

LEGISLATIVE COUNCIL ENVIRONMENT AND PLANNING COMMITTEE

Inquiry into recycling and waste management

Melbourne—Wednesday, 5 June 2019

MEMBERS

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**Necessary corrections to be notified to
executive officer of committee**

WITNESSES

Ms Rose Read, Chief Executive Officer, National Waste and Recycling Industry Council

Mr Alex Serpo, Secretary, National Waste and Recycling Industry Council

Mr Peter Murphy, Member, National Waste and Recycling Industry Council, and

Mr Simon Mackie, Member, National Waste and Recycling Industry Council.

The CHAIR: Welcome. I declare the Environment and Planning Standing Committee public hearing open. I just want to go through some formalities first, and then it will be over to you.

All mobile phones should now be turned off or turned to silent. The committee is hearing evidence today in relation to the inquiry into recycling and waste management, and the evidence is being recorded. I welcome our list of witnesses tonight: Ms Read, Mr Murphy, Mr Mackie and Mr Serpo. I want to thank you for making yourselves available and providing evidence to the committee.

All evidence taken at this hearing is protected by parliamentary privilege as provided by the Constitution Act 1975 and further subject to the provisions of the Legislative Council standing orders. Therefore the information you give here today is protected by law. However, any comment repeated outside this hearing may not be protected. Any deliberately false evidence or misleading of the committee may be considered a contempt of Parliament. All evidence, as I said, will be recorded, and you will be provided with a proof version of the transcript in the next few days.

I think I allocated 5 or 10 minutes but we are in your hands to sort of give us an overview about your presentation. We have received your submission; thank you for that. And I believe you have got some slides. I think, Ms Read, you are going to lead the debate—not debate actually, the evidence. And then at the end of it if any of your team would like to supplement that, that is great. Then after that we will move to questions, at least two or three questions for each member, so we will try to rotate that. Over to you, and again thank you for coming in tonight.

Ms READ: Thank you very much, Mr Melhem. The National Waste and Recycling Industry Council welcomes the opportunity to speak with the committee. Obviously it is a high priority for our members. Before I start, just to introduce who is here, we have Peter Murphy. He is the managing director from Alex Fraser Group, who is a member of the council. We also have Simon Mackie, who is the general manager for Victoria and South Australia with JJ Richards, another of our members from the National Waste and Recycling Industry Council. We also have Alex Serpo, who is our secretariat. Also, I would like to just mention that Mark Smith, the executive officer for the Victorian Waste Management Association, is here tonight as well.

Visual presentation.

Ms READ: The Victorian Waste Management Association is an affiliate of the National Waste and Recycling Industry Council. What I would like to do, if you could go to the next slide, there is just a quick summary. I will try and move through this quite quickly so there is time for Q and As, but I have been requested to provide more of an outline also about the industry overall as a whole within Australia and Victoria. So there is a little bit of background information there and then come back to the current challenges within Victoria and what are some of our proposed solutions or suggestions in different time frames.

Firstly, the National Waste and Recycling Industry Council could be referred to as the UN of waste and recycling companies in Australia. We have a core group of nine members: Cleanaway, JJ Richards, Remondis, Suez, Veolia, Solo Resource Recovery, Alex Fraser Group including Hanson, Sims Metal and ResourceCo. They operate in multiple states, if not all states and territories, across Australia, and together they have come together to really bring a national focus to the waste and recycling issues that the industry faces. The role of the council is really about representing industries' priorities to government and to look at how we can work in collaboration with government.

We also have seven state and territory affiliates, and that includes the Victorian Waste Management Association, the New South Wales Waste Contractors and Recyclers Association, and the waste and recycling industry associations in Queensland, South Australia and Western Australia as well as the ACT and the Northern Territory. So overall we represent probably the nine major operators plus another 450 small to medium-sized enterprises operating in the sector. Our members do all sorts of things from picking up the rubbish or the recycling from homes and businesses through to transporting it, processing it, recovering materials and then also treating it and disposing of it in accordance with laws required across all states.

Looking at just some basic figures, the industry itself—I will go into more detail about the size of the industry, but just some stats about our own membership—has over \$8 billion turnover. We employ more than 16 500 people and have at least 10 000 trucks on the road. And as I mentioned, we have a range of treatment facilities that handle and process materials, whether it is a material recycling facility—that is what MRF stands for—composting, concrete recycling, fuel manufacture or processing liquid treatments, landfills and so on. There is a diversity of that.

What I think is also really important and a key focus is obviously safety. A fair and equitable industry is important to us—sustainable, both economically, environmentally and socially—but also trying to be innovative where we can. It is really about trying to optimise the value of materials that are collected and realising those, really driving towards how we can help to create a circular economy but also how we can move materials up the waste hierarchy and realise the value of those, both from various perspectives.

That is just a quick summary of who we are—the nine founding members, who fund the industry council, and then our state and territory affiliates.

A bit more broadly about the waste and recycling industry, a lot of this information has come from the *National Waste Report* that is produced every two years by the federal Department of the Environment and Energy. These stats are based on 2016–17 figures, and this report was produced late last year. The industry is worth about \$16 billion overall. Australia produces around 54 million tonnes of what we call core waste. What is not included in these figures is from mining there is a production of ash, which is waste. You may see a figure where they talk about 67 million tonnes of waste, and that includes the ash. In here we do not include it because that material is dealt with in the mine sites. Of that, about 32 million tonnes are recycled in Australia, and then in Victoria we are obviously looking at a subset of that—14 million waste generated and 9 million tonnes recycled. Victoria has the second highest recycling rate; South Australia is the leader on that. New South Wales is close behind Victoria, and then you have Queensland—no, ACT; sorry, I should not forget them. They should be quite high up as well. Roughly that translates to about 2.2 tonnes per person per year, so it is quite a lot. We are one of the highest waste producers in the world.

In terms of where the waste comes from, it comes from a whole range of areas. The construction industry is very high, 29 per cent; the manufacturing industry, 23 per cent; households, 16 per cent; and other services, 14. The diagram on the right comes from the *National Waste Report*. On the right you have got the stream, which is construction; MSW, which is homes; C&D is construction; and C&I is commercial and industrial, so that is essentially manufacturing and other services.

In terms of who delivers waste and management recycling services, about 56 per cent of the services are outsourced to the private sector. The companies that the NWRIC represents look after about 56 per cent of that material; 20 per cent is run by local councils or local governments with their own facilities—they have their own trucks, they have their own material recycling facilities, they have their own landfills and a lot of those would be regional as opposed to metropolitan; and 24 per cent by firms in other industries.

This is a very basic model. Just to talk about where waste comes from, most waste follows this pathway. Where is it generated? It comes out of businesses or households—businesses, enterprises, government and households. That is where it comes from. It is then collected. That light green and the darker green is where essentially our industry is actively involved in all those elements. There are different players that collect it. They will then send it to an area where it aggregated and processed. This is where you will see sorting and separating. Then they may go to secondary processes to produce materials for resale, whether that is locally here in Australia or overseas, and then you will have residual. Some of that residual may going into fuel manufacture. It could go

into a wastewater treatment plant. It may be hazardous and needed to be handled properly and treated in certain ways, or it might go to landfill.

But also at the aggregate process side you will have materials that will go into stockpile and, like any resource management, if you were thinking of the mining industry, you have resources, and depending on supply and demand that will determine how much you will stockpile and how much you will not. Obviously we are seeing that in this case, where materials such as plastics and paper have gone through that system and the markets are failing, and as a result through they are being stockpiled.

So in terms of trying to understand a little bit about how the funding moves around, the waste generators, either businesses will pay fees or councils will pay service fees, and those amounts will vary and change depending on, in part, what money is coming through the resale that can come back in to fund that whole process. Also you have got disposal costs to landfill. They are the key things, plus you have obviously got the cost to collect and process and treat in between. But obviously there is a lot at play in terms of where things are happening. If the resale value changes, that would change the cost coming back up to the generator and so on.

The other thing you need to start to think about in terms of the waste being generated at, say, a business or a household is stepping back and thinking about the products that these people are buying. This is where product stewardship is a key tool in all of this. The question is: should that cost be being pushed back to the producer?

