T R A N S C R I P T

LEGISLATIVE COUNCIL ENVIRONMENT AND PLANNING COMMITTEE

Inquiry into recycling and waste management

Melbourne—Wednesday, 6 November 2019

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WITNESSES

Mr John Bradley, Secretary,

Ms Kylie White, Deputy Secretary, Environment and Climate Change, and

Mr Sebastian Chapman, Executive Director, Waste and Recycling, Department of Environment, Land, Water and Planning; and

Dr Cathy Wilkinson, CEO, Environment Protection Authority.

The CHAIR: Welcome, everybody, for the second time. We appreciate that you are giving us your time again and coming back. I will just go through the formal proceedings. I declare open the Environment and Planning Standing Committee public hearing. All mobile phones will now be switched to silent mode. I would like to extend a special welcome to members of the public and any media people here today. The Committee is hearing evidence today in relation to the Inquiry into Recycling and Waste Management, and the evidence is being recorded. I would like to welcome our witnesses for today. Thank you for making yourself available today. Particularly the more senior executives of both organisations that are here today, we really appreciate that you are making yourself available.

All evidence taken at this hearing is protected by parliamentary privilege, as provided by the *Constitution Act 1975*, and is 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. You will be provided with a proof version of the transcript over the next few days.

Because we did have you here before and a bit of time has passed since the Inquiry commenced—and this is the last day—we will try to do a bit of wrap-up of what happened. So I would appreciate it if both organisations would be able to bring us up to speed from your last submissions and presentations that you gave to the Committee back in May, I believe. If you could go through some of the changes or updates, that would be great. Then we will go to a number of questions, and we will go from there.

Mr BRADLEY: I was going to begin with a bit of an opening statement which tries to address exactly that, Chair, if you are comfortable with that. We have got some supporting slides. I will try and move through that fairly quickly so we have got time for the discussion with the Committee.

The CHAIR: That is fine, and we will have a copy of that as well.

Mr BRADLEY: Yes, it is on a flash drive. I think you have got hard copies, Kylie, as well?

Ms WHITE: I have got hard copies here.

Mr BRADLEY: Do you want to distribute those so the Committee have got access to that?

The CHAIR: Thank you. So Mr Bradley will go first.

Visual presentation.

Mr BRADLEY: Thank you very much. Again, recognising your comments, Chair, it has been an enormous priority for both the EPA, my department and also Sustainability Victoria, who you will be hearing from later today. Since we last met with you there has been a significant amount of activity in these spaces, so I will try and give a bit of a recap on that.

The first thing I was going to begin with was a recap, if you like, of the roles and responsibilities of the Government agencies involved in this space. We do have across our portfolio the department's role, which is leading on overarching policy, legislative development and oversight and governance of the agencies; the EPA as the independent environmental regulator; Sustainability Victoria leading statewide planning and programs for infrastructure investment, market development and waste education; and then of course the seven waste and

resource recovery groups that work with local governments and businesses in the regions to identify local solutions.

I wanted to recognise that through the period we have been involved in this significant development of the circular economy policy, which will be released by the Government at the end of the year, we have been conscious of the fact that this is an industry that already involves 600 businesses, 12 000 employees and sees turnover of approximately $4 billion annually. The circular economy policy and action plan which is going to be released by the end of the year is effectively bringing together a significant range of initiatives that have separately been worked on for some time, and I will turn to those in just a moment.

We have been progressing the development of the circular economy policy through conducting a series of workshops, including in September of this year, focused on draft priorities in the circular economy policy. We have heard from more than 500 Victorian businesses, councils, community groups and industry representatives about their thoughts and ideas on policy options. Their feedback has been carefully considered as we develop the final policy. The policy is intended to identify fundamental and long-term improvements to how we use resources throughout the Victorian economy, how to manage waste by a growing population, and it will outline a suite of reforms that will reduce waste in the first place and substantially improve our recycling system.

In Victoria, as you know—the Committee is very aware—we currently have a resource recovery rate of approximately 69 per cent. We do have a statewide plan for how waste and resource recovery infrastructure should be developed over the next 30 years, but to maintain our current rates we will need to collect, sort and process more waste material each year and do better if we want to improve on them. Therefore the circular economy policy focuses on four key objectives: to reduce the amount of raw materials we need for production and construction, improve design and increase use of recycled materials; to design products that last longer and can be more easily repaired, re-used and recycled at the end of their lives; to adopt business models that need less materials through sharing products between multiple users, supplying products as a service and digitising where possible; and to recover and manage waste in ways that increases its value as a resource for recycling.

We expect, as I said earlier, this circular economy policy to be the culmination of a number of initiatives, including this formal expression of the State's waste and resource recovery policy, to clarify the role of waste to energy within a circular economy and within the waste hierarchy; to reduce pollution, including litter and illegal dumping; to improve contingency planning for waste and recycling services so we are more resilient to the kind of disruption that occurred through the SKM disruption; and to provide for the safe management of hazardous waste.

The circular economy policy is also being progressed in a way that is closely involving councils and the local government sector in a fundamental assessment of options to reform kerbside recycling. In September of this year the Government hosted two workshops to consult with local councils and industry and gather their detailed feedback through subsequent surveys. We have been assessing a range of options, which include the scope for standardisation of bin contents, colours and communications with the community; the rollout of food organics and garden organic waste; new glass separation opportunities and opportunities to separate paper and cardboard; and the interaction with a potential future container deposit scheme. We recognise through this approach that material which is additionally sorted at the household level can achieve a higher value than commingled material that goes to a material recovery facility at present. For example, paper and cardboard values are expected to increase, if collected separately, from about $91 to about $126—a premium of $35 relative to the current value.

