing capacity for those plastics but where we have been moving to in recent years is also helping the manufacturers to then pick that material up and put it into the manufacturing sector. For example, one of the grants we funded a little while ago through the product improvement program was for Unilever to be able to retool so that they could pick up and use recycled plastic pellets in their manufacturing process. There are a number of grants we have been supporting industry with to do that for a few years now—since, really, the focus change with China's implementation of their National Sword policy, which really refocused efforts on plastics, paper card and metals.

The CHAIR: Looking again at the Plastics Plan, the draft discussion paper, do you have an idea of what the submission rate was for people who, for example, supported the phase-out of single-use plastics? I notice you asked various questions in the discussion paper. Is there anything you can report to the Committee about the feedback that was provided and the consultation phase of that?

Mr KOEK: Yes, Ms Faehrmann. We had an incredibly strong response to the discussion paper. In fact, for many months I was convinced that we had the highest number of responses ever to one of these things but I was disabused of that by a colleague. But we had about 16,000 responses to the discussion paper.

The CHAIR: Great.

Mr KOEK: Give that that was basically at the start of the pandemic and the lockdown, I think that gives you a pretty good sense of sentiment out there in the community, as I know you are very well aware. I think we had—I would have to double-check the figures but it was in the 90-plus per cent of people who were expressing support for taking the type of action that we had flagged in the discussion paper. As I said, there was very strong sentiment out there, and I think a very activated community who are keen to support the type of activities that we had flagged in the discussion paper.

The CHAIR: That is good to know. I suppose I am trying to get as much information not about what is going to be in the ultimate Plastics Plan when it is released but just around some of the work you may have done that could assist the Committee. What about regulatory settings? For example, where it says "Who is responsible? Government. Take the lead on setting a fair regulatory environment that drives better producer management of plastic", what does a fair regulatory environment look like from your perspective? That is a question maybe for the EPA.

Mr KOEK: The concepts that we had fleshed out in the discussion paper certainly around making sure that producers understand their obligations within the regulatory environment that there is the type of regulation that allows the type of activity that Ms Chang was referring to before in the context of the resource recovery framework, and to make sure that those obligations are clear and that it is an environment that facilitates that type of activity—I am not sure if Ms Chang—

Ms CHANG: I would add that I think what we had envisioned is a proportionate response and certainty in terms of what is the regulatory framework. To that end the EPA is currently working on a regulatory strategy that will talk about how we regulate on all matters, and basically ensuring that we have a proportionate response to anything that is being proposed that comes out of the Plastics Plan or the 20-Year Waste Strategy.

The CHAIR: That would indicate there will be some change at some point around how obligations are placed on producers of plastic packaging.

Ms CHANG: I think that will be a matter for when the Plastics Plan is released.

The Hon. BEN FRANKLIN: I just have a couple of quick ones if I might. The National Waste Policy Action Plan—can you provide some context around that and what we are currently doing in order to meet our obligations?

Mr KOEK: Thanks, Mr Franklin. The National Waste Policy Action Plan contains a number of targets that were agreed by all environment Ministers in each State and Territory, including here in New South Wales. In relation to plastic, there is a target—target 5—around reducing problematic and unnecessary plastics by 2025. At the recent Environment Ministers Meeting in April there was agreement around the scope of what would be included in the definition essentially of "problematic and unnecessary plastics". There is a list of particular items and they are largely single-use plastic items that I think are well known to everyone here—obviously having consideration of the scope of those items in relation to that target. The other areas of the National Waste Policy Action Plan are around our support for increasing investment in recycling infrastructure, progressing issues around resource recovery, regulation and the frameworks that we have that Ms Chang previously mentioned. There is a regular forum for officials and State and Territory environment bodies where we go through the actions that are being taken across the nation. A big chunk of those are being led by the Commonwealth. The recent release of the

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Commonwealth's National Plastics Plan was one of those actions that arose out of the National Waste Policy Action Plan, as was the operationalisation of the export ban on a range of recycled materials, including the mixed plastics and unprocessed single polymers.

The Hon. BEN FRANKLIN: While you are on the waste export ban, what is our role and responsibility there and are we fulfilling it?

Mr KOEK: The role of the States and Territories—and New South Wales in particular—in the waste export ban has been in the provision of funding to proponents. I might refer to Ms Giunta, who is leading that work in the EPA, but our role is chiefly to make sure that we have the right level of processing infrastructure here in New South Wales to make sure that we can process our material domestically and provide more of that recycled content that we were discussing earlier back into manufacturing processes. Ms Giunta might be able to elaborate on our funding approach.

