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TRANSCRIPT OF PROCEEDINGS

PRODUCTIVITY COMMISSION

DRAFT REPORT ON WASTE GENERATION AND RESOURCE EFFICIENCY

MR P. WEICKHARDT, Presiding Commissioner

TRANSCRIPT OF PROCEEDINGS

AT PERTH ON MONDAY, 17 JULY 2006, AT 9.05 AM

Continued from 6/3/06 in Melbourne

MR WEICKHARDT: Good morning, ladies and gentlemen. Welcome to the public hearings for the Productivity Commission inquiry into waste generation and resource efficiency. My name is Philip Weickhardt and I am the presiding commissioner on this inquiry. The inquiry started with a reference from the Australian government on 20 October 2005. The inquiry is to examine ways in which waste management policies can be improved to achieve better economic, environmental and social outcomes. The inquiry covers solid waste and, more specifically, the issues associated with municipal, commercial and industrial and construction and demolition wastes.

We're grateful to the many organisations and individuals who have already participated in this inquiry. The purpose of these hearings is to provide an opportunity for interested parties to discuss their submissions and have their views on the public record. We released a draft report on 23 May 2006 and have received a number of submissions on the draft report. We will hold hearings in Perth, Sydney, Brisbane and Canberra on the draft report. The hearings scheduled for Adelaide have been cancelled due to lack of interest.

After considering all the evidence presented at the hearings and in submissions, as well as other relevant information, a final report will be forwarded to government in October of 2006. Participants in the inquiry will automatically receive a copy of the final report.

We like to conduct all hearings in a reasonably informal manner, but I remind participants that a full transcript is being taken. For this reason, comments from the floor cannot be taken, but at the end of the proceedings for the day I'll provide an opportunity for anyone wishing to do so to make a brief presentation. Participants are not required to take an oath but are reminded under the Productivity Commission Act to be truthful in their remarks. Participants are welcome to comment on the issues raised in other submissions or by other speakers here today.

A transcript will be made available to participants and will be available from the commission's web site following the hearings. Copies may also be purchased using an order form available from the staff here today. Submissions are also available on the web site or by order form.

To comply with the requirements of the Commonwealth occupational health and safety legislation, I draw your attention to the fire exits, evacuation procedures and assembly points. The main fire exit is out of this door and to the right on this level, and there's a clearly marked door on this level. There is a door behind me. The evacuation sound, I am told, is a siren. The assembly point is outside on the corner of William and Hay Streets, in front of the Wesley Church. I ask members of the audience to please turn off their mobile phones or to turn them to silent.

MR WEICKHARDT: As our first participant, I'd now like to welcome the Municipal Waste Advisory Council. Thanks for coming along.

MR RYAN: Thank you.

MR WEICKHARDT: Our first participant is the Municipal Waste Advisory Council, and I'd like to welcome them. Perhaps you can just introduce yourselves, please, with your names and positions.

MR RYAN: Certainly. My name is Bernard Ryan. I'm from the WA Local Government Association. I'm the manager of waste and recycling.

MR REID: I am Michael Reid. I used to work for the Municipal Waste Advisory Council. I've now been brought in as a short-term consultant particularly on this subject.

MR WEICKHARDT: Thank you very much again for a submission which you've clearly put a lot of work into and which contains a lot of important issues. You should assume that I've read that and thought about some of the issues, but clearly if you want to make some key points do that and then I have a number of questions, and I'm sure we'll have some discussion. We have until 9.50.

MR RYAN: 9.50? I appreciate your leniency, thank you. I would like to just lay out the way we're going to deal with the points that we've raised in our submission today. We haven't provided a PowerPoint, and I'm encouraged to hear that you're interested in asking some questions already and some discussion. So we are looking for a little bit more feedback and response than our previous submission.

Firstly, I'd like to acknowledge the boundaries provided by the terms of reference under which the Productivity Commission operates, and I think it's clear that we've recognised those and attempted to present arguments in such a manner that the commission can respond appropriately. We'd also like to acknowledge the commission for providing another opportunity to provide input into its deliberations. It's been, from our end, a very professionally run and productive exercise, obviously, not just here but around the country. We only wish we could see that on many more fronts. I think that would lead to a much better outcome.

MR WEICKHARDT: Thank you, but can I say our work is only made possible by thoughtful input such as from you.

MR RYAN: Indeed.

MR WEICKHARDT: Even if it challenges some of the stuff we think, that debate

is a better debate for getting good policy outcomes.

MR RYAN: Indeed. I just made a note here that - especially when the tyranny of distance is on the other foot on this occasion. You're the ones visiting our camp and not the other way around, so we appreciate that. There are a couple of points I'd just like to acknowledge or make up-front. Firstly, we acknowledge that the commission is rightly targeting issues at a very high level, and we therefore adjusted our arguments to accord with that level of discussion. We haven't delved into detail or minutiae. We've gone, as you can see in the submission, for the main arguments, and that's what we intend to pursue today.

As you've noted, we put significant investment in discussing and responding to these issues, both with our constituents and through consideration of the discussion paper and the draft report prepared by the commission, this being our third written submission and our second oral submission to the commission. We also would like to point out that we do have significant and what we believe are relevant objections to the treatment of various aspects of the subject as shown in the draft report and believe that these need to be addressed to improve the output of the exercise generally. That's why we're here today, to try and further that aim.

The method that we would like to use to do that, rather than going through the submission verbatim, if you like, is to actually draw your attention to page 7 of the submission, which has a series of compiled recommendations. Specifically, our objective here is to seek some response and potentially some discussion from the commission in how they believe these recommendations may be treated with respect to the final report.

With that, and given the time constraints that we're under, I'd like to move directly to put those questions to the commission, if that's appropriate. Feel free to stop me at any point if you wish. We would like to address the particular recommendation and have some discussion about that before moving on to the next recommendation, rather than going through them all at once and then going back in an ad hoc fashion to clear through it. Firstly, I would ask the question of the commission: does it intend to provide additional analysis and discussion to justify its underlying assumptions regarding the effective pricing of natural resources and the substitutability of human and man-made capital for natural capital?

MR WEICKHARDT: Well, let me, so I avoid repeating myself, say we will endeavour to respond to any issues that suggest we could do a better job in the final report of explaining our position or revising our position. So you should assume that anything that you've said we will carefully take on board and think about again and, if we've perhaps not been as clear as we could have been in terms of elaborating why we hold a particular view, then we will do our best to make it clearer. If you have

challenged our belief, then we will review and revise that.

I mean, it probably will not be the most productive use of time for me to try to, if you like, defend or rebut particular issues, so I'll try to focus the attention on areas where I'm trying to sort of flesh out or understand more. But let me say that we certainly don't believe there is complete substitutability between sort of natural and manmade capital. In fact, I think we specifically made mention of the fact with two examples in the report, where we said that clean air and, you know, sort of fresh, clean water are two issues that you wouldn't want to trade off at all.

MR RYAN: Yes.

MR WEICKHARDT: Clearly, there are issues in all the fields of sort of complex public policy where trade-offs aren't possible. If we were talking about a new drug that improved the quality of life for 99 per cent of people but killed 1 per cent of people, we'd probably say, well, it's just not acceptable - - -

MR RYAN: Not acceptable.

MR WEICKHARDT: - - - to sort of have a deliberate policy to kill 1 per cent of the people, or to have the implication of that. So there are some things we acknowledge that you don't want to have trade-offs about and, in this complex sort of field of the future and sustainability, I think what we're at pains to try to stress is that policy-makers need to be very clear about what is being traded off.

As one of the submissions made the point, it's very rare in any policy that you can make a policy that affects only that particular issue. In the laws of physics, every action has an equal and opposite reaction. Well, in the laws of policy, probably every action has a complex series of first order, second order and third order reactions, and what we're at pains to try to do is to ensure policy-makers think about those carefully and to evaluate the pluses and minuses.

As much as you can try to put values on some of these things, which is complex - and you articulate a whole series of reasons why they're complex, and I totally agree with you - at the end of the day people making final conclusions need to sort of weigh up all these issues, and sometimes trying to put financial estimates on these is a way of at least bringing them into one unit so that policy-makers can weigh the two against each other, but sometimes that's not possible. I think we said in the draft report, just articulating what the issues are so people can use their, I guess, intuition, judgment - "Does it feel right? Does it smell right?" - is a better way than simply having a policy-maker say, "I have decided this will be good for you," end of story.

MR RYAN: Yes.

MR WEICKHARDT: It's that issue that I think we're particularly trying to push back against.

MR REID: One of our concerns about the Productivity Commission's treatment of this subject was a bit of a sense perhaps that it felt that environmental policy-makers were unable at the moment, or unwilling, to take into account alternative considerations beside just environmental impacts. We felt that the treatment of the question of whether resource efficiency was a valid aspect of the operation of our economy to inquire into - we felt that the Productivity Commission's treatment of that subject indicated a lack of faith in the ability of environment policy-makers to consider other aspects of the operation of the economy, and we took away from the Productivity Commission's report a view - much like what you've said - that other aspects of the operation of the economy need to be brought into consideration when environmental policy-makers are considering different options.

But we maintain the view that it is both appropriate and important for environmental policy-makers to have at their disposal measures of environmental impact and measures of a particular aspect of the operation of the economy that are particularly relevant to their field. So in the case of the Productivity Commission's treatment of resource efficiency, we've presented some arguments to the Productivity Commission to defend, if you like, the appropriateness of environmental policy-makers considering how well, how efficiently, our economy is using its natural resources.

Now, none of that was put to the commission to suggest that environmental policy-makers should only be concerned with those factors of production, but we want the Productivity Commission to return to this question about whether natural resources are appropriate to treat separately; that's not necessarily to say to treat as more importantly than other factors of production, but we don't believe that the Productivity Commission has satisfactorily made the case for ignoring the question of how well we are using specifically our natural resources.

One of the reasons why we're not satisfied with that is that the Productivity Commission in some of its remarks appeared to satisfy itself that natural resources shouldn't be treated any differently from any other resources and other factors of production, inasmuch as it would be much better to just aggregate all of our factors of production under one measure - that is, our economic efficiency - and we've put arguments several times now to the Productivity Commission to suggest that there are good reasons for not doing that. Some of them relate to the fundamental nature of those inputs of production, so questions about substitutability, and other arguments relate to the question about how public policy is developed.

In another government department - say one that relates to workplace relations - it is considered perfectly appropriate for them to look at measures of labour productivity. That's not to say they should ignore other inputs of production, but that's one that they're specifically concerned with and we think that it's entirely appropriate for an environmental agency to look specifically at resource efficiency as one of the things that it takes into account when looking at public policy options.

So I accept your assertions that we need to be looking at a whole range of different factors when we're developing policy - and we would never suggest for a moment that environmental policy-makers ignore those other factors - but the Productivity Commission has gone quite far in recommending the removal of resource efficiency as a consideration from environmental policy, right to the point of removing it from the charter, if you like, of the EPHC, and we think that's a pretty drastic recommendation to make and we think it's important that the Productivity Commission respond to the arguments that we have made for keeping it in there.