I will not dwell on the detail of the significant funding commitments that have been made since we last met, Chair, except to say that throughout the course of this calendar year there has been the announcement of the $34.9 million fund to further strengthen recycling in Victoria. We have also seen funding allocations that support the commencement of the e-waste ban, which has been in place since 1 July this year, supported by 122 e-waste storage sheds across Victoria. We have also seen funding to support the plastic bag ban, including customer and community education, which commenced on 1 November 2019.

I just want to touch briefly on two significant case studies that shine a light on the direction in which we see the advanced resource recovery sector going in Victoria, and these have both been announced since we last met with the Committee. The Advanced Circular Polymers $20 million state-of-the-art plastics recycling plant in

Somerton is Australia's largest recycling plant for mixed plastics. It was opened on 28 June. That $20 million investment was at least part-incentivised by a $500 000 grant from Sustainability Victoria's Resource Recovery Infrastructure Fund. We see here evidence too about the potential benefits for advanced recycling to lead to job creation, with approximately 46 jobs being created through that plant, which will position Victoria as a potential hub for remanufacturing in Australia, creating new employment and new enterprises.

The centre will transform large quantities of low-value, contaminated plastics from households into high-quality commodities that go directly into the manufacture of new products through sorting and cleaning the plastic by polymer type and then meeting specified customer requirements. The end result should be a high-quality plastic flake that can be sold and made into more plastic products, such as packaging or polyester yarn. It will be funded by renewable energy produced by Goldwind Australia's wind farm near Ballarat.

Two other case studies worth drawing to the Committee's attention are the Clarinda additive bin, which has been funded at a cost of $336 000 from the Sustainability Fund to support the private sector investment of the Alex Fraser Group. The additive bin essentially is a bin that automatically adds the correct amount of product—in this case, sand from recovered glass—to the asphalt. It resembles a giant sieve, as you can see in the diagram. This helps to divert low-value recovered glass unfit for re-use from landfill, and it will enable the use of this recycled glass in construction, such as road base.

At Pipeconnex in Dandenong South there has been an allocation of $500 000 to support a new production line facility which will help to recycle up to 5246 tonnes of plastic every year by diverting hard-to-recycle plastics from landfill, such as PVC and PET, which are commonly used in piping and bottles.

Since we last met with you, of course, we have seen the Government's response to the closure of the SKM facilities. On 26 July 2019, SKM Corporate went into liquidation, impacting 33 Victorian councils—without a kerbside recycling service. The Victorian Government has allocated $6.6 million to the recycling rebate for councils affected by the SKM closure to meet the costs associated with sending recyclables to an alternative materials reprocessing facility or a higher cost where they need to go to landfill. Most of the funded councils have already received their first payment, and councils will receive their second payment by the end of February 2020.

We have also provided the $10 million loan to KordaMentha, which accelerated the restart of those MRFs that were coming back online, and the EPA continues to undertake regular inspections at the third-party sites. Local government municipal building surveyors are also continuing to inspect sites to meet requirements for indoor and essential safety measure compliance.

I hope that gives something of a bit of a recap from the department's point of view, and we are happy to assist the Committee with any questions today.

The CHAIR: Thank you. Dr Wilkinson, do you want to add anything?

Dr WILKINSON: I could provide a brief overview or we can go straight to questions. We are very conscious of the—

The CHAIR: Why don't we just go straight to questions? I think that will be a good start. The first question I have is in relation to FOGO, or the food and other organic material into one bin. Has DELWP, Sustainability Victoria or EPA or those combined, done any research on health impacts or end use, going to fertilisers or to agricultural use, especially now that you are looking at adding food into it? As more or less a bit of education to me and to the Committee: are there any health concerns in relation to that or any studies already done to basically say there are no issues? That is one of the areas we are considering. Can you take us through the benefits, I suppose, and potential problems, if there are any?

Mr BRADLEY: We certainly have been assessing those issues, Chair.

Ms WHITE: Thank you for the question. FOGO, or food organics, is something being considered at the moment, largely because of its application for agricultural or other purposes, provided that it is clean and is free of contamination and bacteria. We do know that there are some technologies that are available to be able to

provide clean materials for those particular uses. We also know, though, that it does require the materials—either green organics or food organics—to be free of contamination, which—

The CHAIR: Can you expand on that? What do you mean by that—what sort of contamination?

Ms WHITE: Largely it is about non-organic material contamination, which has been an issue in some cases, because we currently already collect green organics and some councils already dispose of food organics through a couple of options available to them now. But it is largely about the contamination that comes from other products that proves to be the issue. So there is an element of behaviour change or the need to be able to encourage and educate the community as to what goes into green organics and food organics in the first instance, and then it is about the technologies or the applications that are then available to treat that. I will ask Dr Wilkinson to finish my questions, because the EPA plays a role in the regulation of these products, but we do know that there are already existing technologies, as I mentioned, that can process this material and then make it available for agricultural and other uses.

The CHAIR: Sorry, before we go to Dr Wilkinson, the end application, the end product, which is used for agricultural purposes, what is the health effect of that? Is there anything positive, negative? I am more interested in the negative than the positive—positive is great. Are there issues? Should we be concerned at all?

Ms WHITE: As I mentioned, the material must be free of contamination and be treated appropriately for use in those applications. Following that time, what we do know is that it can be excellent in being able to improve soil, so as a soil improver. We know that it can also lock carbon into soils, and we know it can also reduce water use, largely because it adds fibrous material to soils, so it can be beneficial.

The CHAIR: Excellent.

Ms WHITE: So they are the benefits, provided you meet all the contamination issues.

The CHAIR: Beautiful. Dr Wilkinson, do you want to add anything?