If we go to the next slide, as I mentioned, the industry is very much focused on moving materials up through the waste hierarchy. Obviously landfill is the final end of disposal, and there will always at some point be a percentage of material that has to be disposed of. Does it go to landfill, does it go to waste to energy, does it go to fuel manufacture? As you will see, we will see disposal is the furthest down in the hierarchy, and we see energy recovery—and that can be either in waste to energy or fuel manufacture. Then recycling and composting, and then obviously looking to how we prevent waste in the first place—and there are obviously a number of ways to address that.

To the next slide, I just want to give you a little bit of a feel about waste and national-state, national and state waste policies and where they are going. What you will find now is that for most of the states—for instance, Western Australia has recently put out one, Queensland has put out one and the national waste policy came out at the end of last year—it is all about waste avoidance and resource recovery. We are really moving towards and applying circular economy principles in this thinking. It is all about slowing waste generation, moving right up the top and preventing it but also increasing resource recovery, because obviously there is still the capacity there to recover resources. There are a number of initiatives, whether it be organics or diverting them to landfill, for instance, and so on.

As I mentioned, Victoria sits very high up. You are about the second or third performer in terms of resource recovery, but what has happened is that industry is essentially stalling from what we see at the moment. The markets are no longer sufficient to drive innovation, so with materials, the value recovered from the resources, the markets are dynamic and hard to predict. So as a way to inject funds into the industry it is obviously not working at the moment, which is why you are getting stockpiles in particular regards to, say, plastics. But if you think about glass—the way that whole market has changed over the last five to six years or longer—how the product itself has been put onto the market has become a lot lighter and so therefore it breaks a lot more easily. So then if it is collected in kerbside, the amount that can go back into manufacture for bottles has decreased, you get a lot more breakage. There are all sorts of factors happening, so you have to think about what products are being put onto the market and what is happening there and then understand how that flows through the whole system.

Why do we have waste management? The first priority is really about protecting human and environmental health. That is why we do it, then obviously the other focus is about the secondary markets and recovering the resources, because there is a lot of energy that goes into producing products and using materials and we need to really value and look after those.

What drives industry innovation? Markets are one thing, you know, but the other key thing is certainty in government policy and regulatory frameworks and having the right balance. What is quite interesting is that waste traditionally has been looked after at a very local level, and I suppose 10 or 15 years ago that perhaps was

appropriate, but waste is now very much a global issue as well. The materials are recovered. We operate and trade materials globally. Metals in particular are a great example. But the challenges, for instance, facing the metal industry are quite interesting as more cars have a higher percentage of plastic, so when they process the cars they have got a greater percentage of what we call floc, which is a mixture of plastics and metals. Trying to deal with that and recover those increases processing costs, and then trying to compete—if that increases the processing costs, it makes our metal exports less competitive. So there are some really interesting dynamics there. And then you start to put in things like landfill levies for a variety of purposes, and that can have a positive benefit in terms of giving economic incentive to recover more resources. But it also can have a flip side, say, in the case of the metal recycling, where they have an increase of residual from their process that they have to dispose of in landfill, which increases the total costs, which complicates their ability to be competitive in an international market.

So the key message of that is it is a dynamic market and it is a dynamic system, and it does not necessarily happen just within the local council area. You see materials moving within states and you see materials moving across states, depending on what levies are between different states. And then obviously what is happening offshore—if a market in China shuts down, an avenue, an outlet for materials changes, so where do you go? What are the options? Does it get stockpiled? It might go overseas.

The CHAIR: Just on that, can you explain a bit more about the levy—the landfill levy, for example—between various states and within states?

Ms READ: The levy itself?

The CHAIR: What barriers that is causing, what problems that is causing the industry—to innovate; is that an issue?

Ms READ: The waste levies?

The CHAIR: Yes.

Ms READ: It has a big impact. It has a positive impact in making recovering resources more affordable. So, for instance, if you are a manufacturer of commercial industrial, the higher waste levy makes that model commercial, but it also will end up that, when you have a differential between states, you will see that people will look to—a classic example between New South Wales and Queensland. There is no levy in Queensland, and New South Wales has the highest levy. So you are talking about \$140 to a zero, and we are looking at seeing that going from 140 to 75 from 1 July 2019. But in the last three or four years we have seen a massive movement predominantly of construction and demolition materials from New South Wales to Queensland because it was cheaper for them to dispose of it there. It was quite legal what they were doing. They were disposing of them in legal landfills in Queensland. But it is just an example. So it is important for the states to look at what they are doing, but the state needs to look at what they are doing and understand what is happening around them in other states and globally when doing policy adjustments. If you are recommending different changes, you need to not just think of it within your state boundaries but understand the linkages of how things move around.

So I suppose this slide just talks about the levers. Waste and landfill levies: they do make resource recovery more affordable, and I am quite sure that Peter or other people can talk about that in more detail.

Product stewardship regulation: this is where you are getting an injection of more funds into the system to enable a better process. A good example would be the National Television and Computer Recycling Scheme that was brought in in 2011–2012. That is a federal product stewardship scheme. What is required is any of the companies that import or bring products onto the market are required to recover that product and recover a certain percentage over time. There is a regulation under the Product Stewardship Act that outlines the rules of that.

There are three basic rules. They have to achieve a certain collection rate, and that has grown from 30 per cent; 2012 was the first year. They are currently sitting at around 60 per cent and have to hit 80 per cent by 2030. If they do not, they have to join an arrangement that runs the collection process on their behalf. They have to ensure that over 90 per cent of the materials are recovered, and there is a standard in terms of which recyclers—

the recyclers they use have to meet a certain standard, and they also have to ensure community access, so within a remote area, inner or outer regional or metro areas, the community has to have free access for the disposal of the TVs, printers, computers and accessories that are covered under that regulation. And as a result of that we have seen recycling go from 18 per cent to, say, 60 per cent, and the companies are investing around \$25 million a year to run that project.

Mr HAYES: Can I just ask, on the product stewardship, what sort of products are covered by that or is it working with? It is not packaging, though—

Ms READ: There are a number of product stewardship schemes that operate at a state and a national level, depending. The TV and computer scheme operates at a national level. There are four categories: printers, computer accessories, computers and televisions. Television accessories, like a DVD player, are not covered, for instance. Mobile phones are covered by another scheme called MobileMuster, and that is actually industry-led and industry-run. It is accredited. It is a voluntary scheme under the act.

That is what happens at a national level, but with packaging, for instance, there is a national environment packaging measure for used packaging. That was set up in 1998. They call that a co-regulatory model, where industry and government work together. That involves all the state governments plus the federal government plus the packaging industry, and they have agreed on a system which they talk about—the covenant. You might have heard about the Australian Packaging Covenant. The companies that put packaging on the market, if they join the covenant and commit to delivering the outcomes of the covenant, then they are not liable for any penalties. That has progressed to some extent, but given the state we are in now I would suggest that that regulation is not as effective as it could be.

Mr HAYES: So they do not actually take back any packaging?

Ms READ: Correct; they do not. As that scheme has evolved over the last 20 years—because, yes, it would be 20 years it has been in—the industry and the government have funded various projects, which has actually helped fund and develop kerbside recycling. It has actually contributed to the process, and it has in part funded different types of litter programs and all different things as well. But that has not proved as effective, so what you will see now, because of its performance, is container deposit schemes in many states—South Australia has kept one forever, Northern Territory, New South Wales, the ACT, Queensland—and Western Australia is coming on board next year, so Victoria and Tasmania are the only ones who do not do it. In that instance those companies—the beverage companies that are responsible for the list of containers that are covered in the act—contribute to fund a collection network and the handling and processing, not dissimilar to the investment of the TV and computer companies: they contribute to the costs of collection and processing and so on. But in the case of containers they are actually incentivising the public by having that 10 cent return.

Mr HAYES: So it is really only working well with the e-waste sort of stuff?

Ms READ: Where product stewardship works, you need to have a very smart regulation that identifies some clear rules, clear performance targets over time, and it should be developed in consultation with industry. For example, with MobileMuster you have got the handset manufacturers and the retailers, so you have got three major retailers—Optus, Telstra and Vodafone—and you have seven to 10 manufacturers. They together work as a group, and they do it on a voluntary basis, but they are a small group so they can. But say in the case of TVs and computers there are like 130 companies that import products onto the market and there might be, probably, 10 top computer companies and maybe three top TV manufacturers who would be proactive in taking responsibility, but a lot of the rest of them are not interested. This is where the smart regulation needs to come into play that sets the basic rules. And I think the TV and computer one is a great example. It costs, probably, the federal government and the states around \$1.5 million to develop the act and supporting regulation and put it through its regulatory impact statements and all the rest of it. It probably costs them \$500 000 to \$1 million to manage the compliance. The actual cost of running the program, which is probably about an investment of around \$25 million, is funded by the companies that are putting the products on the market.