MR WEICKHARDT: Thank you for those comments and let me say you are not alone in challenging that particular treatment. It is an issue that we thought about quite seriously and I guess our issue about resource efficiency is that having a measure that improving the measure may be contrary to the community's interest seems to us to be a quite dangerous situation. You can easily I think set up examples where improving resource efficiency of a particular singular resource could be done by expending all sorts of other resources - natural as well as human resources - in that quest; so recycling a particular product which was dirty and contaminated and in a remote location, if I take an extreme example, is perfectly possible, but it would only be achieved by expending a whole lot of energy - not just human energy but natural energy - in order to achieve that, and maybe polluting waterways in the quest of decontaminating the product, and so whilst you have achieved, if you like, an improvement in one measure, the outcome is not one that the community would benefit from. So I guess we were saying, "Well, what is the issue here? What are we ultimately trying to achieve?" and we fall back on, I guess, the commonly accepted tool that government policy is framed around; that is, that policies should improve community welfare and society should be better off.

We all struggled with actually how to measure that and accept that that's a difficult issue, but to simply improve the recovery of one particular resource - silicon dioxide or paper fibre - at the expense of using lots of energy or lots of human capital which could be used and devoted to improve say environmental degradation and the waterway, seemed to us to be a pointless exercise.

MR RYAN: And we agree. We do agree with that, but I don't think we are talking about quite the same thing.

MR REID: I think the agencies themselves would agree, as well, that insofar as is possible they do attempt to take those considerations into account. I suppose it leads to another part of our argument. You referred obliquely to benefits that could be had elsewhere and what we're suggesting is that what we're not necessarily seeing, and we don't believe the commission has made the case for, is that those activities are actually taking place. Those alternatives are not taking place - ie, that there may be a better option than spending money to recover glass in Broome by doing something else somewhere else.

Now, that's technically quite a sound argument. In practice, I suppose we are dealing with the real world and what is happening is glass is not being recycled in Broome in that instance and we have no necessary evidence to show that a countervailing benefit is being ascribed elsewhere and, in the absence of being able to demonstrate that that alternative benefit is actually realised, we would submit that a suboptimal outcome is better than no outcome in that sense. If it can't be demonstrated that those outcomes are being achieved better elsewhere or that resource is being used better elsewhere, then we really have some scepticism about the argument, "Well, you shouldn't be doing this because there's a better option." Where is the option happening? Where is the option actually showing some outcomes in terms of the real world? I think that leads into one of our other points, which is - - -

MR WEICKHARDT: Can I just pause you there and say I accept that that's a view from one end of the telescope. The view from the other end of the telescope is that if you can demonstrate that that actually is going on in Broome - to recycle glass - which is consuming many more resources than it's, if you like, in net saving, then you could say those resources have been squandered and could have been used to have attempted to save the Murray by some environmental action, or to remove a salinity problem somewhere else. I accept the fact that we certainly have not suggested there should be a direct nexus between stopping doing, if you like, something that squanders resources in one area and investing those specific resources somewhere else - we're not suggesting that - but if the economy overall is driven by principles that avoid resources being squandered, those resources are then available to be used in areas which the community as a whole thinks are important in terms of investment in health, education and environmental protection. So our thrust has been to say that unless there is a net benefit from some of these policy actions, they shouldn't be undertaken.

I accept all the points that you have laid out about the difficulties associated with cost-benefit analysis and the complexity of these things - meaning that their accessibility to the public is difficult. I have to say that it takes a lot of determined effort to try to get to the bottom of some of the cost-benefit analysis work that has

been done and we're still wrestling with that issue, and important policy decisions have been made around that.

Those are issues of concern to us and, hopefully, during the process of this whole inquiry we might shed some more light on that, but if it can be clearly demonstrated that somebody trying to enhance a particular ratio of resource efficiency is actually leading to a result that squanders resources, we think that's a bad outcome, and the trouble with having these as measures is that they get perhaps translated from the original intention, which was, "This is an overall guide or perhaps one of a number of instruments to be looked at," and the risk is that they suddenly then become a single focus for somebody driving a particular political agenda in their policy area.

One of your member groups, the Eastern Metropolitan Regional Council, who are appearing today, expressed in their submission - which you may have seen - huge frustration that some of the policy in this waste area is being driven by simplistic and bureaucratic approaches which prevent sensible outcomes. It's that issue that we're trying to address.

MR REID: But the fact that there are problems with the way that say for example certain practitioners might apply the concept of resource efficiency is not a sufficient argument against continuing to use and apply such a measure.

MR WEICKHARDT: Can I ask you to tell us why is resource efficiency itself such an important issue to you?

MR REID: We have set out the reasons in our latest submission. We believe that the conservation or the efficiency with which we apply our natural resources - - -

MR WEICKHARDT: Which natural resources?

MR REID: Natural resources including but probably not limited to those that produce our food; the natural resources that produce minerals and energy; natural resources including forest products.

MR WEICKHARDT: How do you trade those off against each other? Say if you've got to use more of one to conserve another, what do you do to put those into some sort of equal unit?

MR REID: I think that the difficulties associated with trading those things off are enormous, and I think that the difficulties associated with trading those things off against other inputs of production are also enormous. I don't think that it is, again, a satisfactory response to our concerns about striking from the list of things that

environmental agencies consider - striking resource efficiency from that list. I don't think it's a sufficient objection to using resource efficiency to say there are problems associated with using and applying resource efficiency.

I think that there are good arguments to suggest that the way in which we're applying natural resources has particular significance for our long-term sustainability, and the Productivity Commission, to our mind, has dismissed those arguments, using, amongst other things, the argument about the substitutability of manmade and human-made capital, for natural capital, and it hasn't responded to the benefits that we've proposed in continuing to use those measures - using measures of resource efficiency.

MR WEICKHARDT: We're struggling to understand what the measures are.

MR REID: The quantity of energy, for example, that a particular economy uses per unit of output; that's one measure of resource efficiency. The quantity of an aggregated basket of material resources like wood products or metal products for a unit of output. Those are measures of resource efficiency that are being applied elsewhere in the world.

MR WEICKHARDT: How many of these are we going to have? Are we going to have 100, or one for every element, or - - -

MR REID: I acknowledge that there are difficulties with the application of resource efficiency, but these problems are just as profound and apparent in the Productivity Commission's own preferred approach. Resource efficiency is difficult to measure. It's difficult to work out an appropriate set of measures for environmental agencies to use. Economic efficiency is even more complicated because the factors of production involved in assessing that, outside of simply just accepting whatever it is that the market determines to be the value of goods and services, is extremely difficult to do. The fact that it's difficult isn't an argument against its value.

MR WEICKHARDT: I guess nobody argues that it is not difficult to measure economic efficiency when you're trading off sort of complex environmental, economic and social issues, but if you can get a measure you know what to do with it. What we're struggling with is when you've got these multiple measures of resource efficiency, which in themselves are quite hard to measure. What do you do with them?

MR REID: You factor it into a complicated political process. You've got an environment agency that is monitoring the efficiency with which we're applying natural resources. They might arrive at the conclusion that we seem to be using

natural resources much faster than other economies; that our economy requires much more oil, much more metal - much more - in order to produce a single dollar of GDP, for example. Now, that in itself doesn't lead to any particular course of action. It doesn't in itself suggest a particular course of action, but it's something that's relevant to input into the discussion about whether or not particular changes need to be made.

The Productivity Commission, from the discussion that you've articulated to date, has satisfied itself that the market is already operating relatively efficiently and effectively in pricing all of the things that we consume in our economy. If one does not share that confidence - and MWAC certainly doesn't - then how is it that you're going to scrutinise the efficiency with which we're applying natural resources? There is no alternative but to look at measures of resource efficiency.

If we have concerns about the way that things are being priced, we actually have to go into the black box and open it up, and look at it. Now, the Productivity Commission has sidestepped that challenge by deciding, on the basis of a number of assumptions which may be valid but haven't really been fully discussed, that that black box is working perfectly and the numbers that get put out the other end of it are perfectly correct and valid.

Now, we were challenged in our last oral hearing to show why a particular government department had the right or the ability to articulate a target and back that target up as being an appropriate outcome. You suggested that that process seemed quite arbitrary. We accept that there are problems with the way that environment agencies set targets. We accept that there are problems with the way that they set goals and objectives. What we don't see is any response from the Productivity Commission about how environment agencies are to proceed if they don't share the Productivity Commission's faith in the setting of prices; the setting of those fundamental prices that lead to the pricing of all of the goods and services that we consume; that is, the pricing of natural resources. If we don't share the Productivity Commission's assumption that externalities associated with resource consumption are equal to zero, then what do we look to?

MR WEICKHARDT: I guess we probably should look to having a fundamental debate about that particular issue, rather than the second-best outcome of saying let's have another set of measures which we'll take into account, but not know how to use. I guess the debate that probably would last longer than we've got here now is that over time I think governments around the world have accepted - in most OECD countries, anyway - that whilst markets are not perfect in terms of allocating resources and markets have their own distortions, and sometimes have market failures, they have generally been shown to be a hell of a lot better than governments making guesses as to what's in the community's best interests. So what we've been at pains to try to do is to try to think about ways in which the market failures could be

eliminated and to best allow the governments to intervene where those market failures exist and then allow the markets to allocate resources correctly. Now, is this a perfect process? No, it's not. Is it a hell of a lot better than somebody with a black box making a guess as to what's in the community's interest? Our position is yes. Having a long debate about that - - -

MR RYAN: And we are presenting the other end of the telescope, as you say.

MR WEICKHARDT: Yes.

MR RYAN: I think, as you said, we could have that debate over some time, but we do look forward to the commission's treatment of that subject again.

MR WEICKHARDT: Okay. All right.

MR RYAN: And we will be paying close scrutiny to the arguments if they are enhanced in any way.

MR WEICKHARDT: Well, we'll do our best. Can I move to another issue. You do raise the issue of the practical or political problem that you think governments have in terms of intervening upstream to address externalities say in resourcing structure if it made our primary export industries uncompetitive, and you make the point that it's unlikely that, if government intervened and our industry became uncompetitive, it would affect world prices and therefore world consumption very much, anyway. I agree largely with that, albeit that I think there was evidence that the Australian government have taken policy positions on things like environmental pollution, mine site remediation, taxes on fuel and other things which are not replicated by some of our competing nations around the world. They've taken those decisions because they think they're the right thing to do for Australia, and the industry here has had to, I guess, wrestle with the internationally competitive in that policy setting.

My problem with following your argument is that if you say, "Well, okay, I accept the fact that waste policy won't address those particular export industries, anyway, and governments probably won't intervene upstream anyway, because they are politically or economically going to be constrained," if your philosophy moving on from that is that nonetheless waste policy should be used to address those issues insofar as the Australian economy is concerned - the Australian consumption is concerned - don't exactly the same sorts of concerns arise in terms of the manufacturing industry that's trying to export product here in Australia?

If a car manufacturer, for example, has to pay significantly more for waste disposal because the policies you're advocating would suggest higher waste disposal

charges to try to send a signal about consumption of resources, wouldn't that tend to make the industry in Australia less competitive and therefore less able to export product, and therefore our economy less able to invest money in good things that we want to do like conserve the environment, health and education?

MR RYAN: Using that example, I think there's a reasonably sound recognition that there would be impacts if we were to focus away - or if we were to accept the point that upstream interventions were not going to be pursued and that waste policy would seem the second best alternative, applied to both the community at large and to the manufacturing sector, there would be impacts on those industries. I don't particularly take issue with that point. I think it's quite valid.