Dr WILKINSON: I can just add a few short comments, which is that under the waste hierarchy obviously the EPA encourages a diversion of organic waste from landfill with all the caveats Kylie mentioned in terms of contamination. The EPA has conducted some research that finds that physical contamination levels at council transfer stations at the moment are in the range of 3 to 5 per cent. Ideally you would be looking at 0.5 per cent to be able to maximise your recycling options. So as Kylie said, it is really important to get those contamination levels out of that material so it can have maximum benefit as part of the waste hierarchy.

Mr HAYES: Thanks for your presentation. I just want to ask you first of all: have you been monitoring current levels of stockpiling of industrial waste and chemicals since the fires, and what monitoring regimes do you have in place now? If you have got any results from that, I would like to hear it too.

Mr BRADLEY: Yes, so Dr Wilkinson is best placed to respond.

Dr WILKINSON: Yes, so in terms of stockpiling, there is a range of different kinds. For the combustible recyclables, the likes that SKM and so on have, we have got a resource recovery facilities audit task force that has now completed 743 inspections across 186 of the higher risk sites. They are receiving continual attention. In terms of the illegal chemical waste, WorkSafe has control of I think it is 14 of those sites and has active monitoring programs in place for immediate risk and so on. Again, there is a cross-agency task force doing additional inspections in terms of identifying a risk-based approach to additional matters.

Mr HAYES: Okay. I wanted to ask a couple of questions about the Sustainability Fund. You were talking about decreasing the stockpiles, and one of the things that we keep hearing from people in the collection and management of waste materials is the need to develop markets for recyclable material, especially the dangerous waste and things like that, to find uses for it and to develop those uses, and also the recyclables. How do you see the Sustainability Fund being used in the development of markets? I have noticed there are a couple of commendable results that are going on there, but can you talk to further use of the fund to develop end uses for recycled material?

Mr BRADLEY: So certainly we are seeing the fund being applied for the development of end markets for recycled materials. You will see within our submission—and I am just struggling to put my hand on it in time—a bit of an overview of the assistance that has been provided from the fund, which is helping to develop end markets. It is reported on annually as part of the Sustainability Fund activities report. So there is direct assistance going on in relation to infrastructure to support higher process use and resource recovery, but there is also direct assistance from the Sustainability Fund which is going into assistance in relation to establishing standards and proof of use for new advanced products.

So in Victoria, as I mentioned earlier, we see the advanced polymers example, which is increasing our position in relation to the ability to make use of those value-added high-quality plastic flakes, but we also see in Victoria some leading practice in relation to the use of glass sands in construction materials, which is probably nation leading, and also in relation to the use of recycled sleepers. So in those elements the Sustainability Fund has been seeding, through its investments, the proof of technology, which then enables the take-up and more widespread application of particular solutions.

Kylie, is there anything you wanted to add on that?

Ms WHITE: Just to say that the use of the Sustainability Fund, largely through Sustainability Victoria's programs, has gone into a range of market development and research and development opportunities, some of which have been discussed today, but there are a number of them that cover everything from construction and demolition, re-use, all the way through to plastics and others that have proved to be difficult in the past.

Mr HAYES: And that is coming out of the fund at present, is it—the work in that area?

Ms WHITE: That's correct—yes.

Mr HAYES: And you were talking about FOGO, too. Is money from the fund going into refining the work in FOGO?

Ms WHITE: The work on FOGO is being developed alongside those other programs, yes.

Mr HAYES: Do you see any role for the fund in mass education, trying to encourage behaviour change, informing the public as to the right channels for putting stuff into the recycling stream?

Ms WHITE: I think that is an excellent use of the Sustainability Fund—largely to assist communities—and we do know that they have said that they have been unsure of what goes into each of their bins, so to help them develop that consistency right across the state about how to separate waste and how to reduce contamination levels.

Mr HAYES: Yes, I see. Good call. Actually, just one more on that: there has been a lot of criticism about the money being held in the fund for such a long time and such a large amount of money accumulating while we are in a recycling crisis—that it should be rolled out more quickly and used in applications such as I have been talking about. What do you say about criticism on that score?

Mr BRADLEY: I think it is probably important to recognise that in the last five years there has been $140 million allocated from the Sustainability Fund towards these purposes, which is a record scale of investment in Victoria's history in relation to waste and resource recovery assistance.

Of the fund's balance as at 30 June, which was around $406 million, the overwhelming majority of that fund balance is committed through public announcements by Government across the forward estimates to programs that address the purposes of the fund, including waste and resource recovery. So there is a significant commitment coming out of the fund. Certainly, as you can see from the update today and from the initiatives that will come out as part of the circular economy policy, there will be a very significant commitment on the part of the Government through the circular economy policy to get on-the-ground change across the community in those key areas of priority that we have discussed.

Mr HAYES: So the balance is committed already now, is it?

Mr BRADLEY: The overwhelming majority of the fund balance, which was $406 million on 30 June, is now committed in public announcements across the forward estimates.

Mr HAYES: Thanks, Mr Bradley.

Mr MEDDICK: Thank you all for coming back again today. In your earlier hearing you talked about—and I think you have just touched on it briefly in answering Mr Hayes's questions—a cross-agency oversight group. I have just got a couple of questions around that. How often has the group met and what have been the outcomes of the deliberations, and have they put together a framework for addressing high-risk sites and published that? And if not, when would such a framework be likely to be developed and published?

Mr BRADLEY: Thanks very much. There are a couple of coordinating activities that are occurring across Government. I think you are referring to the coordination process around the development of a coordinated prevention and response framework for high-risk and hazardous waste sites; however, should you wish, I am sure Dr Wilkinson could also speak to the operational coordination which is occurring between operational regulators in this space.