The CHAIR: Can I just ask for maybe another 5 minutes or so to take us through the rest of the slides, because you are providing some of the solutions, short to medium and long-term. And then can I ask members

to maybe write down the specific issues you want to explore and then we will start hounding down specifically these issues in the interests of time.

Ms READ: Yes. Sorry, product stewardship probably is my specialty.

The CHAIR: No, it has been a great discussion. Back to you. Next one.

Ms READ: Just quickly, so the challenges, obviously, I do not need to do stockpiling. The infrastructure plan is a great plan. It is one that we highlight and talk to other states, saying, 'This is a really good plan'. The challenge is: how do we get consensus about that? On that part I might get Peter just to outline a little bit of a case example with the Alex Fraser Group here in Victoria.

Mr MURPHY: Sure. Do you want me to do that now?

The CHAIR: Can I suggest maybe we can do that at the end?

Mr MURPHY: Yes, sure.

The CHAIR: Is that the specific one? Because that is in the supplementary submission you put in, so maybe we then can change the USB and put in your USB. Is that all right?

Ms READ: Yes, good thinking. The markets for various materials: plastics, glass and paper. Paper is the one that is probably the strongest. Also, in terms of being the most valuable material for our industry, if the paper market drops it has a big impact. I suppose the other key thing is metals. Aluminium is a very valuable material, and so where that gets collected and aggregated it can have an impact on Earth. Plastics is a clear one, and there are three elements of plastics. You know how you have plastic types 1–7? One, HDPE and PET 1 and 2. Their values if clearly separated are good. It can go back into products very easily—very good. It is the mixed plastics, 3–7, that are the problem. These are your chip packets, your LDPEs, your soft plastics. That is where there is really no market.

Contamination, household and commercial—this comes back to education, consistent messaging and also councils, especially households but also businesses educating their customers, their householders, their residents and their businesses about what is in and what is out, and also being a little bit tough on them too and really sending home the message that that is not acceptable. It is important, because otherwise it is going to have a cost implication. So they are essentially the key issues challenging our industry currently.

Obviously for us we see stockpile reduction and monitoring as a priority, and the EPA is making progress on that and looking at how they can reduce stockpiles, putting in greater monitoring controls.

In terms of the regulatory approaches taken by New South Wales, they have very good mass load balance reporting, and I think obviously the EPA, with the change in the regulation, the new law coming in and the regulations—ones we have in some areas.

Other areas we think are really important to focus on—developing markets. This is where government procurement really needs to come into play, identifying within the procurement policy. And I think you need to be specific. I do not think you can say, 'Okay, carte blanche, 30 per cent of the products bought by government have to have recycled content' or that sort of thing. I think you need to be very specific about what types of infrastructure, civil construction, thinking about the materials where we need markets. 'Where can the plastics go? Where can the glass go? Where can the paper go?'. So really focus. I think it would be more effective. And you can look at mandating certain levels to be achieved by governments, but also I think getting agencies simply to start looking and reporting on what they are doing, because no-one knows. No-one knows how much recycled content is being used. There are sustainable procurement guidelines, but I think once we start reporting on it people will start to realise where the gaps are, where the potential is and to really push that.

Contamination reduction: education is really key. There are lots of mixed messages out there, and we need to try and streamline that and get stronger education out there and more consistent messaging. Also processing capacity means improving our ability to sort and separate stuff. But obviously if we can have cleaner materials coming in in the first place and cleaner streams, then that reduces the cost at the processing end. Whether that is

more people at a material recycling facility or better equipment in terms of optical sorting and getting into secondary processing, washing, shredding and all sorts of other equipment, there is a diversity of things there that we could do.

I think also what is really key is facilitating greater partnership between all the players, and this also builds the foundations for your circular economy. As I showed at the beginning, over half of the waste recycling services are delivered by the private sector. In the past this was all done by local government, and it has gradually been outsourced over the years and the expertise to deal with this. So we need to think of it more as a partnership, not as simply a contractor relationship, because it is in the interests of both parties to do well for a whole variety of reasons. Having industry and having our members involved in various forums to develop plans on a more formalised basis—not necessarily as an ad hoc consultation—is key. Also the other thing is the people who are producing the products—getting the manufacturers more engaged in the process is where we start to look at that.

We have looked at this for the short-term and medium-term. Looking at product stewardship schemes, there is a container deposit. Victoria and Tassie are the odd ones out. Having CDS in every state would actually remove some movement of bottles and cans from state to state and all sorts of other things. Trying to have more consistency in the rules and reporting under that in the administration would be really helpful for our members so we do not have to sort of develop different systems for each state, because that just adds more costs, which means you cannot scale and drive efficiencies and pass that on as cost savings. Getting greater consensus around the infrastructure plan—having local and state planning work very closely, and Peter will explain this.

Mr HAYES: Sorry, could you just say, what is SWRRIP?

Ms READ: So it is the *Statewide Waste and Resource Recovery Infrastructure Plan*. Sorry, I should have—

Mr HAYES: Right. Okay. Should have known that.

Ms READ: Planning is really important—having space and protecting existing facilities. Providing space and making sure it is placed in the right spot is really important because of transport costs. If you want to keep your costs down for the residents and if you want to keep your costs down for the government, we need to be very strategic about how we place stuff, and we also have to think that with these facilities it takes anywhere from two to 10 years to get a facility up and running. You need 10 to 20 years to realise the value of that investment, and if there is no certainty or direction as to what the plan is within a five, 10 and 30-year horizon, it is very hard for companies to invest. There is private equity money out there that could invest in these activities. There are lots of good things about this infrastructure plan, and there is conflict sometimes. Like, ‘Here’s the infrastructure plan’, but what is happening locally or regionally in terms of state planning decisions does not match.

Having precincts for waste and recycling is a really important. Not everyone wants a landfill or an organic or a composting system next to their place, so we have got to be very strategic about that and make sure it is placed in the right area and you have got good buffer zones and also within safe distances. So it is about really thinking very sharply about that. And the zones are identified in the plan.

Mr HAYES: Can I just ask, what happened to that Kingston one that was—

Ms READ: Sorry, I do not know the Kingston one.

Mr HAYES: They lost the planning permit for it all.

The CHAIR: We are coming to that.

Mr HAYES: Will you come to that?

Ms READ: Yes, we will come back to that.

The CHAIR: That is the next one.

Mr HAYES: Alright; thank you. I mean, that is part of having safe zones.

Ms READ: I am nearly done, and we will go on to it. So then the other thing is really about enhancing our industry processing and what we need to do. Because we had the ability to export a lot of materials to China at a fairly simple level of sorting and baling, the industry has not developed secondary processing as much as possible, because there was a ready market offshore to take this material. All they had to do was sort and separate into different bales and material types and go to the market. The market said, 'No, we don't want that quality anymore. We want it up here'. So we have to get our quality up, but we also have to get that quality up and look at being more resilient and independent as well in building the ability to make our own products and developing more products and, for people who are putting products on the market, making sure they have got more recycled content. This is where HDPE and PET can really—you, know, 70 per cent, you should be looking at that level of recycled content. Coke and Nestlé are definitely going down that pathway, so it is important to do that.

Then, finally, just looking more at the longer term horizon—just on the 10 years—looking to minimise the differences between states in terms of regulation and understanding how things operate interstate. Why is this really important? Hazardous materials—continuing to be proactive in reducing what is being put out there in the first place. You know, for instance, asbestos—no new asbestos is coming into the system, but we have got existing asbestos that we need to deal with. PFOS—there have been some recent bans internationally around some of those chemicals. We are continuing to build our recycling infrastructure capacity, but we need to have markets. If you do not have markets, there is no point.

And then looking at products, what is happening? What is being put onto the market? How are we consuming our products? Can we consume them more effectively? We need to consume smartly. It is not going to hamper or stop our quality of life; it is about how can we maintain our quality of life in a more sensible and practical way, about how we consume? That is it. Sorry, that is a little bit longer than 10 minutes.

The CHAIR: Excellent. Thank you. Before we jump to questions, we have got a quick presentation from Mr Murphy, which would be 5 minutes or thereabouts? Would that be under 10 minutes?