Ms GIUNTA: Sure. With the Australian Government and their Recycling Modernisation Fund, we released a new grant program called Remanufacture NSW, which is a \$35 million grant program. Applications are in; we had an enormous amount of interest. They are being assessed right now so we will be able to put those out probably mid this year. That program is focused entirely on helping organisations, councils, industry and the community to respond to the regulation of export of glass, plastic, tyres, paper and cardboard under that new Recycling and Waste Reduction Act. It will look at not only assisting for there to be more recycling capacity in New South Wales, but also to improve the quality of those products to make them exportable commodities or better able to be picked up and used in manufacturing again, either here or overseas. That is really the entire aim of this grant program. We are looking forward to being able to announce those later on this year.

The CHAIR: I just thought I would ask some questions around the specifics of the legislation that is the subject of this inquiry. In relation to the specific types of plastic waste and the elimination target dates that are set so far in this bill, have you had a look at them, Mr Koek? Do you have them?

Mr KOEK: I do not have them in front of me, Ms Faehrmann, but I can pull them up.

The CHAIR: While you are pulling them up, just one example, then. We have heard, and I am sure you are aware, of the pollution problem posed by plastic cotton buds, including what seems to be an extraordinary number of households of people flushing them down the toilet, which surely should be an education campaign in itself. Six months after the date on which this part commences—just taking that one as an example and your work in this space, would you think that firstly it is feasible to phase out plastic cotton buds, mandating that they be phased out? Secondly, the time frame—six months?

Mr KOEK: Ms Faehrmann, I hesitate to provide my rolling opinion on each item. Again, I would say that if the intention of the bill is to phase out a particular item—in this case, as you are referring to, cotton buds—I think that some of those key considerations that I referred to before should be part of the considerations of the approach; so, things like the ability for retailers to shift to an alternative that provides that sustainable option and the ability of retailers to then be able to manage their current inventories. I think those sorts of—

The CHAIR: With respect, I am aware that you would do a lot of research in this space and it is your area of expertise. I am not after an endorsement, if you like, of anything here, recognising that you are a public servant. Are there other jurisdictions that have done similar things in relation to mandating the phase-out of plastic cotton buds, for example?

Mr KOEK: I do not have that information in front of me now, Ms Faehrmann, but I can come back to you with that information, yes.

The CHAIR: What about if we changed it to plastic drink stirrers? Again I am just thinking of the Queensland example and looking at what South Australia—and WA is also looking at that. I think it is WA. Plastic drink stirrers—do you see any issues within New South Wales particularly if other States are looking at mandating that? It is not largely, I would say, a New South Wales company specifically. Are you seeing that manufacturers or suppliers will start to—if one State, for example, phases out these things, other States would move? One example is the confection sticks—so, the lollipops, which are similar to the plastic cotton buds being found all over beaches and what have you. If a couple of States start to ban plastic lollipops, which are manufactured potentially overseas, do you think that the manufacturer will just stop supplying to those States, or will they change the stick? What is your sense of what would happen?

Mr KOEK: I think possibly the best way to answer that, Ms Faehrmann, is to point to some of actions that some of the particularly large national retailers have taken in response to actions in other States. The major retailers shifted away from lightweight plastic bags right across their supply chains and shifted to the heavier

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plastic bags and charged consumers for those. They were voluntary actions that they took for the most part in most of the States that they operated in. More recently we have seen those retailers also starts to remove particular plastic items that in some cases go above and beyond what particular States and Territories might be requiring of them within the regulation within those States.

Look, I think that is very much not only a response to regulation within a particular jurisdiction, but it is also a response to the sentiment from their consumers and, in some cases, from their shareholders as well. The fact that we got 16,000 responses to the discussion paper in the middle of a pandemic, as I said, goes to the strong sentiment that is out there in the community. I think we have been seeing retailers responding to that sentiment and making those shifts in their product lines. I expect that trend to continue as they continue to respond to that feeling from their consumer base.

The Hon. PENNY SHARPE: Clearly you are involved at the Federal and State discussions around harmonisation around those matters. Each and every one of those is—everyone is at a different point and you have got retailers moving on some things and others in response to what States are doing. Can you just tell us how both agencies work through the national process? Is there actually a plan around harmonising this?

The CHAIR: Good question.