The question is, in our mind, that in the absence of any upstream intervention, what is the alternative? Now, if the alternative is, "Leave it to the market because the market is the best placed instrument to deal with this," we don't have faith in the proper exclusion of externalities in those markets and we don't see any particular case that has been made by the Productivity Commission aside from the - and with respect - sort of fiddling at the edges type measures you've mentioned that the Australian government has engaged in in dealing with that major resource externality. There are no other options that have been laid forward by the commission. There are going to be impacts at one end or another. The question is do we vacillate between the two or do we try to make a choice between one or the other?

MR WEICKHARDT: If I ask you for a moment to set aside resource depletion and greenhouse gas as to separate issues of externalities that you're concerned about - greenhouse gas - - -

MR RYAN: Fairly large ones.

MR WEICKHARDT: Yes.

MR RYAN: Yes.

MR WEICKHARDT: But apart from those two, what are the upstream issues that most concern you?

MR REID: They are the upstream issues that most concern us.

MR RYAN: I was going to say, they're pretty big ones to lay aside.

MR WEICKHARDT: Okay. Well, I just wanted to clarify that.

MR RYAN: Yes.

MR WEICKHARDT: It's really those two issues that are at the heart of this.

MR RYAN: Yes.

MR WEICKHARDT: On greenhouse gas, I think we have made clear that we think that issue needs to be addressed by the government and we have a number of reports previously recommending the government need to address that issue on a national basis, so let's not spend time on that.

MR RYAN: Yes.

MR WEICKHARDT: The central area where we've got distance between us is this area of resource depletion.

MR RYAN: Exactly.

MR WEICKHARDT: All right.

MR RYAN: And particularly natural resource depletion.

MR WEICKHARDT: And particularly natural resource - okay. Well, I understand and we will try and do as good a job as we possibly can to explain our position in the final - - -

MR REID: And in explaining that position we would particularly like the Productivity Commission to address some of the argument set out in appendix 2 of our submission, which we think presents valid arguments why resource consumption and resource depletion ought to be treated as something which at least should be suspected of producing externalities for future generations; so it would be great if the Productivity Commission was to directly address some of those arguments.

MR WEICKHARDT: We will do our best. I mean, there are a number of assertions in your submission, like "MWAC considers" and "MWAC thinks". With respect, we all have views, but we've got to have some substantive evidence behind those views. Where we can see, if you like, that it's not just a sort of "I think" type of argument, we will do our best to try and establish why we're taking the position we have.

MR RYAN: I think it is clear though from the detail of our submission that we haven't made offhand statements or assertions to that effect. They have all been related to our fundamental arguments. They are not things plucked from the air. We

would expect at least reasonable consideration of those points, given that they relate directly to our main points of our argument. They are subsidiary to those, but they relate directly to those main points which are substantive and have been prudent, so they're not simply off-the-wall points.

MR WEICKHARDT: One of the areas which might be contributing to this distance between us was drawn to my attention just this morning by one of our team and that is that in your first submission you use the definition of "sustainability", which was the achievement of a rate of consumption of the planet's natural resources which would be able to be ecologically supported indefinitely. Now, that's not the commonly accepted definition of sustainability, and if you follow that definition of sustainability it might lead you to the policy position you're advocating; but if you take the Bruntland Commission's definition of "sustainability" it might lead you to a slightly different position. Do you want to comment on that?

MR REID: This is why our treatment of substitutability and the treatment by the Productivity Commission of the concept of substitutability is considered to be so important. Anything that tends to aggregate our productive resources sort of under one banner and treat them as being able to be used and replaced interchangeably is going to lead one to downplay the role of natural resources in safeguarding the long-term future of society.

If the Productivity Commission is satisfied that resources are sufficiently substitutable, then I can see that it would take issue with our definition of sustainability. That's fine. The Productivity Commission simply has to provide a more fulsome discussion about the arguments for and against; a high degree of substitutability as opposed to a low degree of substitutability between those different productive resources, and we've put some arguments to the commission about why substitutability might be considered a more contentious issue than the Productivity Commission seems to have first assumed it to be.

Yes, it's a different statement of sustainability and it goes to some pretty fundamental differences, I think, between the way that we've seen this set of problems and the way the Productivity Commission has seen these problems. Irrespective of whether the commission decides to respond to specifically our comments on things like substitutability or the externalities associated with resource consumption, it has got an obligation, I think, to provide a substantive discussion about the arguments for and against those different perspectives on those questions and to show why it is that the commission has fallen down on one particular side of the debate.

It's not enough to simply quote different perspectives. It's important to strike out those arguments that tend to undermine your position. Now, there might be

limitations in the way that we've done that, the way that we've used references to back up our points of view, but it seems to me that the Productivity Commission has both more expertise and more resources in order to provide that fulsome discussion about those issues. We really think it's very important for the commission to delve deeper into those questions, particularly those two questions I just articulated.

MR WEICKHARDT: Well, we'll do our best. Again, just to make sure that I'm absolutely clear on this issue, in your appendix 1 where you talk about the feasibility of direct intervention you say:

> MWAC considers that there are likely to be significant externalities associated with resource consumption and that direct interventions to correct these externalities remains a difficult and uncertain challenge for governments in the long run.

Based on what you said previously, am I correct in interpreting that MWAC considers that those externalities, significant externalities, are around resource depletion and greenhouse gas?

MR RYAN: Fundamentally, yes.

MR WEICKHARDT: Okay.

MR RYAN: And that they are greater than zero. I suppose that brings me to the next point where we're seeking some clarification of the commission's view on that specific point of its treatment - that externalities associated with the resource consumption are in fact zero, which appears from the report is the position taken by the commission. We would dearly like to see some more thought given to that, specifically with those two issues in mind. They are major issues and major impacts and to simply dismiss those externalities as zero is fraught with danger.

MR WEICKHARDT: I think your submission tends to characterise our belief that, for example, people operating mines will automatically think about the future in the long term and they think carefully about rates of extraction. We're certainly not relying on that as the only mechanism by which markets get signals or send signals. I think it would be naive in the extreme, for all the reasons you've quoted, to believe that every single operator of a resource thinks about the next generation or even the generation after. There are many CEOs who think only about their own - - -

MR RYAN: Or next year.

MR WEICKHARDT: But that's just one of the mechanisms by which signals get sent and, as prices rise, people start to think about alternative mechanisms of using

product, of conserving product, of exploring for more product. There are a whole range of issues, that I think we tried to quote in the report, which help in the way the markets work. Markets don't work on the basis of one person knowing absolutely what the right answer is: they work on a multitude of signals all coming together and, on average, the fact that one person thinks it's the right time to sell and one person thinks it's the right time to buy, you might argue that one of them has got to be wrong. But that combined voting machine produces a result that more often works than it doesn't. We are certainly not trying to rely on the absolutely omnipotent skill of the operators of a single mine thinking in the future.

MR RYAN: I suppose in that case I'd draw the commission back to what are the direct feasible policy interventions that it sees - those other alternatives that you refer to? Aside from the goodwill and the good sense of the mine operator, what are those interventions and how realistic and feasible are they that they will be introduced and have the impact that's ascribed to them in the near to medium term?

MR WEICKHARDT: You've only got to look at the price of oil, which doesn't rely today - the price of oil going up because of a conflict in the Middle East didn't rely on a single oil operator suddenly thinking, "I'd better conserve this oil for the long term." It occurred because the buyers and sellers of oil suddenly thought, "There's a risk here to the long-term future of a major oil-producing area of the world." Markets work in extremely complex ways.

MR RYAN: You may have seen the Four Corners report - I think it was screened two weeks ago - which made a very good point from industry analysts within the oil industry that the oil sector has not effectively priced in what is a looming crisis with respect to recovery of more reserves, and that substitutability in that sense in terms of away from oil to other alternatives - be it buying fuels or more efficient terms of transport - is at least probably 20 years in the making, and the interim gap has not been plugged and will not be plugged by simply cranking up the price of oil. There are huge infrastructure issues that go along with that that are simply not spoken to by the market, and to assume that that will somehow sort itself out seems a little utopian at one end of the telescope. That's why we argue throughout our submission that there is a case in certain areas for a planning approach to look at those issues and say that there are times when interventions - albeit, based on today's market value may seem a little askew - are actually prudent.

MR WEICKHARDT: I hear what you say and to claim that governments and all of us shouldn't worry about these issues would be naive. But the form in which governments intervene has got to be thought through carefully is the point that we're making.

MR RYAN: Yes, I wouldn't disagree with that.

MR REID: Absolutely. I'd just like to make the point, commissioner, that on pages 350 and 351 of the Productivity Commission's draft report, the commission has set out a case for why we might consider, in this particular case, mineral resource depletion not to be a matter of concern from the point of view of there being unfactored externalities. That appeared to be - and we proceeded in developing our submission on the basis of this - more or less the sum total of the Productivity Commission's discussion about how it is that resource depletion or consumption of finite resources - to put it a different way - ought not to be considered to be a problem from the point of view of policy-makers.

There may be other things that the Productivity Commission has said on this subject throughout its report. It would be good to see in the final report that discussion to be given a little bit more attention. It may be that we were wrong in our interpretation of that being the sole treatment of that subject - and in which case I apologise - but if that is as much as the Productivity Commission has said to date on the subject, then I think that tends to counter your point that the Productivity Commission does not assume that the market will simply take care of these things, because the argument set out in that section of the report seems very much to say that. It seems very much to suggest that the market is taking care of concerns about future needs.

MR WEICKHARDT: Okay, I'll take your challenge on board. Let me say that there are many people who suggest that the Productivity Commission also contributes to waste by publishing reports that are already too thick, so we have to strike a balance between trying to lay out our arguments and also not consuming too many trees.

MR RYAN: We'd be happy to receive an electronic version, I'm sure.

MR WEICKHARDT: All right. Thank you very much indeed for appearing. Thank you for your interest and for the sort of intensity with which you've followed this whole area. It contributes to our work and I appreciate your interest.

MR RYAN: We appreciate that. Briefly, before you close us off, there is one last point that the commission made with respect to local governments and, as an association, obviously we're at pains to just understand that a little more - the suggestion that the operational capacity of local government to deal with waste management issues is compromised in some way by its very nature - and we think that that, as we've laid out in our submission, needs to be spelt out much more clearly, especially given that the commission has made a draft recommendation with respect to that that has far-reaching consequences, especially when you talk about taking waste management control out of local government's hands and putting it in

the hands of the minister or regionally constituted bodies.

We have those here in this state and it's clear in speaking to those organisations that the concerns which the commission was trying to address through that recommendation are not addressed by virtue of simply having the regional organisation of councils. There are external factors which come into play in that case. So we would just request that you deal with that issue a little more carefully and consider the recommendations that we've made about how strongly those recommendations might be put.

MR WEICKHARDT: Thank you. We're looking forward to talking to the Eastern Regional people that made a good submission, and they may indeed have a model that we can build on and better understand. Thank you very much.

MR RYAN: Thank you.

MR WEICKHARDT: We will adjourn briefly.

MR WEICKHARDT: Our next participant is the Department of Agriculture and Food WA. Perhaps I could get you, for the record, to give your name and position, please.

MR PAULIN: Certainly. Bob Paulin: I'm with the Department of Agriculture and I'm a senior development officer.

MR WEICKHARDT: Thank you very much indeed, and thanks for your submission which you should assume I've read. We have about 20 minutes, so if you can raise the key issues that you want to draw our attention to and, in particular, I think I was interested in your further submission but I wasn't sure what it was that you were really wanting the waste policy-makers to do.

MR PAULIN: Thank you for the opportunity. I think there are three things that are of importance. The basis of our response is that over 50 per cent of our waste stream is organic in nature and those organic wastes are responsible for significant environmental concerns, et cetera. From an agricultural point, they have significant, let's say, value as a resource for the agricultural industries.