Mr MURPHY: If you tell me it is five, I will do it in five.

The CHAIR: And then we can allow for questions. Are we ready to go?

Visual presentation.

Mr MURPHY: Sure. So I can tell you a bit of a good news story about resource recovery in Victoria, and I will use the Alex Fraser story but there is more than us to it. It is a bit about innovation, it is a bit about the importance of end markets that Rose touched on and it is a lot about the processing capability in between the two—so from where you take the material and divert the material from landfill, where do you process it so that you can support and then market?

A little bit of background. Alex Fraser is one of Australia's oldest companies. We are 140 years old this year. We employ nearly 400 people. We run five recycling facilities in Victoria and Queensland. We run three asphalt plants that supply asphalt with a very high recycled content all around the suburbs of Melbourne and Brisbane. We have recycled about 50 million tonnes, and we have got a capacity of about 4.5 million tonnes each year. So the resource recovery statistics that you see in Victoria—the tonnage that we put into that recovery is a substantial part of it.

What has been the part that is success? Like I said, it needs innovation. It needs good relationships with regulators and customers who use the end product, because by and large customers do not buy it because it is recycled—they buy it because it is practical. So you need good relationships there. You need some good people. You need a market and a lot of that is about specifications, and I think Victoria does a very, very good job there. I have travelled the world and looked, and I think there are departments in Victoria that deserve credit for the work they have done, because it gets a good outcome. But what it does need is a network of sites—that process and capability. Now, my example is about our part of the industry and the stream that we handle, but the principle you will apply to anyone in the industry.

So glass is a good one. Of course for years when we put our stubby in the wheelie bin we thought we were recycling, and in the last 12 months it has been highlighted that that is not the case; that is just putting a stubby

in a wheelie bin. When you sort it at an MRF you can recover a certain amount to go into glass, and sure, that is recycled, but in Victoria there is about half of that or close to that that cannot be recycled because it is too small or too dirty or whatever. That ends up in the mountain and you have seen the mountains. There are sheds full of them all around Melbourne; there are mountains out at Laverton. You need a high-volume way of handling that, so we take that material. The plant we commissioned last week has got the capacity to do 1 billion bottles a year. We have been doing it for 15 years. This is a step up, and all that material goes into a network of sites around Melbourne.

That has really been the critical part of it, and that network of sites takes the material, processes it and competes in a brutal, competitive industry. So we are supplying against major quarry companies, and they have got huge economies of scale. Our customers do not care whether it is recycled or not. They care about: is there a specification, can I buy it at the right price and can you deliver the volumes that I need? If you are doing a shutdown blitz for the LXRA, you want to know that you can buy thousands of tonnes on a Sunday night so you can get your project going on Monday morning. What that means is that you need to be close to the metro area to collect the raw material that comes—get it where it is generated. You need to be close to the metro area to collect it, consolidate it, process it and then deliver it back into the metro area, because that is where the demand is.

So the outcome of that, I think, in Victoria has been quite successful. In most major infrastructure projects in Victoria you have got some recycled content. It could be asphalt. If you came through Bayside this morning, we have got a crew out in Bayside that is laying asphalt that has got something like glass, plastics, recycled asphalt all being used all day, every day, in massive quantities. It is also jobs like LXRA, various Monash upgrades, the Western Ring Road—all the way back to the grand prix track, actually—that have got some kind of recycled content in them. So again I think in Victoria the story is pretty good. Victoria's Big Build is underway.

If we flick to the next slide, we have got a network of sites around Melbourne. In the south-east we have Clarinda. That is a sample of the projects that we are supplying or pricing in the south-east. They are the major projects. We are also supplying Kingston City Council's drainage work and footpath work, the Bunnings car parks and all those kinds of smaller projects. You cannot service those projects without good sites. The scale of it is misunderstood by lots of people. We do not do things on a small scale. So in Victoria those three sites have got a capacity of over 3 million tonnes a year—about 1 million tonnes a year each. That replaces a substantial quarry—a million-tonnes-a-year quarry in the quarry industry is a big quarry. So the facility like that one there in Clarinda—it is in the middle of where the material is collected from and where it is delivered to—replaces a big quarry. If you close that facility, you need to find a community somewhere that wants a big quarry established in their community and you need to tell them that they need a quarry because you shut down a resource recovery facility. Again, this is our example, but that capability between where you collect the raw material from and where the end market is is a critical part of it. It does not matter what product you mandate or what levies you have; if you cannot process the material efficiently and close to the market, it is a waste of time.

I will use this particular site as a bit of a case study because it has been well regarded globally—people come from overseas to look at what we do there. A very senior bureaucrat came out and had a look at the site a while ago and said, 'If we can't support a site like this, what hope have we got for the industry?'. This is our Clarinda site. Like I said, its capacity is about a million tonnes a year. It has got a sensational road network that is getting better. It is about 300 metres from the front gate to a major interchange. It is close to where the material is needed. If you go in there on any day, there will be trucks from the LXRA and those kinds of projects in there. It reduces the cartage kilometres.

DEDJTR did a very good study about three years ago on the increasing cost to these projects from carting quarry materials further out of town, and the cost is already well ahead of the base case. Anyone at Major Projects or LXRA or VicRoads will tell you that completing the projects we have got in the Big Build for the budget that was set a year or two years ago is impossible because of raw material supply. It adds a competitive tension to the market because it competes directly with quarries. In that south-eastern corridor there are three major supply points that all do about a million tonnes a year. Two are major quarries, and one is that. Again, if you take one supplier out of three suppliers, it decreases your competitive tension.

With the site itself, again in terms of difficult to replicate, VicRoads mandate a certain percentage of moisture content into the road for it to be constructed properly. You need a good water source to do that, you need a good road network to do that and you need landscape buffers around it so that people cannot see what is inside. At that site, if we flick to the next slide, it is very well designed in that the whole site is below ground level. It has got landscape buffers around it. When people drive past it, all they see is a row of trees. It is incredibly hard to replace. In fact Invest Assist have spent three years looking for an alternative site for us to relocate that to. They have put in writing that they have not been able to find a suitable site. They get the value of it and the difficulty of replicating it. If we do not act to save that site, Victorians' recycling capacity goes back by a million tonnes a year.

Mr HAYES: Why is it being closed or threatened with closure?

Mr MURPHY: We had a 15-year permit to start with and a right to apply to extend. We applied to extend about three years ago. It went in front of a ministerial planning panel. The planning panel recommended that it not be included inside the green wedge. The minister went against that. So we are now applying for an extension, which we still can under the existing permit. We are about to do that with Kingston City Council in the next month or two.

Mr HAYES: The planning panel recommended it stay inside the green wedge?

Mr MURPHY: The planning panel said words to the effect of 'Do not include this site in the green wedge at this point in time'.

Ms CROZIER: Where is it at now? Where are you at now?

Mr MURPHY: We are about to re-apply to Kingston City Council for an extension to the permit.

Ms CROZIER: That is currently with Kingston City Council?

Mr MURPHY: I beg your pardon?

Ms CROZIER: That is currently with the Kingston City Council?

Mr MURPHY: No. We have been talking with Kingston City Council about the issue and we have offered them, first of all, to establish some local sporting grounds. So we have said okay, there is a gain for us obviously in extending the facility, there is a gain for the state in the midst of a recycling crisis and a resource emergency—there is a gain for the state. We understand if there is a local community concern. Now we have been there for 10 years and done something like 8 million tonnes and we have never, ever had a complaint. We have got a school across the road that we get on famously with and neighbours we get on well with. But all that said, we are happy to make a contribution to the local community and we understand there is a shortage of sporting fields. We are happy to establish local sporting fields for the community and the neighbourhood—buy the land and develop it—and if you are worried about what becomes of that land at the end, because bear in mind regardless of the zoning, council does not own the land. In fact the planning panel pointed out that quarantining these blocks of land means you could end up with all these vacant blighted blocks of land with no further use. We have offered to, after an extension, put that land in council's hands, because as I understand it that is one of the only parcels that they can get access to that is not impacted by landfilling.

Ms CROZIER: So is it with the minister at present? Is that what you said?

Mr MURPHY: No. It went to the minister in 2015.

Ms CROZIER: That is what I thought you said—three years ago.

Mr MURPHY: Yes.

Ms CROZIER: So the government has known about this issue for three years.