But as per our previous advice to you we have been actively developing this framework, which is going to be finalised by the end of 2019, which will improve the coordinated response—initial detection and response then—to high-risk waste sites, which should reduce the likelihood of significant Government intervention and costs at the emergency and recovery stages. It is seeking to minimise risks to the community and environment through a whole-of-government approach. The primary objectives for us in developing the framework are to implement that risk mitigation in a cost-effective manner; to enable Government to respond effectively and efficiently in managing high-risk and hazardous industrial waste sites; to identify gaps, barriers and strategic issues impeding effective regulation; to document an agreed risk management framework for identifying our priority high-risk sites; and to establish interagency protocols and supporting regulatory tools as we respond to those issues.

There is quite a bit of diversity in the kinds of things that have emerged, and we discussed this last time with the Committee. So it is quite different to see the issues that have occurred at, say, the Broderick Road, Lara, site, where there has been a site with construction and demolition waste that represents a combustible stockpile risk, as opposed to what is effectively an illicit activity where large volumes of chemicals might be stored at a site in a factory that is not a licensed site.

So the framework is, if you like, tightening up existing procedures that occur operationally between departments and seeking to ensure that we have got an anticipatory approach to coordinating our activity in that space. It will build on recent amendments in relation to compliance and enforcement powers, which included in 2018 amendments to provide clearer powers to the EPA to issue clean-up notices for waste stockpiles; higher penalties for illegal dumping; personal duties and accountabilities for the management of industrial waste; and also the introduction of a repeat waste offender and prohibited persons categories—and that is 2018 amendments.

Already since we last met the Committee there have also been reforms, as you will all be aware as parliamentarians, through the passage in the Parliament on 31 October of the *Dangerous Goods Amendment (Penalty Reform) Bill*, which has introduced prison terms of 10 years for those that recklessly engage in dangerous goods storage or management, fines of up to $6.4 million and higher penalties for abandoning dangerous goods.

So this work that is occurring through that development of that operating framework is kind of being reinforced at a number of levels through the legislative changes but then also through the operational controls of regulators that Dr Wilkinson can expand on, if that helps.

Mr MEDDICK: Yes, if you would.

Dr WILKINSON: Operationally, I mentioned the Resource Recovery Facilities Audit Taskforce has focused on the combustible recyclables. That has worked through the highest risk sites now. Stepping in on Broderick Road was really the last of those, and getting the SKM sites into compliance. The focus of that group continues to be what is the next risk-based inspection regime—that is the 743 inspections I mentioned before—

as well as then, what is the next set of guidance that can be provided to duty holders out there to operate as businesses; so indoor storage guidelines now I think have been completed together with the fire agencies and so on.

WorkSafe chairs an interagency task force to share information on the dangerous goods sites, so that is very operational—'Right; which ones are we going to be clearing next?', and so on. EPA is also chairing a cross-agency intelligence-sharing committee that is more broadly across waste crimes, so a range of different activities.

Then you sometimes get individual sites that need such intense operational attention that they then at a very low working group operational level have interagency—so Broderick Road is a good example of that. EPA is now in there clearing that site. The timber is being mulched and going offsite, the contaminated mulch piles are moving as well.

GRS, Glass Recovery Services, in Coolaroo is another one of those where EPA stepped in on 25 October to conduct clean-up of the highest risk issues there. Then we have an operational team in that case that involves ourselves, MFB, Hume council and so on, to just execute operationally in a safe manner that protects the community.

Ms BATH: Thank you very much for being here today. I have a number of questions in a couple of different spots, so I will start off with e-waste. You mentioned about the funding that has gone to e-waste, and you also mentioned that there are storage facilities in play now and the expansion of those. I guess, echoing community concern, to some degree storage of e-waste is just stockpiling under another, nice name, and so the important factor is what is being done. What do you advise to be done in relation to actually recovering and recycling those material components of e-waste and the metals et cetera, and what are the blockers? Are they workforce blockers, are they technology blockers—what do you need to see them not just being stored but being processed?

Mr BRADLEY: Kylie, are you happy to answer that?

Ms WHITE: Thank you for that question. E-waste being diverted from landfill has been seen as a progressive step to be able to take those materials that are able to be recycled, often for particular forms of other technologies, which are of limited availability in the natural environment and be able to re-use them according to those circular economy principles. You mentioned that they are stored, but there are markets that will take these materials, be able to disassociate the recoverable parts of them and then be able to process them further. Many of those markets are export markets, but provided that the high-value material is collected and then transported, the value of those materials can be realised. We do know that being able to develop, if you like, the onsale of those materials is something that councils are currently working on so that they do not end up with materials just stored on site.

Ms BATH: That is a really good lead-in. We were in New South Wales and we heard how they ship the bales of aluminium cans to, for example, I think it was Scotland et cetera. So it was worthwhile sending offshore, and some of these components would be potentially sent offshore is what I am hearing you say. What do we need—what framework needs to happen—for them not to go offshore? So when we unpack the washing machine or the computer or whatever and take the components, what drives onshore repurposing?

Ms WHITE: I think the economies of scale probably play a part here, and that is around being able to collate those materials in a cost-effective way so that then there is sufficient material to be able to utilise them and reprocess them for the next value-added stage, whether that be utilising them in new products or being able to value-add in a way that, rather than just the raw product being offshored, there is a significant component of reprocessing done here.

Ms BATH: In relation to your case study number 2, so Alex Fraser and looking at reconstituting low-grade glass for road base et cetera, I am interested in the quantum of processing. That might be a take-on-notice that we cannot take on notice in this late stage, but if you had any values in relation to that? I say that with respect to regional processing. What we have heard going out into the country areas—I am a country MP—is the need for, I guess, opportunities for regional processing. Could one area—could Latrobe Valley—become a

specialised area in X and northern Victorian Y? What would that mean and how could that be achieved? I personally do not want to see all the reprocessing in Melbourne. There can be jobs and opportunities in regional Victoria.