The first one is that there really, within the report, needs to be more focus on the role that organics have in the quality of our soils. At the end of the day, agricultural production relies on maintaining soil quality, and one could argue that in the past our agricultural industries have not been particularly good at conserving soil organic matter. But it is, indeed, soil organic matter which is essentially responsible for their performance and therefore the performance of our agricultural industries.

The other important issue about organic matter is its contribution to the quality of our water resources and, indirectly but nonetheless importantly, the quality of air, and also from our point of view particularly the role it plays in the community in enabling us to maintain self-sufficiency of food supply.

The second issue is that, in talking about the management of organics, the report seems to focus on the area of municipal solid waste or mixed waste composting rather than examining some of the other options. I think, in many ways, that in itself goes to the issues surrounding the waste hierarchy, which the commission deals with fairly severely, and whilst I accept - and we accept - some of the points made, I think at the end of the day a more careful and thorough analysis of the situation would indicate that the waste hierarchy in fact does work.

Finally, as we've interpreted it, one of the major findings of the report is to favour landfilling, and even perhaps energy recovery, over recycling of organic materials. Perhaps if I just go back particularly and deal in a little more detail with those. It's fair to say that the report does acknowledge the importance of social and

environmental benefits in determining the economic utilisation of waste, and the argument that the waste hierarchy should be used as a guidance tool is certainly accepted. We accept that there are situations where that hierarchy could not be realistically applied, given a whole range of other prevailing conditions, policies, et cetera.

It can be argued that policy regulation and communication processes need to be used to maximise the separation of organic waste from the general waste stream. A good example of that has been in South Australia recently, where they've looked at how we can collect food waste within the green organic waste stream and deliver that to composting facilities. That, from my understanding, has been very successful, but what it presupposes is an effort on behalf of local government, et cetera, to collect the organic waste stream, or the green organic waste stream, separately. In other words, it requires a three-bin collection system as opposed to the two-bin collection system which is widely used in Western Australia.

The arguments that properly considered economic analysis is the basis of determining best options for managing organic waste need to be applied with due regard to all externalities, and I don't believe that they've been thoroughly covered, and those include the influences of policy setting and regulation. As an example, it's widely quoted that the recycled organics industry suffers market failure, and very often it's that market failure which is quoted by people who are interested - or by the recycled energy interest groups, but the reality is that it's the policy setting and regulations that are the cause of the problem, particularly - - -

MR WEICKHARDT: Sorry to interrupt, Bob, but can you just clarify what you mean by "market failure" in that area?

MR PAULIN: Generally, the accumulation of recycled organics at various points and the failure to develop adequate markets for those products.

MR WEICKHARDT: Okay. Well, I think we've probably got a definitional sort of issue here. Economists talk about market failure when markets fail to correctly allocate resources due to sort of spillover effects or some sort of other aberration - natural monopoly effects. The fact that a market might end up with a surplus of product or depressed prices is not, to an economist, a market failure.

MR PAULIN: Okay.

MR WEICKHARDT: It's a market that might be in distress but it's not an economist's definition of a market failure. I say that as a non-economist, and I know that the two words are both parts of the English language and "market failure" might mean, you know - - -

MR PAULIN: Different things to different people.

MR WEICKHARDT: - - - an outdoor market is wrecked by a typhoon, but that's not an economist's definition of a market failure.

MR PAULIN: All right.

MR WEICKHARDT: But you're referring to the fact that the market has significant surpluses and depressed prices.

MR PAULIN: Yes.

MR WEICKHARDT: Okay. Thank you.

MR PAULIN: And the consequence of that is a function of current or existing policy settings which really don't accommodate it. The example that I've quoted in our submission is the continued availability of things like raw manures and biosolids at very low cost, which don't reflect their impacts on the environment or anything else. They simply reflect the historical approach which has been taken to the management of some of those waste streams.

When we start to talk about trying to manage those wastes in a responsible way, we have to do something about dealing with their inherent risks, and these are things like their content of not just human but plant pests, diseases, weeds - those sorts of things - the potential for heavy metals, et cetera. So that, of course, requires some level of processing in order to successfully manage those, and those rules are not being applied to a lot of the existing organic recycling markets.

MR WEICKHARDT: If I can clarify that, you're saying that the compost market is being regulated to address those risks but the manure market is not.

MR PAULIN: Yes. The compost industry by default manages those issues, at cost.

MR WEICKHARDT: Right. Why do environmental regulators not turn their attention to the use of manures in those sorts of applications? Is it just part of sort of customer practice and history?

MR PAULIN: Yes. I think difficulty. I think part of this whole thing is that these areas are perhaps not seen as that important in the gambit of things that they have to deal with, but it is an issue that's being addressed and dealt with in Western Australia at the moment, in the fact that we are grappling with the establishment of minimum standards for the application of organic materials to land. But the - - -

MR WEICKHARDT: Including manures?

MR PAULIN: Including manures. Yes, the application of all organic materials to land and setting minimum standards for that purpose.

MR WEICKHARDT: Right.

MR PAULIN: At this stage, on the Department of Environment's web site there is just being placed a minimum standard document, but that document is simply quoted as a voluntary document, not as a regulation. Of course, I think this comes back to some of the argument before about how people operate. You know, at the end of the day you don't bring about these sorts of changes by simply quoting some voluntary regulations, et cetera, which perhaps people should adhere to but, in the reality of the marketplace, are not going to adhere to because of cost impositions, et cetera, or their perception of how it will impact on their business.

MR WEICKHARDT: Okay.

MR PAULIN: In terms of - and we did deal with this originally - renewable energy credits, the renewable energy industry can generally claim carbon credits of some form, which contribute to its bottom line, whereas the recycled organics industry doesn't really have any capacity at this stage. We're not in a position to grapple with how that might be brought about, but it would seem to me if we want to bring about some fairness in the system of managing organics - managing all waste, I guess - there needs to be some fairness in how those things are applied.

MR WEICKHARDT: Your concern there was that the markets - or the use of organics was being skewed to generate renewable energy credits rather than using compost?

MR PAULIN: Yes. I would argue that that's a cost-benefit which the renewable energy - a cost contribution which the renewable energy industry enjoys but the recycled organics industry does not.

Maximising the recovery of source-separated waste and the development of more conventional, less capital-intensive organic processing facilities, I would argue, changes some of the economic arguments. The issue at the moment is that the MSW composting approaches are really driven as an engineering solution to a waste management problem, which is quite understandable, but at the end of the day it doesn't necessarily produce the product of maximum value and therefore maximum return.

I've listed some of the particular issues with that approach, namely being that when you deal with mixed waste streams it is difficult to impossible to utilise a lot of the ways that people can manage separated waste to optimise the composting process efficiency. The other problem is if for some reason or other, or in some way, an unknown material turns up into the composting stream which, for example, has a significant impact on one of your major markets - say agriculture - and is a material that you really didn't anticipate, went through the composting process which - composting in itself is quite an aggressive process and very often breaks down organic materials, but if it fails to do that then, when you're in an MSW composting situation, you virtually have to close down the whole operation, whereas when you're dealing with source-separated waste it's a matter of sorting out where that material is coming from and taking that out of your compost material. So that's an added benefit to the approach of source separation.

The other one is that one of the ways of managing contaminants in organic materials, which are inevitable - you know, they are a function of human activity - is by dilution, which means that you can simply blend materials that are high in a particular heavy metal or toxin with materials that have very low levels and bring it back to safe levels for application to land. Of course, that harks back to those minimum standard aims.

MR WEICKHARDT: Yes.

MR PAULIN: There are a range of reasons why I believe the report doesn't adequately address, shall I say, the less technologically intensive end of the recycled organics industry, and I believe it should.

Finally, in terms of looking at managing the cost of organics to the end user, the principles of extended producer responsibility should be applied within the organics sector. Now, I'm not saying that the commission's role is to make sure that happens. I'm more implying perhaps that in the past the organics industry has perhaps missed opportunities to get involved in this debate. Nonetheless, this report is a way of at least identifying a role for extended producer responsibility.

I guess the point that we're making is that agricultural industries, by making use of organic waste streams and creating environmentally positive outcomes, not only for their industries but also for the actual community by managing the organic waste streams in a more sustainable and effective manner, means that the end user should not bear the full cost of producing the recycled organic products, and hence the EPR principles would be a way of ensuring that the community and the generators of waste make a significant contribution to the final cost of the product and therefore make the market situation, if you like, more tenable.

MR WEICKHARDT: Can I clarify that issue because, based on what you said to start with, you were saying that really the productivity of Australian land depends upon the organic content - - -

MR PAULIN: Yes.

MR WEICKHARDT: - - - and that farmers are not attending to that well enough. I mean, if that's the case and it's demonstrated to farmers that they need to do something about it, why wouldn't they demand these products and be prepared to pay for them?

MR PAULIN: Because they don't get any reward particularly for doing that.

MR WEICKHARDT: Don't they increase the fertility and productivity of their land?

MR PAULIN: They do, and I think it's fair to say that in wheat belts and some of those situations they are starting to do that by changing management practices. But - and this really brings us to that final point in our submission about planning - one of the issues for a lot of the more intensive industries, which are often located close to cities and on the periphery of cities and which are well placed to reuse these materials - one of the issues for those industries is that they don't see they have a particularly long-term future because they're going to be urbanised. Therefore, very many of them - and I've had examples of people we've worked with making this comment themselves - is that they're really not prepared to invest large sums of money in using organic materials because they see that within a relatively short period of time they will be selling out; so they don't see the value.

The other thing is that agricultural industries in general are under large pressure, let's say. They are not doing particularly well. Most of them are struggling. So, at the end of the day, the reuse of organics under the current structure is very expensive. Typically, a well-made compost will cost in the order of $45 a cubic metre delivered, within a reasonable distance. If you take it out of the wheat belt it will cost a lot more. At the end of the day, at the rates that we know are effective, that translates into something like $1000 a hectare of crop additional cost, and that's up-front. With the uncertainties, et cetera - surveys say most farmers acknowledge that it has potential value to them but, at the end of the day, the perceived return to them is not sufficient to cover the risk that they perceive in making that outlay.

That's part of the reason why I acknowledge what you're saying. That's why I do not believe that, as in the European situation, we should provide compost to farmers for free. I absolutely believe they should be paying something for it. I would argue at this point in time that the price farmers pay should be about the

equivalent of what they're paying for the cheaper organic materials that they use at the moment, such as manures.

MR WEICKHARDT: Which is what?

MR PAULIN: Probably around the order of $20 a cubic metre. In other words, you could argue that they would pay about half the cost and the other half of the cost would be, roughly measured, achieved through other processes - contribution from waste generators, et cetera. I think there's a principle where, certainly in looking at waste management, et cetera, the waste generator certainly has some responsibility for paying for the cost of managing the waste.

MR WEICKHARDT: I think they do pay something for it in the disposal already.

MR PAULIN: Yes, I'm not saying they don't. But I think you could argue, if you look at the way it's going, that what they pay isn't necessarily directed towards marketing of the product. I'm sorry to use the term "market failure"; but those market difficulties are very often related to the fact that the recovery of rebates or whatever it is within the community is actually swallowed up by the internal process and still doesn't reflect in the price that the marketplace pays for the product.

MR WEICKHARDT: Thank you very much indeed, Bob. I appreciate you appearing and for your submission.