Mr MURPHY: Correct; yes. Now the thing that has changed since then, to be fair, is recycling industries—we have all seen the publicity about recycling industries since then so there is a lot more pressure on the

recycling industry—and there is a chronic resource shortage of materials around town for the big build that is underway.

Ms CROZIER: Yes.

The CHAIR: So you might have a different outcome because the need is different from what it was two or three years ago?

Mr MURPHY: I think that is well understood by lots of Kingston city councillors now. There are a few things that are well understood now that were not then. It is very difficult to find a site that is suitable for that kind of activity, that is close to the market, that has got good road networks. So I think that is now better understood and I think we have done a better job of articulating that. We certainly had Invest Assist, who have given us a lot of support in terms of trying to locate an alternative site. Over the last three years they have worked pretty hard. What is better understood, if you want to take that material that Rose talked about out of the kerbside stream, you need to have an end market for it.

The CHAIR: What is specifically likely to be the objection from the locals who are objecting to that site? I will give you a comparison, for example, which is close to home for me. If I take Ravenhall, for example, it is an issue about odour and municipal waste. That is where the residents are complaining about the odour [inaudible].

Mr MURPHY: Yes.

The CHAIR: Is that something similar to the issue you are facing locally, which is giving rise to whether individuals or councils are objecting to potential renewal of the licence. Are they the issues you are facing?

Mr MURPHY: Yes. I think the issue is it has been bundled in and we have been told by a number of people that we are collateral damage in their view.

The CHAIR: You are what, sorry?

Mr MURPHY: So we have had lots of people through our site. We run an open door and invite people in. They are very supportive of what we do and very supportive of the standard that we operate at. But they have said they consider us collateral damage. I think for a long time the community has put up with waste, I know, from lots of landfill activities that are there, and litter and whatever that comes with that. But we do not process things that have an odour and we do not process things that generate windblown litter.

Mr HAYES: I cannot see the complaint—

The CHAIR: I think, Mr Hayes, we need to give someone else a go.

Mr LIMBRICK: Ms Read, I would just like to comment on Mr Murphy's contribution. I am very happy to hear that you are competing in an open market against non-recycled materials and doing it successfully, so that sounds wonderful, but one thing that concerns me about the council submission was this issue of mandatory procurement targets. Can you tell me why that is necessary if council members are competing in an open market and competing with other materials? Why would a mandatory target be necessary?

Ms READ: There are still a number of challenges in some of the construction—and this is not just necessarily in Victoria but also in other states—about the reluctance of some councils or some road construction, governments, to use recycled materials. I think we have a quite unique experience here in Victoria, and Melbourne in particular, about how competitive the Alex Fraser Group is. It does not necessarily apply in other states. The other thing is you are also looking at plastics. There are a number of other areas where the material could go into. The other thing is that governments do procure a lot of materials and services and products and therefore have the ability to be proactive and support and encourage and develop an industry as a result of that, so create new markets as well.

Mr LIMBRICK: But if they are competitive markets, then wouldn't government just choose them because they are the best product on the market or—

Ms READ: But not everything is competitive. An example would be—and this is probably more of a plastics one—mandating recycled content, perhaps in a bottle that is put on the market. Processed PET is called RPET. It is quite difficult for that to compete with virgin PET, for instance. Governments, through their procurement strategy, can really help create new markets. The other thing also is the standards and specifications go hand-in-hand in that, and that is why I think government really does need to look at its procurement and identify those areas. Whether it is a mandate or a strong encouragement, I think the point is it is not really getting the attention or consideration it should be. The value for money is definitely outweighing looking at recycled content, and that value for money is not necessarily taking into consideration the other environmental costs incurred by not using that recovered material, so the external costs.

Ms CROZIER: Thank you again for your presentation and explanations. Could I just go back to Mr Murphy. I know that you are giving us an overview of the company and the issues that you are facing. You said that you were collateral damage and that you had been involved obviously with the Big Build, the level crossing removals, and as part of that strategy and solutions you talked about the construction industry and the civil industry in Ms Read's presentation. But to go back to what you said in relation to the issues around that, you pointed out that you were contributing to that, yet you are being stalled in terms of potentially being able to deliver further value-add to those projects. Am I correct in my understanding of what you were saying?

Mr MURPHY: The principle, as I see it, is this: creating a market for recycled products is incredibly important and, as Rose just said, that is a lot about specifications and giving people comfort that they can use a recycled product, but you have to have processing capability.

Ms CROZIER: Close to what you highlighted?

Mr MURPHY: Correct. To say, 'This is a nice facility. Could you please build it 40 kilometres further out of the city' is ridiculous. It is a metropolitan problem. It is a metropolitan market for the end product. There is the capacity to process it in the metropolitan area.

Ms CROZIER: What would that cost you if you were required, for whatever reason, to move 45 kilometres out of the city?

Mr MURPHY: I could provide an estimate on that. I could take a wild guess, but it would not matter because no investor would do it because there is not a market there.

Dr RATNAM: Thanks so much for the presentation and all the—

Mr MURPHY: Sorry, if you want a local example, Sydney does not have a network of sites like that. Of course there is Alex Fraser in Melbourne, but there are other people in the industry as well. Sydney does not have the processing capability that we do here in Melbourne, and we get a much better outcome in terms of recycled content in our infrastructure than Sydney does, because we have got—

Ms CROZIER: Because you are more efficient. You are closer by.

Mr MURPHY: Because we have got the capability to do it. Like I said, it is beyond Alex Fraser.

Dr RATNAM: Thanks very much for your presentation and the excellent work that you are doing across the board. I was quite interested in your submission. You highlighted some quite discrete and well-detailed proposals for how we can get some reform and solutions on the table. Things like the green zones—the planning controls that you were talking about—risk-sharing contracts, the packaging industry contributing more to, I think it was, the collection efforts—

Ms READ: Yes.

Dr RATNAM: I am happy to hear a little bit more about that, and mass balance reporting, amongst a number of things. I was wondering if you could elaborate a bit more on the risk-sharing contracts and how that would help and also the packaging industry contributing more to the front end or that post-collection cycle. It would be great to hear a little bit more from you on that.

Ms READ: Sure. On the risk sharing I think probably—and I might actually also defer to Simon on this because we had a very good discussion about it yesterday—if you go back to the little diagram I did, it sort of highlights just to keep in mind how things move around. This one. It highlights how things run. Risk sharing is more about rise and fall. So with the pricing—maybe, Simon, I think you should explain this, because you will do a better job than I will. Because the other thing is that JJ Richards also run two regional MRFs, so they are operating at the margin.

Mr MACKIE: I would love to be Peter, and I would love to have his facilities. I am responsible for two MRFs, one in Bendigo and one in Wangaratta. Obviously they are in regional Victoria, and obviously I am dealing with a number of councils that take recyclable material to our MRFs for processing. That is stuff that is delivered to the kerb. Unlike Peter, all my markets are in Melbourne or in fact overseas. So my MRF—if you have never been to one, you are more than welcome to come and have a look at ours. They are fascinating, and it gets in your blood. I love them, and that is quite sad. I have been on the line processing, so the things that Rose is talking about, the contamination, are really important. We send to landfill about 15 per cent of every bin that is put on the kerb for two reasons. We have a community, and even though we have been educating the community for nearly over 30 years, that still do not get it. The reality is that as soon as your garbage bin is full, you use the other two bins, and you put waste in them. That is our reality.

In our MRF we get everything, even though it is a recycling facility, from dirty nappies to dead snakes and everything in between. I have seen a whole bathroom come through a MRF. I have seen literally the sink, the plumbing, everything, because the community think—or do not think, as the case may be—‘Here’s some space, and I can get rid of it and it’s not going to cost me anything’.

So unlike Peter, who has got a lovely set up with beautiful locations for everything, the recycling industry has been over a period of time aggregated to really three main players in Melbourne—one player has got probably the largest percentage of it—who are reliant on being able to export the product overseas. If you look at the thing here, the resale side of that, it has got two elements: it is local and it is overseas. As soon as China, who was the largest taker of all recyclables across the world—not just Australia, but across the world—decides that they are going to set a new benchmark and no longer be a receiver of the waste, it has now meant that we do not have the ability to actually be able to get rid of material here.