Mr BRADLEY: Yes, we have been confronting exactly the same issue in our engagement with councils and with other stakeholders in relation to both the circular economy policy and the kerbside collection overhaul. It is fair to say that we are very conscious of the fact that the economics of the use of alternative materials as part of road base construction are likely to drive the need for localised solutions.

We need to have an approach of assessing market context in those local government areas where there will be differing levels of constraint on the availability of quarry resources and therefore the kind of available cost to a project of the quarry resource, the virgin materials, compared to options like glass sand. So as part of the thinking around the development of the circular economy and the approach to the regional infrastructure plans that each of the waste and resource recovery groups produce, we are wanting to ensure that we have got the ability to take a localised approach to effectively think about the circular economy at scale in local areas. The specific question around the planning of individual sites is one we might have to take notice or come back to you with some further information after the Inquiry is completed if that is your preference, but it is fair to say that we, like you, recognise the need for localised solutions and localised infrastructure.

Dr WILKINSON: And if it is helpful, I can add—we did not include it in the case studies—that Australia's first lithium battery recycling plant opened in Gisborne in April last year, which was funded by Sustainability Victoria and really was an Australian first as part of the e-waste ban. So that was ahead of the e-waste ban. So it is just one example.

Dr RATNAM: Thank you very much for your presentations, both at the start and the conclusion of our Inquiry. I have got a few questions. I might actually ask all of them and then please answer as you will, in case I run out of time—just in case we run out of time, Chair.

So the first question—thank you, Dr Wilkinson—follows up from Mr Hayes's questions on the particularly toxic stockpiling. Obviously there has been a lot of conjecture and concern reported in the media over the last couple of weeks, particularly around the West Footscray site and what has or has not happened there. I was wondering if you could outline what measures have been taken to allay the community concern and protect the community from ongoing risk given that there are significant volumes still, I believe, on that site. I think also at Glass Recovery Services up in Coolaroo there was concern that there were still quite hazardous amounts of combustible material there, so I would like to know what plans there are or what is being put in place to keep the community safe.

The second question is a bit longer and is on incineration. Since we have last seen you at the hearing we have had a lot of quite concerning evidence about waste incineration, combustion and the number of plants that are currently in the pipeline, which could see Victoria commit to burning large-scale waste, which could undermine the recycling hierarchy but also produce high volumes of toxic and hazardous ash material. Since then we have also received a submission from Environmental Justice Australia. They have talked about very worrying monitoring and regulation around coal ash dumps. So if you think about how coal ash is being managed, it is one-fifth of our waste stream and they claim it is being managed very poorly. There are concerns around groundwater contamination and the risks there. But if we cannot manage our coal ash, how are we going to manage millions of tonnes of ash produced by waste incineration? So of the questions I have there, one is: do we need another hazardous waste facility along with Lyndhurst, because there are different accounts about whether Lyndhurst has capacity or will have to build another hazardous toxic waste processing facility in Victoria? What monitoring of bottom and top ash will you do if waste incineration goes ahead in Victoria? And why is it not a requirement that recyclables are taken out of the waste stream for waste incinerators under the current regulations? So that is incineration.

The third question is more probably to DELWP. I am thankful for the summary you have presented of progress being made—that is really welcome—and the investments that are being made. We often see things in terms of investments—we are putting this much money into this—which is great; we love investment there. What about the outputs? What is that actually going to achieve? So for all the work that has been done over the last six months, have we increased the amount of recyclables being recycled? Have we reduced relatively the amount

that we are sending to landfill? With all those plans now afoot, will they actually have a material impact on reducing the amount of waste that we generate and send to landfill and the amount that we recycle?

So three prongs of questions: West Footscray; the second is incineration and particularly toxic, hazardous storage and management; and then three is outputs.

Dr WILKINSON: I can kick off. So in terms of West Footscray, community safety, environment protection, has been the focus obviously right from the time that the MFB handed the site back to the duty holder. So EPA is the regulator of pollution and waste. WorkSafe, as regulator of dangerous goods, have been jointly taking a co-regulatory approach. EPA has put a number of regulatory notices on that site right from the start. First of all, it has focused on securing the site. Then the most immediate environmental public health risk or environmental risk was further offsite contamination of Stony Creek. So the focus certainly in those initial months—and it is a complex site—was to make sure there were bunds in place, engineered solutions as well, to prevent, particularly as the spring rains came and so on, further contamination of the creek. There has been extensive engagement with the community around that process and progressive information sharing, including of the detailed results.

It was always known that there was significant legacy material on the site, and it was a very complex process to go and sample that. Then as soon as EPA put the regulatory notices on the duty holder for clean-up, we shared that information publicly and we hosted a community meeting recently as well to share further information. It does take time to do that sort of sampling. We can understand for the community it can come as a shock then when you share those results. Through our engagement, through the community meeting we hosted, we were able to share with the community that because the material on site has been through such an intense fire it has got a different kind of stability to the sorts of chemicals that you are finding in those unregulated warehouses and so on. Notwithstanding recent press, WorkSafe shared the information with MFB and EPA shared the information with UFU. So at every step of the way EPA is very committed to sharing results both with the community and obviously with MFB and others.

In terms of next steps, we are committed there. There are notices on the duty holder for a staged clean-up, but Government stands ready to step in if the duty holder does not meet those obligations. In terms of GRS, which you mentioned as well, this is a site which we have been very concerned about for some time. I should say on the West Footscray site, EPA has been on that site for I think it is 130 days of the 200 days that led up to the end of June, so in terms of risk management and so on, they have been very active on that site.