Mr KOEK: Thank you, Ms Sharpe. I think that the issue of consistency across jurisdictions obviously something that comes up from stakeholders. I am sure you would have heard that.

The Hon. PENNY SHARPE: In every submission.

Mr KOEK: In every submission.

The Hon. MARK PEARSON: Yes.

Mr KOEK: Again, it is down to the logistics that I referred to before. We are talking in many cases about national and international supply chains that businesses have to manage. That issue of consistency—the States and Territories and the Commonwealth have sought to manage that in that recent decision at the Environment Ministers Meeting, to put some scope around what constitutes the unnecessary and problematic plastics that are subject to that target.

The Hon. PENNY SHARPE: So that environment MinCo is really the place that that is all happening? Is there anywhere else that is happening in a parallel process? There are all those MinCos on standards and all of that sort of stuff, where a lot of this stuff falls into. Does that get picked up?

Mr KOEK: I would have to probably take that on notice, Ms Sharpe.

The Hon. PENNY SHARPE: Sure.

Mr KOEK: But I think it is fair to say that a lot of the discussion around waste policy at the Environment Ministers Meeting is obviously focused on the areas of the National Waste Policy Action Plan that all of the States and Territories are trying to advance. Certainly the plastics area was the subject of discussion at the last Environment Ministers Meeting.

The Hon. MARK PEARSON: Because you have been looking at this for so long, do you think the example you gave of supermarket chains moving away from providing single-use plastic bags—because they produced them and they provided them, they had carriage of that and they had responsibility. Is it your view that large retailers could also take on an issue, for example, by saying to producers, "We will no longer sell cotton buds with plastic stems in the middle?" They have done it with other animal ethical issues and some sourcing from slavery, for example. Do you think that they have the will to take on issues like this once it becomes a critical concern in the community even though it is not their product particularly, but they are the carriage of the product, or the retailer?

Mr KOEK: Yes. Mr Pearson, I will not speak for those retailers. But I think that the decisions that they have been making and announcing quite publicly over particularly the last 12 months—I think it is fair to say that there has been a lot of activity in that space, that they are demonstrating some of the characteristics that you have just described.

The Hon. MARK PEARSON: You are answering my question. You have seen this will by large retailers, with no particular financial interest for themselves, but actually a good will in a sense. You have seen that.

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Mr KOEK: We have certainly seen a shift away from some particular products that retailers are stocking. Now, whether that makes financial sense or not, only they can tell to us.

The Hon. MARK PEARSON: They will work that out.

Mr KOEK: Yes. But I think we have definitely seen these big players in particular, but a strong representation in the small and medium sector as well, making that shift away because their consumers are very much hoping to see that shift and embracing that.

The CHAIR: I have just got a question or two, probably for Ms Chang or Ms Giunta, actually. We heard from APCO in relation to everything in relation to the covenant. In their submission they also mentioned the fact that companies can also choose to be regulated as opposed to going down the voluntary path. If they choose to do that, that is implemented by part 8 of the 2014 regulation. How many companies have chosen to be regulated this way by the EPA instead of going down the voluntary path?

Ms CHANG: I am going to have to take that question on notice.

The CHAIR: Can you explain how that works? This is APCO's submission. I note the Government did not make a submission. So I will go off APCO's submission. It says:

This Regulation establishes two packaging targets for companies that choose to be regulated by the EPA.

Are you aware of what those two targets are?

Ms CHANG: I am not. I am going to have to take that on notice.

The CHAIR: One is that 80 per cent of all material used in packaging products must be recovered. That is one of them. It would be good to know when by, just more detail on that. The other is that 100 per cent of new and existing packaging must be reviewed using the Sustainable Packaging Guidelines by June 2020. How many companies and which companies? It would be good to know that. Then it also says that the regulation includes civil penalties for companies that do not comply. It sounds like you are not aware of this specific—

Ms CHANG: I am not personally aware of this. But I will take it on notice and come back to you.

The CHAIR: It also says that to date the penalties have not been applied. So it does not sound like it is working very well, if you are here from the EPA—you are the executive director.

Ms CHANG: Yes, of regulatory policy. I would have to check with the executive directors of compliance and regulatory operations, unless it is a program, in which case my colleague the executive director of programs will have to answer that question.

The CHAIR: That would be great to get that on notice. That is all I have got for that. Thank you very much for attending. That is the end of our hearing today.

(The witnesses withdrew.)

The Committee adjourned at 15:55.