It is basic economics—supply and demand. When the supply is here and the demand is here, the price is on the floor. From a straight MRF perspective, I have obviously got a set cost of having all my infrastructure and my labour costs that are Australian labour costs—they are not overseas labour costs; we love them, but it is a reality in terms of our costing—and we are in the middle of the country. So I have got to freight everything from Wangaratta or Bendigo to Melbourne, to the dock or to a local supplier here, who is going to pay the absolute minimum price that they can possibly pay, which is logical and sensible. And when your supplier is here and the demand is there, then logically that dollar is pretty much back to zero.

So I had the value of paper and cardboard in or around \$200 a tonne; it is no longer the case anymore. I had glass. And I love Peter, I love his business—so we are clear—because he takes my glass. So he gives me a solution that is not what I had before. Yes? But my reality beforehand was that in the old days—I have been in and around recycling for 30 years—it used to be \$72 a tonne for your bottles. It remained \$72 a tonne, I reckon, for 30 years. The trouble with the glass now is that it is thin-wall. So in the old days, anyone who drank out of longnecks—and some of you are old enough to remember what a longneck is—knew they were solid. Yes? No longer. You try and buy a stubby now and they are all thin—and of course, because the manufacturing industry needs to make sure they are as cheap as they can possibly be, because they have got price margins to meet as well. When we put that into a truck it just smashes. It smashes. I have now got people in my MRF who have got to pick that off by hand. Yes? And we can buy technology. I can buy technology to optically sort; I can. I am doing 11 000 tonnes in each of those two MRFs, so 22 000 tonnes in total. If I put in the optical sorting type stuff it is 3 or 4 million, minimum, but for the tonnes that I am doing it does not stack up.

So I have got to bring stuff back to Peter, so something that used to be a revenue stream is now a cost. I have got to truck it to him. He has got a gate rate of course; he is a commercial business. That allows him to be selling his asphalt and his rock back out into the marketplace. It is just economics; it is straightforward stuff. But that means when I am sitting in front of council and trying to sort a rise, each of those councils is rate capped and none of them want to be paying the money. The state government took time to get to a decision as

to what they were going to do. Sixty dollars was awesome if you were sitting in metro Melbourne, but I am not. I have got another \$30 over on top, I get no recompense for it and my council has told me to go—‘We don’t care. We don’t care what the price is’.

So even though we had mechanisms, they said, ‘We’re going to hold you to contracts and we’re not going to deal with you’. So it became very problematic for us because it is not within our stuff to happen. And to go back to what Rose was saying, this is not about a sharing model. People are making the mistake of saying it is a sharing model. At the end of the day, as a contractor who is processing, I cannot share this. What I have actually got to do is put a model in place that reflects the changes in the value of the commodities, period. I have got X amount of dollars per tonne as to what it costs me to process, and then I have got to discount depending on what each of those products are worth, and that gives me a gate rate to the council. And that will vary.

Mr HAYES: You have mentioned three problems there: the glass, the distance and also poor sorting, I suppose, or contamination big-time. Can you recommend any solutions that you see to any or all of those?

Mr MACKIE: I would love to say contamination will disappear. It will not. It will reduce, but it takes a targeted effort for people to be paying attention to it. It takes a realisation that we actually need competition in the marketplace, particularly out in the regions, because as a result of history we have consolidated to three main players, and we were freighting everything down to Melbourne because it was not worth doing the processing up in the regions. We do not have, I guess, a circular economy at a local level, which means therefore it is not used locally, so therefore we have got to transport and therefore we have got additional costs.

So anything that creates a market at a local level—as in, in Victoria, local Victoria, country Victoria—makes a significant difference. It is really important to us. That then reflects back into the gate rate. Because you are dealing with very low volumes—and typically regional MRFs will deal with 11 000 to 15 000 tonnes—the cost of the additional infrastructure to raise it to another level is not sustainable at those sorts of levels. There are not simple solutions—that is really what it comes down to.

Again, with the recycling stuff, the HDPE and PET-type product is all good. Anything that is scrunchable plastic is rubbish. Anything that is small is rubbish. I have got to get a human to pick it off the line and put it in a bin—put it off to one side onto another conveyor. So aluminium—great stuff, \$1500 a tonne—is only 2 per cent of the material that goes through my MRF, and it is the second-most important product in my whole MRF, because it is the second-most revenue as a total per tonne received. Cardboard and paper is about 50 per cent of the total product going through, and it used to be a really important part—it was about \$34–\$35 a tonne back to me. It is now worth that—zero.

The CHAIR: So would you separate cardboard and paper from other recyclables, like glass, for example?

Mr MACKIE: I would to have glass elsewhere, yes. It is the most abrasive, terrible product in the whole world, because it is from an engineering perspective—

Mr MURPHY: It is beautiful!

Mr MACKIE: He is right, it is beautiful in there—in all seriousness it is beautiful in there—but it is not beautiful going across metal, because it is highly, highly abrasive, so all of my machinery that we have now got broken glass through, it permeates every single one of my products.

Mr HAYES: So you would like to see that separated out at the council level?

Mr MACKIE: Yes, absolutely.

The CHAIR: So basically you would like to see cardboard and paper in one bin, metal and aluminium in one bin, glass in one bin and then other food waste and organics in one bin. Is that a sort of simplified way of doing it?

Ms READ: The metal could stay in with the plastic and paper. I think it is just separating out the glass—

The CHAIR: Okay, we eliminated one bin.

Mr MURPHY: We are trialling that with Yarra city as we speak. With Yarra we have got a trial on with a separate bin for glass.

The CHAIR: Glass is the biggest culprit basically?

Mr MACKIE: The two biggest costs, in all seriousness, are sending stuff to waste. So the other thing you have got to realise in central Victoria is disposal in central Victoria is \$200 a tonne or more. In Melbourne it is not \$250 or \$220, but there is nearly a \$70 differential roughly, and I have got to transport it by trying to get it to Melbourne as well. So waste is one element, a large cost, and glass is the other. Again, to get it down to Melbourne is a significant cost to the business, and that is reflected in the gate rate. Everything—and this comes back down to model—councils and the ratepayer are paying for it, and, as Rose was saying, having product stewardship then puts injections into money, which gives some protection back and into the councils if it is managed.

The CHAIR: In the interests of time, because both business are two different models—one is construction-based material, yours is kerbside—do you mind if you take that question on notice? Are you able put in specific ideas about some of the stuff you have already covered, about what you see as a good solution and some of the examples you have just given, to the current problems going forward—different bins, all these sorts of things, country versus metro? If you are able to specifically address that with some practical solution, that is something the committee might be able to consider in its findings and report at the end.

Ms READ: Yes, I think from the council perspective we are happy to put in supplementary submissions, highlighting particular aspects covered by Peter and Simon. Obviously we also encourage our members to put in their own submissions as well, and I believe Suez and Cleanaway probably have put in submissions.

The CHAIR: Before I move to Ms Taylor, maybe if you want to consider the waste-to-energy option, because 15 per cent residual might be going to landfill at the moment. Is that another option you want to consider?

Ms READ: Waste to energy—it definitely has a place to play in dealing with our materials. There are materials that come through the waste stream that cannot be recycled either because they are contaminated or there is no market for it, but they do have a significant amount of energy embodied into it that could be recovered to produce energy. Whether that is, for instance, in the case we have with the proposal with Australian Paper down in Morwell looking to establish a waste-to-energy facility providing waste to power the Australian Paper plant. That is a really innovative way to do it. It is obviously securing energy issues for Australian Paper as well. It is also a way to realise embodied energy within the product. It also addresses a number of landfill issues—so your question. This comes back to planning and what the government as representatives of the people of Victoria want as a priority. Do you want material to go into landfill? Are you looking to realise the energy value of materials, and where does that fit into the whole scheme? You cannot just look at things individually and say, ‘That is the solution’. But turning waste into fuel definitely has a role to play. It is not cheap to do, so you have to have the right—the landfill levies have to be a certain rate and other economics. There are some costs around it, so that is why with the Australian Paper one there are a lot of good reasons for doing that.

Mr HAYES: The Australian Paper one is highly centralised, isn’t it? I mean, you have to transport things a long way to the plant. Is it possible to have smaller scale plants around the metropolitan area, doing pyrolysis or burning?

Ms READ: I am not an expert on all of the technologies. There are certain sizes. If you research it, you have to be a certain size to make it work economically. In terms of technologies, obviously we do not particularly favour one technology over another, but the focus would be on proven technologies where you have strong emissions controls and clear evidence of what they can perform in terms of their outputs and so on—and inputs. So, yes, because the ability of the streams of coming in is also quite complex.