MR PAULIN: Thank you.

MR WEICKHARDT: We'll just adjourn briefly, then we've got Global Olivine.

MR WEICKHARDT: Our next participant is Global Olivine WA. If you could just give your name and position for the transcript, please.

MR DAFFEN: Thank you very much. Thank you for the opportunity to speak with you this morning. My name is Norman Daffen. I'm the general manager of Global Olivine in Australia. Global Olivine wishes to acknowledge the commission and applauds the commission's conclusions in the draft report.

MR WEICKHARDT: Can I just say, you should assume that I have read your submission. We have about 30 minutes or so, so if you can focus your attention on the key points you want to make. Assume we've read what you've put in so far.

MR DAFFEN: Thank you. The problem with producing volumes of material is that it's generally done by technical people that have got the bug and they produce volumes of material. In having read over the information that was prepared by our head office in New Zealand, I find there are some very salient points that are not driven home sufficiently. I'd just like to bridge across those. I've timed my presentation and it should fit well within the time that you've allowed.

There's no doubt that there are many better ways to resolve our waste challenges. In my opinion, landfill is not even on the list. We support, as does our submission earlier support, recycling. Organic recycling does, however, have a very prominent place in the whole activity.

My background is as an electrical and electronics engineer heavily involved in the mining and materials handling industries. For the past eight years I've been the general manager of Siemens Ltd, which is a very substantial international company. Having retired from Siemens, I'm now a consultant to Sinosteel. It's called "work till you drop", I think, according to the Prime Minister. I'm the project manager for building the new Oakajee port in Geraldton, which is a 100 million tonne a year iron ore facility.

Global Olivine's headquarters is in New Zealand, with offices here in Perth and in London. Global Olivine has gathered together several well-proven standard products. I think this is something that is missing from the original information. These well-proven products come from Olivine's USA licence agreement, Siemens and their backing for instrumentation, electrical and the steam turbine generators; May Gurney, who may not be known to many of you, is very similar to John Holland Australia and they will be doing construction; Corus for steel fabrication, a USA company for boilers, another USA company for vitrifiers, Fresco for materials handling, and Sinclair Knight Merz is the overseer and engineer making sure that everything is done right.

All companies are committed to act internationally to build and support the Global Olivine project and have been intimately involved over the last five years in debugging the original designs which, of course, were done by engineers and not necessarily altogether acceptable to other people. Global Olivine represents a completely engineered system involving all aspects of waste stream that is polluting our world. Let's make a sweeping statement at this stage: there is absolutely no residue whatsoever from a Global Olivine plant that needs to go to landfill; absolutely none whatsoever.

The Global Olivine plant meets or exceeds all environmental requirements both here and in the UK, and we have an environmental certificate from the Western Australian government to back that up and also two from the UK. The only outputs that we have are CO_2 to the atmosphere, which is infinitely better than the methane cocktail of gases that come from a landfill, useful saleable products - and I really mean useful and saleable products. All of our products that we have, that we are producing from such plants, have ready markets and willing buyers. In fact, we have some contracts signed - and sufficient heat to operate a very substantial power station.

The Global Olivine concept is totally compatible with current kerbside collection practices plus putting in some sophistications at the transfer stations in the various shires or subcentres. Current and new transfer stations will be equipped with standardised compactors and containerised systems for transporting the waste to a central Global Olivine plant. All waste is acceptable, except for scrap and structural steel, builders rubble and motor bodies.

The waste could include all manner of household waste, unsorted, restaurant and hotel waste, fast food waste, abattoir and veterinary - and one could almost include other human-type waste that one might gain from hospitals; industrial waste, motor vehicle tyres. Some 12,000 tonnes of tyres per year are dumped in Western Australia. There is no actual positive way of getting rid of the majority of them. Some are used, but very few, a very small percentage - waste oil, acids, chemical, dry-cleaning fluids of any quantity, which have caused problems here recently; vehicle batteries, torch batteries, industrial batteries. I don't think people realise just how much mercury is sprayed around the countryside, especially in recycling plants where we are returning mercury to the land, which is not a great idea. Electronic products, computers, TVs and domestic white product appliances contain metal and glass, whether it be the wrapping around a TV or otherwise - bottles and cans, PTE, dewatered sewerage, instead of flowing it out into the ocean, which we do so well - and any amount of green waste: green, green or green.

Global Olivine's sustainable resource recovery facility is based on the highly successful Global Olivine USA combustor, of which there are some 400 operational

around the world. Let me say very quickly that not one of them is involved in waste to energy or domestic waste disposal. They're all attached to plants of one sort or another to burn wood waste, green waste, whatever it happens to be for that specific plant. The Global Olivine plants are to burn all the wastes that we've just identified.

This simplistic combustor is constructed from concrete slabs, consisting of large proportions of olivine rock mixed with refractory cement - and seven other herbs and spices that we won't disclose - and each panel has an operational life in excess of 50 years. All of the plants are modularised. This ensures maximum availability and continued throughput, even during maintenance. There are 12 individual combustors. There are 12 boiler systems, four steam turbine generators of 160 megawatts that can be wound up to 200 megawatts and have a saleable 125-megawatt output, 12 baghouse filters, four HT plasma arc vitrifiers, 12 separate control systems, one for each module, so if something goes wrong in control, it's well and truly covered. All security systems are duplicated. CCTV monitoring of all hazard areas and high-security accountability origin of every container that comes in will be taken right through the plant, mainly by zip coding.

The only sustainable fuel in the entire plant is the actual waste stream and large volumes of forced air. There are no other supporting fuels required. Most incinerators burn at some 600 to 800 degrees C with all sorts of pollution going directly up as smoke. The Global Olivine combustors operate at 1200 degrees C, with a very long burning time in the half, the output being passed through sacrificial screens, then passed through tube boiler systems to create steam, which is utilised for generating power, and then on to the baghouse where the residue is passed to vitrifiers operating at 3600 degrees C. This enables us to even accept a proportion of asbestos waste within the waste stream, because this melts down to glass. The vitrifiers will take it right through to that. There is nothing left at the other end, except a range of saleable products.

The whole plant is totally enclosed, as depicted in the handout just provided, and operates in a negative pressure, with all of the air intakes for each of the combustors being drawn from inside the plant. So we haven't got a NIMBY situation of, "We don't want one of those in our backyard." There is virtually no odour whatsoever coming from the plant. The only possible odour would be of the delivery trucks or delivery trains or whatever.

A considerable percentage of the heat is retained as kinetic energy within the olivine slab walls of the combustors. These combustors are very large pieces of equipment, some five to seven metres in diameter, some 14-odd metres tall. They are a significant combustor in themselves. The containing of this kinetic energy within the olivine slab walls maintains the ongoing spontaneous combustion cycle almost regardless of what is put in - obviously in proportions - even dewatered

sewerage sludge. During its normal operation, a Global Olivine plant can process in excess of 1.2 million tonnes of waste per year.

I don't propose to wade through the handout that I've given you this morning. I think it's lack of respect to the commission to have me read a document to them. However, there is an indication in there that we have covered each of the phases. We've only put in one engineering drawing, mainly because we like people to pay for the engineering at the other end of it. It has taken seven years to develop the system to the stage that it's at and we're not going to gleefully give it away to all and sundry, that it might get republished to.

What I would like to address is something that isn't really covered in the report and that is the commitment from the client. This is about a $600 million plant. It's not a cheap toy. It's not something that we'll have this year and probably run for a couple of years until the shire gets deposed or demobbed or changed or something. It's got to be a commitment from the state, even to the extent that we would even wish or like to have an act of parliament covering it. We don't see it as being a toy. We see it as being a very serious resolution of the waste problems in front of us.

We have a land requirement of some 30 hectares, which includes environmental planting all around the outside. Despite the fact that we're running 12 combustors on this, we are a very green operation; in fact our principal, Warwick Davies, is an oceanographer in his own right and spent most of his younger years drilling holes in the icefloes of the world, sorting out the pollution rates in which we're covering it, and it's probably one of the main reasons that he has turned his hand to try and resolve this.

The land that we'd be looking for must be freehold; we wish to purchase it so there's no shilly-shallying at later dates when governments change. The land must be near the sea or a significant water body, a river, from the point of view that we need cooling water and we also need to draw boiler water.

Client outlay: we're talking about a $600 million plant and we really don't need much from the client. We need the things which we've just covered - like commitment, the land, an act of parliament - but we also want a $20 million deposit. This is negotiable, depending on the attitude and the backup that we get and the act of parliament. The next stage is the completing of the concrete slab, and the next stage is the commissioning. This would probably run somewhere between 40 and 60 million dollars as a security bond to us that the client is dinkum. We see the project being at least 50 years.

MR WEICKHARDT: How is it paid for?

MR DAFFEN: It's paid for by a 25-year irrevocable waste supply agreement between 1 and 2 million tonnes of waste at a figure, and that figure we would see as being nothing different to the waste-dumping figure that Mr Average has got to pay as he pulls up with his trailer or the waste companies deposit at. We believe the figure to be somewhere ranging across from 25 pounds European to about $A40 and they would be the sorts of figures that we would look at. Depending on the security of that sort of thing, that figure can be adjustable and that's one of those things that we would go into at a later date.

We would also need a 25-year irrevocable power off-take agreement for the 1.1 million megawatts of power - or 125 megawatts of power at any one stage - power that is generated within the system. This power is baseload. It will be certified, and it is by Scotland and also here in Perth to be 78 per cent in Scotland, 75 per cent in Perth, as a green contribution, so we'd be claiming benefits from that. Should this commission - or any other interested state government - be interested, we're willing to commit to further financial and technical discussions and, depending on their commitment to us, as to how our commitment to them would follow.

We don't want us to be sounding as though we are high and mighty and we've got all the answers. We know we have many, if not most, of the answers to get away from disasters like the Fremantle PCB pits in the limestone down there that have had several less than satisfactory outcomes in the endeavours to resolve them. They still have PCBs in great quantities in limestone locations down there, all of which can be recovered and recycled in a plant if it was placed in Kwinana.

As you said, sir, you have reviewed the documentation that was there and one of the documents was for a significant plant to be placed in Kwinana. We spent four years and just on three and a half million dollars working through that, but we could never get the commitment of the state government, despite the fact that we got certification from the environmental department to proceed with it. We were never able to get access to the waste. Too many people were making too much money out of putting it into Red Hill and other waste places around the place and providing it to people who ended up in court as being unable to handle the large amounts of dry-cleaning fluid and other such things, as you may well remember.

May I thank the commission for coming to Western Australia and opening its mind to resolving one of the greatest challenges the current administration is handling for our future generations. We believe it is being handled exceedingly poorly at this stage, despite the large number of learned people involved. We believe that we have very responsible answers to it and we would welcome the opportunity to further expand on those, either here or in Sydney or Melbourne or wherever, at your pleasure, sir.

MR WEICKHARDT: Thank you very much indeed. Can you just clarify for me: in reading your documentation you talked about the UK facility and permits with dates of 2005, but has construction of the facility there actually started yet?

MR DAFFEN: We'd love to say yes, but we've got to be honest about this because these days honesty is the only rule. It has not commenced. We are unfortunately going through a PER that has been challenged, so we are going through a re-PER and we would hope that - - -

MR WEICKHARDT: That's what, a planning - - -

MR DAFFEN: The local shire has been challenged on their planning authorisation and it has had to go back to square one. It has now got to go out to public review, which we're all very distressed about because we have six stranded staff over there that have been there for three years now and they are wondering what home looks like. We are having better luck in Scotland. Scotland is proceeding at a very significant rate because, despite the fact that the UK is the UK, Scotland sees itself as being different and the Scottish government has decided to proceed with a plant within the least possible period. We're expecting to sign documents by the end of this year. Documents are being prepared both in Scotland and in New Zealand to that end.