In terms of GRS, this is a site where again unfortunately you have a duty holder and there have been 11 notices that have not been complied with from EPA. There are VCAT orders that have not been complied with. We have done 51 inspections. We have been on that site between one to three times a week doing the monitoring of hotspots and so on, which all led, on 25 October, to EPA deciding enough is enough. We have gone in. We have engaged consultants, including a private fire protection company, fire engineers, occupational health and safety experts and so on, and for the last two weeks what they have been doing is creating safe emergency access to the hotspot as well as actively monitoring it.

I am advised that actually today, pending final safety checks, the hotspot will begin to be addressed. This is unacceptable. We have got 14 charges laid against that company, and we have done extensive engagement with the local community—so doorknocks, kitchen table discussions and so on—and we will keep doing that and having discussions with surrounding businesses. There is a lot more information I could share on both of those, but I am conscious of it time.

The CHAIR: Just on that, with the number of notices you have given GRS, do you think you moved fast enough or should we consider regulation to give you the ability to move earlier? What would you do differently to avoid that or have you got the tools to move earlier?

Dr WILKINSON: It is quite unusual to have a site like this where you have so many charges laid against a company and very specific VCAT orders that are not being followed. So that is why we did not hesitate. We have been actively monitoring risks, and it has got to be a risk basis on which you go in to these sorts of sites. EPA has regulatory powers to step in and hold people to account. The community rightly expects that those responsible pay for clean-up, and we need to use the regulatory tools and powers we have to pursue that in the

first instance. But what this demonstrates is on a risk basis EPA will not hesitate to step in and do that, based on fire advice. We are working with MFB, we are working with an independent fire engineer, we have got to take necessary legal steps. We had a contingency plan ready for this site for quite some time, so that if the need arose quickly we could act very quickly, which is what we did. And to the extent that we had already issued a show cause, essentially, that was then waiting so that when the risk profile changed we acted and we were able to mobilise very quickly and get on that site. We had all the contracts prearranged and so on.

But it is an unacceptable level of responsibility that that duty holder is showing for community safety and the environment. And so our people have been working around the clock. Yesterday, I am advised—I would need to check this—around 51 trucks left the site with contaminated material. So they were in there on Cup Day just making sure the community safety is being prioritised.

I will speak on waste to energy briefly, and then maybe from a policy point of view if there are any broader things. As the regulator we have the approvals role for proposals, and as you would be aware, we have approved a large facility down in Gippsland, in the Latrobe Valley. We draw on the waste hierarchy in making those sorts of assessments and we also draw on European standards. So what that means in practice is that we are looking for residual material to be used in those facilities—material that would otherwise be going to landfill—but what we are very conscious of in the context of Government moving to a circular economy policy is making sure, as any of these facilities are considered and should they be approved, that they are conditioned in such a way that they do not become static for the time at which they were conditioned. What that means in practice is they need to design their facilities so they can process material that has less residual waste into the future—as we get more organics out, as we get more plastics out of that residual landfill material. So if you look at the conditions of the Australian Paper approval, you will see those sorts of detailed conditions in there.

In terms of the ash, some of the reporting that has happened on that, including I think—I would need to check—the reference to Environmental Justice Australia, is drawn very much from the New South Wales experience, and the regulatory framework in Victoria is different. We have had previous queries about this, and we could provide the response to the Committee, perhaps out of session, but there is quite a difference in the way it is regulated in Victoria than I understand it is in other states—which means it is appropriately regulated, if you like. The question about the capacity of Lyndhurst and others I might leave to the department.

Dr RATNAM: If I could just follow up, thanks, Dr Wilkinson—

The CHAIR: If I could just interrupt, we are looking to extend to a quarter past, but we need to allow the witnesses to answer questions of other members. Go ahead.

Dr RATNAM: Of course. Just in terms of where there might be differences between New South Wales and Victoria, I guess what we want to know is what those regulations are in monitoring the bottom and the top ash. We had estimates of in excess of 500 000 tonnes, and that is just of the bottom ash; the fly ash was 80 000 tonnes, which is really toxic. They are some of the estimates that we are going to have to find facilities for. So how are you going to monitor them? How are you going to make sure dioxins and furans are not entering the food chain? All those regulations, I think, would need to be specified quite overtly for community concern to be allayed. I guess the point of my question is what have you got in place, because these things are about to go, it sounds like, because approvals have been given by the EPA. What has been put in place? Where can we find the detail of that? There have been concerns as well in the European Union, and they are walking away now from incineration because they are so concerned about what has happened over the last few years. So I would like to know how we are responding to all those concerns that are really cropping up now.

Dr WILKINSON: Some of that I might be able to answer now and some of it I might need to take on notice and come back to you on. How the ash is dealt with: it is conditioned and needs to be taken to an appropriate licensed facility. The question around the capacity of that for the long term we will need to come back to, possibly. Under the EPA regulations we have got the best practice environmental management guideline that then sets out the qualities, if you like, for the design of that as well. We certainly look to Europe for some of the best practice standards on this and we just stay connected to that so that we can then condition. So as they are evolving standards, or indeed as we are in Australia, we condition linked to those best practice standards wherever they are in the world.

The CHAIR: We need to move on. Have we answered the other two questions?

Dr RATNAM: Outputs?

The CHAIR: No, the other.

Dr RATNAM: Yes, it was on outputs.

Mr BRADLEY: Just to add to that—I guess briefly—I think that was one of the things we were trying to achieve as we went through the overview in the presentation so that it was not just a series of financial commitments but also giving you some insight into the kind of on-ground outcomes that are being achieved as part of the investments that are occurring today. In terms of the specific question, if you like, the headline measure that you might think about is the diversion rate of solid waste, which, as you can see in our submission in the material that was presented to the Committee, had been tracking along at around 66 per cent or 67 per cent for an extended period of time—five or six years. So 66 per cent in 2013–14 and 67 per cent three years later in 2016–17.