Ms BATH: If you do not mind, it is on the back of that question. I am happy to hold it.

The CHAIR: No, follow up that question and then we will go to Ms Taylor.

Ms BATH: In relation to the energy from waste, what value do you put on the long-term holding in rubbish dumps and tips, as opposed to generation of power? So I guess you have got a molecule of waste and you have got to sustain it and look after it and grandfather it, in effect, in landfill, as opposed to creating something from it. Is that something that you follow—that thread, that thought?

Ms READ: I might let Alex respond to that.

Mr SERPO: Look, I think one of the things you have to appreciate about landfill is the average landfill in Australia might last 30 or 40 years, so you pay in today's dollars to dispose of a tonne of waste when you go across the weighbridge, but then the after-care for that landfill will occur in 40 years time in dollars which are 40 years in the future. So that is a huge future cost. If you put waste into a waste-to-energy facility today, you have added that value to the economy today. Economic growth is about getting innovation and infrastructure in as quickly as we can. So when you do those mathematics, it is much better to cash immediately, I think.

Ms READ: But I think one of the key points also is the industry's priority is that we want to recover materials as materials. That is our priority, and I think that really needs to be quite clear. Material should be used as materials at their highest value. That is the priority and that is the key principle. Materials that cannot be recovered and reused—then do you consider them going to waste-to-energy? Is that a better option than putting it into the landfill? What we are seeing is in a lot of states, in Victoria and so on, 50 per cent of materials, or 40 to 50 per cent of materials, currently going to landfill are organics, so obviously there is a whole organics pathway that is happening. Now what we have to be really strong about with organics is preventing contamination of that stream. You are looking at recovering valuable nutrients that can benefit our soils, can deliver a whole lot of benefits and also reduce our greenhouse gas emissions by taking them out of landfill. So that is really important. In locating organic processing facilities odour is an issue. There is anaerobic digestion where you can get nutrients and fuel—and that is a huge chunk of material.

Plastics: of the 50 million tonnes of waste, 2.5 million were plastics. Organics: 20—10 times the volume. So keep that in mind as well, where you are going to realise the best benefits socially, economically and environmentally.

Mr SERPO: If I could make a comment as well about recycling versus energy, I think there is a fear in the public sphere about material which could go to recycling going to energy instead. Just to clarify the sort of economics of that, if we are talking about plastics, you might get \$550 a tonne for clean PET, but it might cost you \$220 a tonne to send that material to a waste-to-energy facility. So there is actually an enormous economic difference between material recovery and energy recovery. Energy recovery is actually quite expensive. It is substantially more expensive than landfill, and that is why we have not had it. It does have enormous environmental benefit compared to landfill, but for a recycler any material that they can recover they will absolutely recover before they can send to energy.

Ms READ: Because there is a market.

Mr SERPO: Just on economic terms the difference is enormous.

Ms TAYLOR: So I have two questions. One is you are a national peak body?

Ms READ: Yes.

Ms TAYLOR: And you have outlined the levers for state government. What do you see as the federal government's role in addressing some of the challenges for the industry?

Ms READ: So, yes. There have—

Ms TAYLOR: Do you want me to say the second question?

Ms READ: Yes, go to the second question.

Ms TAYLOR: The other one was that you talked about plastics 1 to 3 and then 3 to 7, and I just wondered, is it sensible to keep having plastics 3 to 7 if there just is no market?

Ms READ: Good question. And that will come back to answer something that Dr Ratnam identified earlier. So just back to the first question, which was?

Ms TAYLOR: Like for the federal government—

Ms READ: Oh, yes. The role of the federal government.

Ms TAYLOR: We were looking at what the state government should do. What should the federal government be doing to help?

Ms READ: Sure. The federal government has a number of roles to play. They have a role in creating markets. They can procure. There is work that they are starting to do through the Australian Road Research Board about getting consistency in standards, so driving consistency across states on standards and specifications for re-use of materials for processing. We have so much variability across the states it is a nightmare. Peter gave the example that here in Victoria it works really well. They also operate in Queensland and I think it is a lot more challenging.

Mr MURPHY: A very different story, and so they do not get the outcome that we get in Victoria. They do not have the good news story that we have here.

Ms READ: And we have a new coalition government in place. We have an assistant waste reduction minister. That minister and the new environment minister really need to step up and drive that national waste policy because, as I flagged, it is not something that can—waste just does not happen within a local council area anymore. And what New South Wales does impacts Victoria. What Victoria does, what South Australia does—we all have knock-on effects. In terms of trying to keep the costs down and making sure that our industry is efficient, the less variability we have between states the easier it is for us to have more efficiencies in our operations. And similarly, in terms of resource recovery standards and specifications, there are Australian standards for compostable plastics.

So this a good example, coming back to procurement. You can mandate that you use compostable plastics that have to meet this standard. That is an example of where government can have a significant shift in behaviour and drive a market, and create, you know, a pull-through for these resources. It is a good example. Product stewardship is another great example.

Ms TAYLOR: Yes, I was thinking about that.

Ms READ: So it is interesting. The container deposit schemes are all happening at a state level. But genuinely, if you are looking for the companies and the producers, a lot of them operate across multiple states and all the rest of it, so for them having a national scheme is better.

Photovoltaics is a good example that has come along. We are going gangbusters here in solar—everywhere. A huge amount of photovoltaics are coming out of the market. A lot of them are being expired. Where are they going? There is no process. There is no capacity. And there is no requirement on those companies putting those materials into the market to take them back, and we have to be proactive. Batteries is another one. So product stewardship is a really a key part, and this is where state governments need to push back and engage with their counterparts in other states and work with the federal government.

There is a good collaboration happening these days across the states through the national waste policy process; we participate in that. Export markets, looking at trade, I know the trade minister in Victoria is proactive in working with, for instance, China, who may want to sell us equipment—so take certain products. How can trade ministers interact, and that is another area. There are emissions reduction funds at a national level. That has helped drive gas capture and energy generation off landfills, but it also supports more composting and organic processes.

Other resource recovery activities can generate greenhouse gas savings, so that is another area with those sorts of things. There are some good examples. Education is another one. There was probably—

Ms TAYLOR: The plastics.

Ms READ: The plastics. So coming back to the plastics, and this also comes back to Dr Ratnam's question: 1 and 2, yes, very recyclable, HDPE and PET, and the manufacturers can use it. The national government, say with the microbeads process, worked with the manufacturers and said, 'Okay, you need to get microbeads out of these products by X time; otherwise we'll regulate'. They need to do this with the packaging companies. They need to say to them, 'For HDPE and PET products you need to hit a certain recycled content level', and they can negotiate that with the manufacturers because there is some sensible things about all of that; you need it for health and safety and other products. If you say, 'Okay, 70 per cent recycled content in these containers by X'. And if those companies do not achieve that, then the federal government could put in a regulation which says, 'If you're not going to achieve that target, you need to contribute X cents per item that goes into a fund that covers the cost to recover it, collect it and recycle it'. Then that could underwrite a rise and fall contract for a materials site—for the councils, for instance. If the market is good, then the price for councils is better. If the market is bad, your councils have to pay more.

The regional councils do not necessarily have the resources or the ability to fund that, so this advance fee paid by a company who has not achieved a certain recycled content puts it into a fund. That might get matched by Sustainability Victoria to underwrite that. I am not a finance expert by any means—this is just a model that we have talked about. But then the council could repay part of that eventually, given they had changed their rates. We have to start thinking creatively about what we do. In terms of 3 to 7, what we need to do is go back to the packaging companies and say to them, 'Substitute that with a material that is recyclable. There is a market with whatever', or else 'Don't'—

Mr HAYES: Ban mixed use plastics, basically.

Ms READ: Well, yes. You can say, 'If you don't achieve this within a certain time, we will ban it'. And 2025 is probably a bit too long. A 2022 start—we need to start seeing that conversation happening. There are so many things that we could do, and having the political will is what is lacking. The technology and the innovation, the potential private investment and so on—they are all there. It is really about it being a priority for us at a—

Mr LIMBRICK: You mentioned photovoltaics before, and we have been subsidising these for decades now. They have got toxic materials in them, is my understanding—cadmium and lead and stuff like that. On 1 July we have got an e-waste ban. What is going to happen to the solar powers that are coming offline?