MR WEICKHARDT: You mentioned a large number - 400, I think you said - of these Olivine furnaces operating in the timber industry primarily, on waste timber. Given the fact that incineration of waste is something that is done in many countries - and I accept the fact that your proposal goes well beyond that, with other stages, but given what you say about the characteristics of your combustors and the experience in green waste and wood waste, why is it that none of the facilities in places like Germany and Japan and the United States that actually incinerate municipal waste haven't used these furnaces?

MR DAFFEN: Basically because we focused on Western Australia to put in an initial plant and, as I've said, we lost some four years in that exercise; a very expensive exercise which wasn't very well aimed at the beginning, but it's pretty easy to be very clever afterwards. The next effort was in Italy and that is still running, but it takes a long time for people to wrap their minds around the fact that a unit can run at 1200 degrees C instead of the normal incineration of 600 to 800 degrees C.

Why are there none out there? Because we've been methodically going around following the leads that we think are the right ones to go for first. We acknowledge Germany is a good place to be; and having been in Siemens for a long time I've spent a lot of time in Germany discussing this. However, we're fairly thin on the ground for people. We do not have large volumes of staff, as you can imagine - it's a

start-up organisation - but we do have very fine engineering and very high-quality people that have proven the unit up to date. May I inquire, do you know Western Australia at all well, sir?

MR WEICKHARDT: Only as an easterner.

MR DAFFEN: Okay. Down at Yarloop there used to be one of these furnaces until they decided that they didn't like it around the place. The one at Yarloop was attached to a Bunnings plant and it was a simple wigwam, conical, and that used to take absolutely everything - green leaves, the works - and didn't smoke and nobody knew it was there, except everybody used to lean on the outside of it in the cold weather to keep warm. The Olivine has an amazing ability to retain its heat inside and that is the biggest benefit of the actual units themselves: the kinetic storage heat that these big slabs retain. We would very much rather be looking at the German market at the moment; in fact my retirement was supposed to go in that direction, but it didn't quite happen. We would love to think that that would be one of our steps after we tie down Scotland.

MR WEICKHARDT: You make the point that you feel we have perhaps not done the right thing by confining the scope of our draft report to findings on non-hazardous waste. That was the terms of reference the government gave us, so unfortunately, or as the case may be, we're sort of honour-bound to comply with the terms of reference. But why is it that you are so strong on the fact that this facility should handle a mix of hazardous and non-hazardous? I mean, from what you have said, it could handle simply non-hazardous wastes, could it not?

MR DAFFEN: No, because you wouldn't get the volume of it. Non-hazardous waste and hazardous waste are both being poorly handled as far as we're concerned, and I think you could probably go back to the motor car industry: if you buy a small car it doesn't have as many airbags around inside it and it doesn't have driving lights and all the other things which you would expect to find on a higher-priced car. This is a complete resolution of the entire waste stream problem and we have felt honour-bound to tell you that we can do things like eliminate all of your hazardous wastes.

I mean, there is nothing in the hazardous waste stream that worries us at all, except for nuclear. And I might add - and it's foolish to put one's foot into these things, but let's be honest and straightforward and be foolish at the same time - most of Woomera range was cleared up by the identical vitrifiers that we are using in this system, so let's not include nuclear waste, but it can be handled if need be. And let that not get into the press, from the point of view that we don't particularly want to start a nuclear waste war in Western Australia.

MR WEICKHARDT: You make the confident prediction that all of these products would find markets. During the course of this inquiry we have had a number of people put to us their optimism and hope that secondary materials resulting from processing of waste would be accepted by markets, only to be frustrated that the standard for roadbase in some cases quotes the use of virgin materials, or that they're frustrated by the conservatism of some government or commercial entity that doesn't allow the use of that recycled material. What gives you so much confidence that the predictions you've made for the subsequent application of these processed products will find markets?

MR DAFFEN: Have we members of the press here?

MR WEICKHARDT: No.

Continued in Transcript-in-Confidence

MR WEICKHARDT: I would like to resume the hearing now and we have the Waste Management Association of WA. If you could give your name and position in which you're appearing, please.

MR JOHNSON: Sure. My name is Adam Johnson. I'm the secretary of the Western Australian branch of the WMAA.

MR WEICKHARDT: Thank you. Well, assume that we've read your submission, and if you want to make some points to draw our attention to any key issues and I've got a few questions and then we'll have a discussion.

MR JOHNSON: Okay. I think the first thing from the branch was that they were looking to see, in terms of the draft report, more focus on the resource recovery aspect of it. Whilst acknowledging that the report was very thorough, I think some of the people dealing with organic waste in particular - so it's the composters mainly - thought that by not teasing out the resource efficiency aspects of it then - let's be frank - it really undermines their position in what they've been doing; the quite good work over the last probably three to five years in developing a market for recycled organics. It's been an uphill battle for them, in that they've been struggling to get market acceptance for the recycled product. That was certainly a strong message that was coming back through from them.

Obviously we represent a range of different stakeholders in the waste management industry. I don't think the landfill sector in WA was too fussed, to be perfectly honest. They thought it was a fair report in that sense. But it is the alternate waste technology people that felt it undercut a lot of what they've been doing. That was the first aspect I wanted to point out. Just on that, as I'm skimming through what I wrote, the market is changing a lot, and to expect that the market will be making good decisions at the moment is not necessarily fair.

There are developments that mean that the market is making its decisions on imperfect information is really what that was getting at and, I guess, that was a minor corrective to some of the points of the draft report which was suggesting that the market would be best placed to make its decisions, which I think most people in a free-market economy agree, but that's also relying on the market having perfect information - or good information - and being able to make good decisions based on that information. The branch felt that, with the industry changing as rapidly as it is, the products coming on as rapidly as they are, then obsolescence being one to two years, it's very difficult for projects that might have lead times of a couple of years to be able to deal with that sort of change.

In terms of an overall industry response, I'm not sure if this was intentional, but the report seems to place certain segments at odds with each other. We work as an

industry - a lot of landfill operators, for instance, operate composting facilities, and basically we work hand in glove. To be honest, this report has highlighted some of the fault lines between the sectors, which is probably good. It makes people realise that we are not all the one waste industry, but I think it's worth highlighting that often these decisions aren't necessarily one option versus another but with a mix of options. The report does state that, and I guess it's a matter of emphasis.

The reason that's important is that the problem for landfill is typically biodegradable waste. That's what causes the leachate that we have to manage; is not a problem for composters, because that's what they need. For composters the problem is glass, which isn't a problem for landfill. So once you start drilling down, then it does become important which sector of the industry you're talking about.

The final comments were really just highlighting that, again, the industry is changing rapidly; the regulatory response isn't necessarily changing as rapidly to keep pace. I'll talk through this a bit later on, but the regulatory model that's in place is one of command and control and it's been in place and worked for 20, 30 years. We're expecting a much more refined response as we go forward and, in fairness to regulators, it's really hard for them to keep up with what's going on. I think part of what the branch is saying is that it would like to look at how we can be dealing with not just the regulatory aspect of it and expect the regulators to have a complete understanding of the economics of waste management and all that, but to try to do what's been done in a number of other sectors of the economy: identify first and then free up the barriers to those decisions being made appropriately; good decisions being made.

I've highlighted a couple there - and I'm not an economist; I don't know exactly where the barriers are - and that's the sort of thing that, if we can make it easier for the market to make its decisions, then that might go some way towards resolving the concerns about the market not being able to make its decisions based on accurate information.

MR WEICKHARDT: What are the two barriers you're referring to? Can you just tell me that?

MR JOHNSON: I've highlighted taxation regulation and international trade - I'm not sure whether they actually are barriers - and, to be honest, I was trying to think through before I came along exactly what some of those might be. It might be as an example that substantial portions of construction and demolition waste are generated because tax systems give incentives to people to renovate houses because of negative gearing - I'm not sure. That might be something that might have that perverse flow-through effect - skewing investment towards more wasteful investment.

MR WEICKHARDT: Okay. Can I ask a couple of questions?

MR JOHNSON: Yes, sure.

MR WEICKHARDT: You, in company with a number of other people, have criticised the fact that we've not addressed in your view the terms of reference in regard to resource efficiency and resource recovery, and you say that you would like to see us go through a thorough analysis of the structural barriers to optimal resource recovery. I guess we tried to set out in the draft report the reasons why we haven't adopted that approach, but can you help me understand what you mean by "optimal resource recovery" and what it is you want to see optimised?

MR JOHNSON: What you've clearly set out - and there's no criticism of what's been done on this and the way you've set it out - you've clearly looked at the optimisation of how many resources should we be recovering, and that's really, I guess, where the report heads, and then from that flows through a number of analyses. I think the comment is more to do with, where are the blocks to resource recovery? It might be that the market is currently at its optimal level, or it might be that it's overoptimised - if it can be - or whatever. But what we're looking at is, are there regulatory barriers? Are regulators too overzealous? Are they not regulating enough to enable the market to find its own level?

I don't think we're trying to say - well, I'm certainly not; I don't know whether the branch is - it has to be at 60 per cent, 70, 80, 10, 20 per cent. I think what we're saying is that there are some barriers that we know of - and we suspect that there are some others - and what are they? As I said, I'm not going to comment; I couldn't pin them down.

MR WEICKHARDT: Our concern about optimising one particular resource or group of resources is that that might be at the expense of other resources, and that's why when we sort of said, "Well, what are you trying to achieve here?" we fall back to the fact that we're really trying to make policy that enhances overall community welfare, and that might mean using some resources, more of some resources, to generate a better outcome. But just focusing on enhancing the recovery of one resource and ignoring all the inputs that were required - whether they be labour or other energies or transport or whatever - just seemed to be, to us, futile.

MR JOHNSON: We agree wholeheartedly with that. It's not a matter of saying, "Look, there's glass out there. We can use it for something. Why aren't we?" It's a matter of saying, like what has happened with the labour market, and we're seeing that flow through the political process now - it's looked at the individual things that we need to free up, to free up that market. It might not be that they're the best way to go, but at least identify what the barriers are.

MR WEICKHARDT: All right. That's helpful. Thank you. If I could come back to this point you made about - and it's alluded to in the submission and you've used the terminology that our report had sort of set different segments against each other.

MR JOHNSON: Mm.

MR WEICKHARDT: You say in the submission that - I think you said decisions are how best to develop a mix of the various approaches to achieve net social benefits and improve environmental outcomes. We're certainly in favour of addressing the externalities, ensuring the distortions are removed, ensuring that regulatory barriers to the use of recovered materials are not unnecessarily burdensome, but then allowing the optimum mix to develop. We're certainly not trying to advance one form of waste management over another; in fact, quite the contrary.

MR JOHNSON: Yes.

MR WEICKHARDT: But what is it about our report that gives this impression that we've sort of set different sectors of the industry against each other?

MR JOHNSON: I think this highlights it more than it is highlighted in the report. I acknowledge that the report does talk about the mix and it's the mix that's important, but I think it's just a general - maybe it's the fact that it's defending landfill and the convention in the waste industry is not to defend landfill, so it seems to be skewing it towards landfill. Maybe it's the consideration of the sorts of problems that face landfill operators, but are not necessarily the problems that face incinerator operators or composting plants. I guess it's a tone maybe, but again that might just come through because it's putting the facts on the table about landfill, which the convention is that it's not done.