As I indicated earlier, our rate at this stage is up around 69 per cent, so there is a measurable benefit. But I think one of the things we recognise in relation to both the immediate response that you can see is being funded through the government announcements over the course of the last 12 months but also the circular economy policy that is being developed is that we will need a systematic and comprehensive approach to this that is more than just a resource recovery strategy being released and is actually a full circular economy policy that looks at those issues around design and the extent to which we can establish a community culture where we expect made-to-repair expectations of our products and where we see the use of recycled material as standard practice.

I was in Mildura only a week ago, and recycled material is being used in furniture there in terms of access ramps and gateways for infrastructure being put in place by local government. It is also the location which is producing recycled sleepers being used in rail in Victoria, which is again national leading practice. So some of the initiatives that are being funded through the Sustainability Fund and the kind of things that are highlighted today are having on-ground impacts not only in terms of our use of recovered material in production but also in local employment and regional jobs in Victoria today.

Dr RATNAM: Mr Bradley, can I ask one follow-up question. Thank you for that response. Where it talks about a capacity of 70 000 tonnes—so 47 per cent of hazardous waste reprocessed—does that include soft plastics? That is one question. And when will that plant be running at 70 000 tonnes capacity? How much of Victoria's plastics will it actually recycle?

Mr BRADLEY: I think on your last question first, it is fair to say that that is the capacity of the plant and the question is going to be one of economics around the end market and the feedstock for it in relation to the supply that would come to the plant.

Dr RATNAM: Do you know what capacity it is starting at?

Mr BRADLEY: I do not know off the top of my head. I am not sure if any of my colleagues know off the top of theirs. But it is the kind of thing—

Dr RATNAM: It is good to know how many more we need to build of those things, anyway.

Mr BRADLEY: We could quickly come back to you.

The CHAIR: You can ring him up.

Dr RATNAM: Thank you.

Ms TAYLOR: Two questions, just following on from one that you had: so if you take that toxic ash to a licensed facility, what do they do with that? Do they just bury it? I know I heard in Germany they have to have special stability salt flats and stuff. Is it just going to be buried? What happens to it then? That is my concern.

Dr WILKINSON: It depends on the nature of it and the composition of it, but we have the Lyndhurst facility here in Victoria, and yes, that does just get buried. But it depends on the material that comes out as to how it needs to be dealt with. We could perhaps provide some further information back on that and maybe if EJA has provided a subsequent submission, see if there is anything we can further assist with on that one.

The CHAIR: We have got Sustainability Victoria coming in later in the day. Your colleagues might be able to sort of give them the heads up so they might be able to give us something. There are two types of waste we are talking about here: the ash—the top and the bottom. So one can be recycled and the other one cannot.

Dr WILKINSON: That is right.

Dr RATNAM: That is an interesting point there because EJA actually says there is no market for that ash at the moment. Like coal ash the dumps are not protected with lining, so it could leach into groundwater contamination. They are saying there is no market for the re-use, and the mines do not have to be rehabilitated or remediated before recommissioning. They are wondering what happens now. When we generate all this waste ash from incineration, what is going to happen to all of that, given that the coal ash does not have to have anything done to it to be dumped, it sounds like.

Ms BATH: Chair, just for the sake of accuracy, the subsequent report from Australian Paper speaks to that. I can go and read it into this transcript, but it just talks about the recovery of the bottom ash and the balance being recycled for road base and construction materials replacing non-renewables, gravel and sand et cetera. So there is actually some documentation in their subsequent report that we could consider.

Dr WILKINSON: In Victoria all three of Victoria's brown coal power stations use the same ash pond at the moment to settle and dispose of ash from the station's wastewater. The pond is surrounded by a groundwater attenuation zone, which is monitored to ensure contaminated groundwater then does not go beyond the premises boundary, and groundwater clean-up will be required as part of the decommissioning, which is then an audited process. I know that only goes to some of your questions. That is a little bit of the flavour of some of the way it is regulated, in Gippsland at least.

Ms TAYLOR: One more. What is the make-up of the residual waste that you would send to a waste-to-energy facility? That always baffles me. I am not saying it does not exist. I know it takes time to educate people and to change society and the way they manage waste. Is it mainly building waste or is it just people not separating out stuff? What is it?

Dr WILKINSON: At the moment take, for example, the Australian Paper approval—it is not built yet, but the approval—which is the sort of material that currently would be taken to landfill. So the sort of stuff that comes out of your bin that would go to landfill at the moment would be allowed to go to Australian Paper, but what we know is that over time we want less and less plastics that are recyclable, less and less of the organics and so on. What we did was condition the Australian Paper approval to require monitoring of what is in that residual material and to design the facility so that it is not stuck in today and unable to adapt to tomorrow as we recover more out of our waste materials.

Mr HAYES: Can I just ask on that: how will Australian Paper cope with less energetic material being supplied to them?

Dr WILKINSON: That is exactly why we included these conditions, and they need to come back to us now. After an initial works approval there is then a commissioning approval and so on. They have to be able to demonstrate that they can meet those conditions and design it in a way that is adaptive for the future.

Ms TERPSTRA: I might just ask one question that is sort of a bit out there. On the question of the waste to energy and what is left over—and we were just hearing Melina talk about what is in the Australian Paper report about potential markets that could be opened up for the use of these residual materials that are left—has there been, or could there be, any consideration of further processing of those materials that might reduce them into nothing? For example, there was one example we had in a presentation on gasification. So could you, for example, use gasification to further reduce that leftover—whatever it is that comes out of the waste-to-energy process—as well? I mean, I do not know.