Ms READ: Good question. By way of background, I used to work for an e-waste recycler. I used to run the mobile muster recycling program, so I have a background in that. But there are some materials that can be recovered from photovoltaics—metals and so on. Yes, it is a really good question: what will happen to it and where will it go? And there is no product stewardship scheme in place.

Mr LIMBRICK: Yes, that is my understanding.

Ms READ: I think there is a company in South Australia that repurposes some of those. You can grab elements and re-use elements of the photovoltaic for other purposes—you know, cut out the good bits and do those sorts of things. But it is a very good question. There has been work done by Sustainability Victoria on looking at setting up a product stewardship scheme for photovoltaics. It is a product that has been flagged on the national list for product stewardship, but I mean it is a big project.

Mr LIMBRICK: Can I just clarify that? My understanding is that at the e-waste facilities they are building new sheds, basically, and storage facilities—

Ms READ: Collection facilities, yes.

Mr LIMBRICK: Yes. But with the PVs that are not going into landfill anymore, is the only option at the moment to just stockpile them? Is there no market for them?

Ms READ: Well, no, there is some ability to—what I would like to do is to take it on notice and get you some more information on the detail of it because I know there has been more investigation into what options there are. But there is metal that you can recover. Silicon is a key component of it. I am not too sure what the processing is of that, but I would like to take that on notice.

Mr LIMBRICK: Because it is only three weeks away.

Ms READ: Yes.

Ms BATH: Off the back of that, if we look at research and development, what are the gaps that you see in some of these very multiple, different channels of recycling? I did have that question, Mr Limbrick, thank you, in relation to photovoltaic cells and batteries. What are the gaps? If we are going to develop policy from here, are there research and development gaps that we need to fill, or are there off-the-shelfs from overseas that we can plug in? If we want to lead in Victoria, where do we need to be leading on that?

Ms READ: I think batteries and photovoltaics are a priority. Plastics is another one that needs to have more research and effort put into it. There are solutions out there as well. Product development, finding new markets for the materials.

The other thing also is looking at how we avoid waste in the first place. Recycling is not the answer to all these problems. It is looking at what we are putting out in the first place and how we can avoid it. If you look at food waste and the challenges in food waste and how much organics—there is a food waste CRC, for instance, to fight food waste that is looking into a whole number of areas. So Victoria should be actively involved in that. I mean, there might be other areas that—

Mr MURPHY: My take on that is that I think Sustainability Victoria does a pretty good job actually of looking for where are those gaps, what stakeholders can they put together, what kind of project would demonstrate whether something is practical in the marketplace or not, so I think there is a fairly long history there. We have worked with SV but so have lots of other companies, and they put together people like Swinburne and RMIT and the Australian Road Research Board you talked about and lots of others. So when there is a gap, SV does a reasonable job of pulling together what is the gap, who are the stakeholders, what are we trying to demonstrate and what funding is required or what research is required to get there. I think in Victoria that has got some pretty good outcomes.

The CHAIR: Okay. In the interests of time we have got a couple more questions. Any burning questions from members? Who has got a burning question?

Mr HAYES: You were sort of intimating that it would be good to reduce the amount of plastic that is being produced and going into the waste stream, so what do you think about banning single-use plastics? We talked about mixed plastics before. Would there be big pushback from the industry? Just something else on that, product stewardship. I understand that countries in Europe, and I have heard it was Germany, said that people could return packaging, especially plastic packaging, to point-of-sale—

Ms READ: Retailers, yes.

Mr HAYES: And that dramatically reduced the amount of packaging that was produced, because for the manufacturer it created problems. Is there some way of tackling single-use plastics that way?

Ms READ: So the industry is receptive to the banning of single-use plastics. Obviously we are sensitive to what the community wants and does not want. But bans are very effective. The ban of the shopping bag—the change in behaviour was rapid. I worked at Clean Up Australia from 2000 to 2005 and we did a Say No to Plastic Bags campaign, and at that point Ireland put in a plastic bag levy. Trying to do it on a voluntary basis—sometimes you just need to do those things. But the thing is being smart and clever about what you target. The microbeads, I think, is a great example where the government has sat down with the industry and said, ‘Okay, we need these out of the system. You work it out and deliver it within this time frame. If you don’t, we will act’. And you hold true to that. I think straws, balloons, things like that—there are things where it is a numbers game and we need to remove them because otherwise there are too many items out there that just end up getting

everywhere. As much as we try to collect them or capture them in stormwater systems or whatever, it is hard to do it. So there are key points where we can intervene like that. What was the other part?

Mr LIMBRICK: About product stewardship and being able to return packaging, maybe.

Ms READ: The point I want to pick up with that, one of the areas in terms of research and development is thinking more laterally about how we do collect and recover materials. Engaging retailers—retailers do have a role to play. The traditional role is we either pick it up out of the bin or we go to a transfer station. We need to think about taking materials back into a shop down the main street. Mobile phones—you take them to a mobile phone store. Mobile Muster is a great example where the retailers are an active participant and take responsibility. Whoever benefits from the sale of that product has a responsibility to deal with the cost of the disposal of that. If that is a retailer offering a takeback and consolidating materials at their store to more efficiently get it back then, yes, they have a role to play.

Mr MACKIE: Can I add to that? One of the things—and I am sure all of you have experienced it going to the shopping centre and going into the supermarket—try buying apples loose. They are all in packages. Try buying beans loose. You can get them but they are in packages. So what is not being driven is that we are marketing very deliberately X number—eight apples. I know I am going to use three and the other five are going into the bin. It is in a package, it is in a tray and it has got a wrapping that goes around it. We get it in our bins. It is not recyclable. But from a marketing viewpoint it is brilliant because they sold eight apples. But no-one is thinking through where is the packaging being created from in the first place and what are the conscious decisions that are being made by the marketers to actually generate the material? We at the end—and I say this as a MRF, and I do want to say this quite strongly—I have no role in this other than I pick the stuff up and I process it. It is not my rubbish. I say that to my council, ‘It is not my rubbish. It is actually your community’s rubbish which we are processing’. For you to get an idea what a MRF is, all it does is sort the material, bale it and send it somewhere else. So we are a factory.

The CHAIR: On that point, I was going to ask that question. You mentioned in your submission that the Australian market is not big enough to basically have a manufacturing sector to cope with the amount of recycling materials we have, even though we have sorted it out and are trying to use our own product. Are we still able to actually export that in light of the various bans by China, the Philippines, Indonesia and anyone else? Is there still an opportunity, and what do we need to do to get that opportunity to sell it at a profitable price?

Ms READ: If we wanted to keep exporting that material, this is where facilities like a MRF create secondary processing facilities where, say, for instance, the regional MRFs would send the plastics. It is a bit like the glass in some aspects. The plastics might go to a facility where they would do further washing, shredding, flaking, and create a pellet. So they create. There we go. Look at that.

Mr MURPHY: Plastic pellet.

Ms READ: There we go. Beautiful. Show-and-tell.

The CHAIR: That is why I asked the question. And the Chinese will still buy it? There is no ban on that?

Ms READ: Well, yes. The point is that some of it can be used here, but also think about where the products are being made. Peter, Alex Fraser—they make the asphalt here. If you have got a lot of manufacturing overseas—and this is where the trade negotiations and discussions come into play—if we produce a quality product, they will buy it. And that is our biggest gap. Because they were happy to take a low-quality product, we have not developed our secondary process and capacity to produce it to be this as opposed to a bale of plastic bottles.

The CHAIR: I have a question you can take on notice, if you are able to do that, which you touched on in relation to the current capacity and capability of the sorting and converting of all these things to a good product, because we are talking 14 million tonnes in Victoria of which I think 9 million is recycled, and hopefully we can bring that up a bit? Are you able to give us a bit of mapping about what is available with the current capacity and capability of the sorting and converting to a final product, and say what is likely to be needed to

actually increase that and to be able to convert it and sell it and export it again? If you are able to take that on notice, that would be great—if you are able to come up with something.

Ms READ: There is some of that we can answer and some of it we will refer to other work that is being undertaken by other agencies that may have more up-to-date information than we have.

Mr MURPHY: That is another good example. That actually makes a better quality road. That is HDPE pellets. That actually makes a better quality road.

The CHAIR: Thank you for giving up your Wednesday night and sharing your thoughts with us. It has been very useful. On behalf of the committee I thank you again for your participation.

Committee adjourned.