MR WEICKHARDT: Yes. Well, we certainly weren't trying to favour landfill. We were, however, trying to point out that properly managed landfill shouldn't cause too many problems. Whether or not that turns out to be the preferred solution is up to a whole range of factors to play out. But, okay, I understand your point better now. Thank you. I think the other comment you made is this issue about, is the market sufficiently well informed to operate effectively? What is it in regard of that you're concerned with? You know, the lack of sort of market information that might mean that it doesn't operate effectively as a market - - -

MR JOHNSON: I think there's a lot of waste streams out there which are quite readily able to be converted into valuable materials. It's not even saying "if we just subsidise it to this amount". It's there staring at you in the face now and yet it's not

happening. An example is timber recycling isn't happening in Perth. There is a market for coloured timber. There is also a market for woodchip to go back into remanufactured board. I guess EMRC is going to be developing that ourselves, but the fact that it's been there for a number of years, it's not a new thing. Western Australia has always had pallets coming over for shipping that are one-way pallets. I guess that's where that's coming from.

The fact that decisions aren't being made - and it's not a loss-leading business. It's a profitable business, and is a profitable business in other states. That is, I guess, where that's coming from. I'm not quite sure what information is lacking. It might be the fact that waste receivers aren't reporting or aren't required to report what they receive, so the only people who would actually know of the resource that's out there is other people who receive it; whereas if you compare that with the natural resources sector - you know, a goldmine would have geological maps available which are developed by Geoscience Australia - they have an idea of where the resources are.

MR WEICKHARDT: Maybe, but - - -

MR JOHNSON: I know they obviously do their - - -

MR WEICKHARDT: - - - goldminers have to go and invest in exploration.

MR JOHNSON: That's true, but they have a basic idea of what the geology is of the country, which has been done by others. They augment that with their own information and obviously they can do that, because it's worth a lot of money.

MR WEICKHARDT: Yes, but what's the conclusion you reach when you say, well, some of these opportunities are staring you in the face? What are you suggesting policy-makers ought to be doing: shaking people in business, saying, "Why aren't you idiots out there"?

MR JOHNSON: No, I think the best that we can hope for - look, obviously if business doesn't want to take up an opportunity, then that's their call. Presumably that's because there are better investment opportunities out there and so that's fine. I think the only thing that we could really hope for is that we know what's going to landfill. I mean, we know the tonnages, but we don't know the mix. There's obviously a balance to be struck between waste sites having to report everything and anything, and breaking it down to microscopic detail, and the sorts of information that's useful for business to make decisions on and for them to have access to that information. At the moment you don't. For whatever reason, you can't get it. I think a few small steps would be better than trying to holus-bolus force this issue.

MR WEICKHARDT: But those steps are what? You want some government

involvement in publishing statistics or - - -

MR JOHNSON: They don't even have to publish. They could just make it available on their web site, but, yes, some sort of publishing - some sort of making available of information that licensed sites receive. That might be tonnages and an agreed breakdown of what's what.

MR WEICKHARDT: I think we did study a couple of government facilitated, I guess, sort of web based market - - -

MR JOHNSON: The waste exchanges.

MR WEICKHARDT: And they just didn't seem to work.

MR JOHNSON: No. I guess what I'm getting at is more just a straightforward - so Red Hill landfill receives 200,000 tonnes of waste a year. Of that, 60,000 tonnes is municipal waste. This amount is commercial waste, of which is typically this amount of concrete, this amount of timber. That way if you're looking to set something up, then you can say, "Well, in this sector of Perth there's 40,000 tonnes of concrete. Is it worth setting up a business?" You would assume that - and people do do their own work to see what's out there, but I guess it's not a major ask to get that extra information into the mix. It's probably a whole lot more effective than the landfill levy - cost-effective, I should say.

MR WEICKHARDT: So that implies you would like to see the government mandate that a landfill operator has to publish some sort of statistics?

MR JOHNSON: Landfill operators have to report to government anyway, and so if that information were made public - I think a lot of this information is reported anyway to government.

MR WEICKHARDT: So landfill operators today have to report the mix of stuff they receive, do they?

MR JOHNSON: They certainly have to report how much they receive. Whether the mix is reported wouldn't be a major thing to change, to split it down to a small amount - and that is, I guess, where I'm suggesting that you do it in stages. You wouldn't try to do a massive 100 categories of waste. You might do five and see how that goes.

MR WEICKHARDT: And the benefit of that would be other people outside the landfill industry would then be able to use that information.

MR JOHNSON: Presumably, if they wanted to, yes.

MR WEICKHARDT: Do you know whether that happens anywhere else around the world? Is there a model that you're thinking of?

MR JOHNSON: I guess I'm thinking of something like the NPI - National Pollutant Inventory - where industry does its reporting through the government of pollutants and that's obviously not for business decision-making, it's done for the public right to know, but it's a similar sort of model.

MR WEICKHARDT: All right, thank you very much indeed. If that has covered the major issues you had with your hat on as the WMAA, can we change gear now to the Eastern Metropolitan Regional Council?

MR JOHNSON: We can indeed.

MR WEICKHARDT: Perhaps if you could just again clarify your role and responsibility, and the capacity in which you're appearing, that would be helpful for the transcript, please.

MR JOHNSON: My role at EMRC is manager of engineering and I guess I do all of the engineering planning, engineering design - all that sort of work - for the council. We run a large landfill. We run several recycling operations on behalf of our six members council. They are also commercially run. I guess that's what EMRC does and what I do within EMRC.

MR WEICKHARDT: Thank you. Thank you very much for your submission which we've read with great interest. I've got a number of questions about this, too, but if you have some particular points you want to make, that would be good.

MR JOHNSON: I guess you'll note that the tenor is a little different in the EMRC submission. I think the EMRC is quite pleased - in fact very pleased - to see a bit more balance put back into the debate. In fact Brian Jones, who is my manager - he couldn't unfortunately make it - his comment was, "It's like they've been reading what we've been writing for the last two years," because we've been saying for a long time that, yes, we can recover a lot of resources from the waste stream. The one resource we don't have in abundance is capital, and so we have to prioritise our decisions to achieve, I guess, the best outcome for the environment, if you want to narrow it into the environment or the community at large, and that's obviously what your report has talked about. We've struggled with that, to get that argument across.

It's all based on this perception that landfill is a time bomb, I guess. That's the way it's described. These aren't my words, these are almost paraphrasing what you hear, but landfills will always fail, landfills will always pollute the environment. How could you possibly develop landfills when you know they're going to cause all these problems. So the question isn't, how much landfill do you have? The question is, how much do you pay to get everything out of landfill?

You still see that going around, where people say, "Our problem will be fixed when the landfill levy is at $50 a tonne or $100 a tonne." You sort of sit back and think, well, that's $100 a tonne that the entire economy has to bear for a problem that's not really that big, and yet we can't spend the money on protecting biodiversity or protecting whatever else it is that we might value. We seem to lock these decisions into our landfill levies particularly where we hypothecate them.

We're then saying we think this problem is worth $200 million a year and if you turned to your politicians and said, "Do you really value it that much when you only value salinisation at whatever you value it at?" then they might turn around and say, "Well, no," so that's, I guess, in a nutshell our submission. And, look, I won't go

through each individual aspect. I guess it's probably more efficient if you talk to the points - - -

MR WEICKHARDT: All right. Thank you. We're particularly interested in talking to start with about the sort of structure of this regional council because, as you know, we made a recommendation in the draft report that we felt local councils were struggling to grapple with some of the issues today around management of waste. We talked about regionalisation without being absolutely specific about what that meant, but your submission really raises a model. I'd like to examine and understand whether or not that's the sort of - the optimal way you would structure things if you were starting again. Can you talk to us a bit about the way this regional council works. How is it set up? How is it capitalised? How is it governed; the board? How does it sort of vote on planning issues, if you like? If a new landfill had to be established, how does it decide where it goes?

MR JOHNSON: This is where Brian would be great because I've only been there six months, but the six member councils obviously each have a representative on the council. It's effectively run as a council but the councillors are elected by - well, not even elected. They're probably elected within each member council but they're not elected directly by the ratepayer. So we're only indirectly answerable to the ratepayer; answerable through our member councils. It's constituted as a council, so we work under the Local Government Act. We obviously have a CEO and our executive, as well as our elected members.

MR WEICKHARDT: How is it funded?

MR JOHNSON: At the moment it's funded by Red Hill landfill. The initial set-up was by - it's owned by our member councils, and they put in some capital initially.

MR WEICKHARDT: Okay.

MR JOHNSON: So they each own a stake of us.

MR WEICKHARDT: Right. Because one of the comments that has been made to us by several people - I think mainly AWT operators who could try to deal with some regional council groups in other states - was that when they tried to write a contract with those regional groups they found that the legal entity they were dealing with was in some cases a very undercapitalised entity, and here they were potentially investing $100 million and dealing with a $2 company.

MR JOHNSON: Yes.

MR WEICKHARDT: From that point of view, the risk if things went pear-shaped

was pretty sort of one-sided. How would that work in your case, if such a - let's imagine a new landfill had to be established - a significant capital investment of some sort - how would you contract with an outside body? Would they be dealing with an entity that had substance?

MR JOHNSON: Yes. It's, I guess, as much substance as any other local government does. It's not a coalition, like for Melbourne. I've worked in Sydney and Melbourne, as well as here, so I guess I can compare the three approaches. The Melbourne approach is really loose and it doesn't work because it's, in effect - say there were six councils in a regional waste management group in Melbourne. They each do their own thing, and it's just almost a coordinating sort of thing. I've called it a talkfest - just a bit of language - but, when push comes to shove, each council goes its separate way and the contract falls over.

That happened whilst I was working for a council in Victoria. The entity wasn't strong enough to hold that together, whereas EMRC contracts in its own right. We actually mainly do the work ourselves, but if we were to do a project such as AWT, where we needed major international expertise, then we would be contracting to them in our own right. The member councils aren't obliged to use the facility, but that risk is borne by us and they own us, so it's sort of in their interests to be part of it.

MR WEICKHARDT: Do they receive a dividend for their capital in the EMRC?

MR JOHNSON: Yes, they do.

MR WEICKHARDT: So you're, if you like, motivated to operate in a profitable manner.

MR JOHNSON: Yes, and that's why our commercial business is so large for a local government organisation.

MR WEICKHARDT: Okay. If you came to a situation where, say, your Red Hill facility was full and you needed to establish a new landfill facility - somebody in Sydney made the point to us that, "We can agree on almost everything but when it comes to the prospect of a new landfill we couldn't possibly agree because of the NIMBY effect, so we have to look to the state government to basically point and say, 'Well, that's going to go there.'" How would that work in your situation?

MR JOHNSON: I would like to think that, because we run a good operation and the councils can see that we do a good operation, they would basically trust our judgment and they wouldn't be, "Oh, no, it's not going in Mundaring because most of the waste comes from the other five councils, so we're not going to wear your waste."

The difficulty for me is that we're not going to have that test for decades because we have so much land, and the member councils have been quite - we have been buying up land around the site to make sure we have capacity for a long time.