Dr WILKINSON: There are—and I am not an expert on waste to energy, I should qualify—about three different forms of waste to energy, of which gasification is one. Depending on the sort of proposal that is put before EPA or whoever for approval, that can already be built into the process, at least to get the energy part of it out. In terms of then the residual material—fly and bottom ash—that is a different question. Often that is quite toxic, so I think that is a different question of what we do with that as distinct from how you can get the most benefit out of the material going through, whether it is thermal or whether it is gasification, and there is one other as well.

Ms WHITE: Pyrolysis.

Dr WILKINSON: There we go.

Ms TERPSTRA: And that is the issue. There has been concern raised around the bottom ash and what is dumped there. That is why I am just questioning whether there has been any consideration given to another process. Waste to energy, gasification and pyrolysis are three processes that could potentially produce energy, but my question specifically goes to the leftovers and how you could then further treat that or get rid of that—hearing about some companies that are burying bottom ash in salt mines. Potentially could that very toxic material be further treated through another secondary process?

Mr BRADLEY: And it is fair to say, as the circular economy policy will speak to—the waste-to-energy policy of Government as well—we have been grappling with this issue. The point that is being raised in this hearing is similar to the issue that has arisen as we have been developing the waste-to-energy policy that will be forthcoming. We thought about it in the conventional waste hierarchy where you are effectively seeking to ensure that it is only the residual that goes into that waste-to-energy facility. That is absolutely still the intent, but what arises from that is that there is actually potentially a residual from the waste-to-energy facility that can have a potentially productive purpose or at least a safer disposal method as per the examples used earlier in relation to the use in road base. That is something which we are intending to reflect in a kind of more sophisticated view of the waste hierarchy as it applies to the waste-to-energy policy, and we are making sure that that is reflected in the circular economy policy at the end of the year.

Mr HAYES: Just one more: in regards to using it as road base, if dioxins are included in the road base, does that stabilise them or get them out of the system temporarily, I suppose, until the road breaks down?

Dr WILKINSON: I would need to take that on notice and get advice from our applied scientists. But I can assure you that if it had been approved to be used in road base it would have had all of those sort of checks done. But to get a technical answer I would need to check with the team.

The CHAIR: While on the subject of health concerns in relation to waste to energy and current regulations—and I know you approved the APM one—how satisfied are you that with using the European standard the health impact is actually no issue there, particularly in comparison with landfill, for example?

Dr WILKINSON: We conducted a thorough assessment of that works approval process. We had our experts go to Europe and other parts of the world to make sure we were learning from the absolute best standards and so on. We were satisfied in our assessment of it. There was a health risk assessment done as well as part of the approvals process. In issuing the approval, again, there are quite significant conditions on it for continued monitoring of emissions and so on so that that can be monitored and be made transparent to the community as well.

The CHAIR: Thank you. Just two quick questions and quick answers, because we are approaching 11.15. The landfill: can you see a time where the red bin will not be going to landfill in the foreseeable future? And the last question, which has come up in a number of submissions, is about the emergency app for Metro, like for the West Footscray fires and various other things. Are we considering looking at using, let's say, the bushfire app or emergency services to alert people about health issues and so forth? If there is a bushfire, for example, you can go and pick the emergency app and they will tell you where the fires are, what the risks are and what to do and not to do et cetera. Are we considering rolling that out for Metro crises and emergencies?

Mr BRADLEY: Two quick responses on those: on the first one, certainly as an aspiration I think what we are seeing increasingly in European practice—including the Prime Minister of Netherlands, who was out

recently—is that there is this principle that in a circular economy there is no such thing as waste. So it is certainly an aspiration. It should be the light on the hill. The second issue in relation to the use of the emergency app is that we would already see significant events like structure fires being reported on that app at the moment. Dr Wilkinson might have something more useful to add.

Dr WILKINSON: The Emergency Management Victoria app is available to everyone, and certainly during the West Footscray fire and the Bradbury fire, as the Committee knows, that is where health alerts were channelled through. We absolutely take the feedback from the interim report, I believe, of this Committee that said we will do metropolitans populations that have the same visibility. Certainly we have been working very closely with Emergency Management Victoria fire agencies to raise awareness.

I can also advise that from Thursday last week the EPA has an AirWatch website that provides real-time air quality information. The feedback we have had from the community is, 'Okay, it's good, but it's not particularly accessible'. We released our new mobile-enabled version of that last Thursday, and it is now live. That was prepared with input from community as to what it should look like to meet their needs and so on, and the EMV website will link to this during an emergency and vice versa.

Dr RATNAM: There were some questions to be taken on notice. Can I just summarise?

The CHAIR: Yes.

Dr RATNAM: I also know that the secretariat has advised us that because the Inquiry is finishing very soon, we actually do not have a lot of time to receive—

The CHAIR: It is finishing today.

Dr RATNAM: information back, so I am not sure how quickly you can get this back. But I think there were a few questions unanswered, which were about the actual monitoring regime for the bottom and top ash that is going to be built in if waste-to-energy incineration goes ahead. There was a question about how dioxins and purines will not end up in our food chain—so what is done to make sure that will not happen? The last question that I do not think was answered was: will we need another hazardous toxic facility like Lyndhurst, given the volumes of waste incineration that have seem to be approved? If we could get some information on that at some point, that would be wonderful. Thank you.

The CHAIR: Thank you. That is excellent. On that note, if we are able could we get the answers to these questions hopefully today or tomorrow?

Dr RATNAM: By Friday?

The CHAIR: Friday? Okay, very generous. On that note, thank you very much for your assistance to the Inquiry—twice. We appreciate all the information that you have supplied us. Thank you. The final report will be handed down by 28 November.

Witnesses withdrew.