We've been looking at the siting of a resource recovery facility, which is pretty much as objectionable as a landfill, and there hasn't been that sort of, "No, it's not going in our turf." To me, it seems to be discussed on the merits of the site, which is the way it should be, but it hasn't actually got down to the pointy end yet.

MR WEICKHARDT: Does any one of the councils have sort of, I guess, a power of veto? If the EMRC says, "We've all looked at it, and the best site here was Mundaring. It complies with the planning regulations," and five councils vote in favour of it and Mundaring Council votes against, do they have a power of veto?

MR JOHNSON: I'm not sure whether it needs to be a unanimous vote on that sort of decision. I couldn't comment.

MR WEICKHARDT: All right.

MR JOHNSON: I can get back to you on that, if that's - - -

MR WEICKHARDT: Well, it would interesting because, you know, from what you've said there's a lot about this model that sounds pretty good in terms of a potential model of something that isn't necessarily at the state level, because we recognise that particularly rural and regional areas - the state running them would be very heavy-handed. On the other hand, having - I think it's 48 local councils in Sydney trying to operate waste management in 48 different ways - again problematic. So we're looking for good ideas in terms of what might be a model, and any information you can provide in that area would be helpful.

MR JOHNSON: Sure. Again, having worked in Melbourne, Sydney and here, I'd say irrespective of whether I worked for EMRC - but I think that the regional council model has far more strengths than any of the others.

MR WEICKHARDT: Okay. A few other questions, if I may. Under the Waste Hierarchy heading, you referred for our required reading a paper Rethinking the Waste Hierarchy produced by the Environmental Assessment Institute of Copenhagen, Denmark. Can you give me a brief synopsis of what it says.

MR JOHNSON: It's basically the Europeans realising that cost-benefit is a tool and running the cost-benefit over their rates, which is a bit of a novelty for them.

MR WEICKHARDT: All right, thank you.

MR JOHNSON: That's it in a nutshell.

MR WEICKHARDT: Okay. No, that's very helpful. You do talk about the problems of a regulatory culture and the fact that you've got sort of quite a lot of regulatory red tape and environmental regulators are cautious and secretive and adversarial. You say this is a problem that's mainly caused by the fact that there are a number of rogue operators that typically cause the industry a bad name, and the regulator then starts to get heavy-handed. What's your solution to that problem? I mean, it's a problem throughout our society that perhaps regulations to catch a few people have an impact on everyone else.

MR JOHNSON: I think at the moment, as in this last decade, it's just been a trend of regulation to sort of react to a few problems. Having worked for EPA Victoria, I can see why it's so frustrating when you can't get the bad guy, but I actually think that we just need to take a long, hard look and start pruning back, and just a bit of restraint if somebody does something wrong - "Look, is it really that bad? Does it really matter if somebody's running an illegal landfill of concrete? What are the real problems?" - rather than trying to set up these massive regulations to stop something that we don't really care about.

MR WEICKHARDT: We were concerned - and expressed in the draft report the fact that we'd rather see levies reduced or removed and that there was proper enforcement of regulation to stop the sort of underpricing of some facilities and the fly-by-night operator. What do you suggest is actually done to, I guess, reduce the heavy-handed regulation and yet ensure that we don't end up with - you quoted a few benign sort of - perhaps things that don't matter too much, but how do you get the environmental regulators to really clean up the act of the some of the rogues?

MR JOHNSON: I think that pollution of waters, pollution of air - those sorts of things - are more than enough to deal with rogue operators, if you're out there to catch them, and that's obviously the problem, that there's obviously not enough enforcement. Look, if it meant that there had to be levy on landfills to fund the enforcement so that landfills could be not undercut by bad operators - if that's what it took, then we wouldn't oppose a landfill levy increase if that's how they've got to fund their operations, but I don't think that we need to focus on waste per se. We can probably get the same outcomes with a smaller tool set of water pollution, air pollution and that sort of thing.

MR WEICKHARDT: Okay. One of the points that was made to us in the first round of hearings was that some council-run operations were underpricing their landfill and certainly not providing for remediation and closure and other things, but they were caught in a trap that they couldn't raise their rates because they were

operating in a regime where the state governments had prevented them from escalating their rates beyond CPI or something like that and, as a result, the wastes component of the rates was being effectively constrained. In your situation, is there anything that constrains what you charge to your councils? Is it a completely free environment? If you think, as a result of regulation or other things you need to do, that you need to escalate charges, is there any cap on that?

MR JOHNSON: No. The only cap is the fact that the councils pay, and so if they don't want to pay as much then they will tend to - but they get a dividend. It sort of all balances out, and the way they see it is that it's not a huge burden on their business, particularly given they get the dividend. If our rates went through the roof, our biggest problem would be we'd lose commercial custom. We're a commercial operation, and that's the way it should be.

MR WEICKHARDT: In practice, do the six councils use you for 100 per cent of their waste disposal to landfill?

MR JOHNSON: Yes.

MR WEICKHARDT: You provided, I thought, some very interesting insights into the sort of motivation that might drive a landfill operator to look at recycling over and above the issues that are conventionally thought of - and this is sort of the recoveries for some of the recyclates. That's the point that you allude to in terms of the density: that the landfill operator gets remunerated on the basis of weight and their costs are associated with volume, and therefore low-density things are actually bad.

MR JOHNSON: Bad. That's right.

MR WEICKHARDT: That was a very interesting insight, I thought. In your case, I gather that generally drives some of your interest in recycling some of these products.

MR JOHNSON: Yes. We're about to start our mattress processing and timber processing, because they are the easiest at the moment. Our approach is actually just to shave off bits. We are looking at - and I think we've suggested - the big black box of AWT, but that's a pretty big, scary decision, and it's a lot of money, a lot of commitment. So in the interim we're looking at these little shave-off particular waste streams that are easy to deal with. It might be that we end up with the same outcomes, and then we don't have to have a big black box.

MR WEICKHARDT: At the moment, what recycling activity does the EMRC get involved in directly?

MR JOHNSON: At the moment it's green waste, so composting. We can do wind-row composting because we're not in a built-up area, so we don't need to have the extensive engineering that's associated with investment composting. And, look, we're burdened with the same problem as everybody else: nobody wants the compost. But we have the substantial advantage, in that we have 100 hectares of land that was filled and needs to be rehabilitated, so we can consume it, if need be. We can basically control our release to the market to suit, so we don't kill the market. We can nurture it, build it up, and I guess that's one of our comments.

MR WEICKHARDT: Do your local councils use it in parks and stuff like that?

MR JOHNSON: They do what anybody should do. They hold us to standards and, at the moment, we're not meeting them, so they're not buying it.

MR WEICKHARDT: Why don't you meet the standards?

MR JOHNSON: It's a process aspect. We're just not composting it as hot as we should or something like that. This is something that we're working on actively. Obviously we want to sell it, rather than use it. But we're not suggesting at all that we should be forcing local government or state government to buy substandard product.

MR WEICKHARDT: But at the moment do recyclates like paper and aluminium cans get separated out from the material that you receive, or do you receive completely mixed waste?

MR JOHNSON: At the transfers, if you go as a member of the public to the landfill you can separate them all out. But that's not a huge part of it. When you've got 200,000 tonnes going through, it might be a few thousand goes out as recyclate.

MR WEICKHARDT: But the material you receive has come from a two-bin system, has it, where recyclates are supposedly separated out at kerbside?

MR JOHNSON: That's right.

MR WEICKHARDT: And you don't get involved in that aspect?

MR JOHNSON: It's something we're looking at, which is why I guess the discussion on MRFs. But we're not at the moment, no.

MR WEICKHARDT: All right. In terms of looking at an AWT and the future, do you as a regional council invest in R and D and some sort of investment for future

staff? Do you operate as a business would in that regard?

MR JOHNSON: Yes. We have a fund that we set aside money for them. So we've got, I don't know, how many in reserve, but several million dollars set aside.

MR WEICKHARDT: What is it that allows the EMRC to operate as a sort of effective separate and constituted council, whereas the Victorian and New South Wales models don't work that way? Is there an avenue that would be open to them in New South Wales and Victoria, or is there something different about the legislation in WA that allows the EMRC to operate this way?

MR JOHNSON: I think it's because the Local Government Act has a specific section about constituting a regional council. I think it was the Western Australian way of dealing with this plethora of tiny councils, whereas Victoria just amalgamated them. So it might be similar to what you have in Victoria; it's just that we call it a regional council and they just call it the new council. I actually think it's gone a bit beyond that still. We have made larger entities than Victorian councils, and it's probably a good thing because when you're dealing with ratepayers you don't want to be too big, otherwise you start losing that democracy aspect. But when you're dealing with some of these issues of environmental quality in the region or waste management or whatever, you need large organisations.

MR WEICKHARDT: Does the EMRC have any other responsibilities, apart from waste?

MR JOHNSON: Yes. We do environmental management work for our member councils as well, so we provide catchment management advice. We have environmental management consulting, and we also do OH and S training, again for member councils. There's basically a series of services that we set up in response to the needs of the councils, so they don't have to have an environmental officer at each council, for instance.

MR WEICKHARDT: All right. Thank you very much indeed for your submissions. It's been very useful.

MR JOHNSON: Not a problem.

MR WEICKHARDT: We will adjourn briefly.

MR WEICKHARDT: Our next participant is Dr Harrie Hofstede. Perhaps you can clarify on the transcript in what capacity you're appearing, please.

DR HOFSTEDE: I'm probably representing as an individual. I've had over 20 years' experience in various positions in waste management, initially as a PhD researcher, as a lecturer, as a businessman, technology developer. I did a lot of research in the early days before waste management was worth a mention.

MR WEICKHARDT: Thank you for appearing, and thank you for your submission, which you should assume I've read, and if you want to make a few points then we can have a discussion and some questions about it.

DR HOFSTEDE: I suppose there are a lot of aspects to waste management at the moment that make it worthwhile doing a Productivity Commission study on it. It's very much an industry in transition. It's also probably the public utility that is most underestimated or undervalued relative to power supply and sewerage systems and water supply. I'd rate waste management to be as critical to the functioning of society as any of the other utilities. There are plenty of examples where that has been proven. It's only about 12 years ago that the City of New York was brought to a complete standstill within three days when the garbage collectors refused to collect the garbage, and it caused a massive public health issue.

Waste management is very much a critical aspect of society functioning properly, and it's highly underrated in terms of the attention and the funding that goes into it. There's a huge transition going on at the moment. I'm not sure what is driving it, but from initially a linear materials flow where materials are extracted from nature and the environment, mined or from forestry, pastoral industry, society and go into landfill which the linear materials flow - that, whatever way you look at it, eventually there's going to be a depletion on one side and a lot of full landfills on the other side, whether it takes 50 years or 100 years. Obviously the resources that are mined as individual raw materials end up fully blended with a lot of other materials in landfills, which is a degradation of value because of the cost of recovering the materials once they are mixed.

Given the limit of resources, it's our personal belief that there's been a big failure of economic theory to assume that all resources are infinite and will continue to be supplied, which I think is one of the major fundamental problems with waste management. Being in a situation with waste being generated is the result of that assumption that minerals and resources will always be available. That's clearly not the case, and so there has been a move towards looking more at using virgin materials more than once, which we refer to as recycling, or reuse, which is really the use of a product for a second time, rather than the raw materials. I suppose that's one important point I'd like to make.

At the moment, recycling and waste, the change in waste management from pure landfill to reuse of materials multiple times and recovery - it seems to be very much driven by sort of altruistic ideas and mentality in society of wanting to do something contributing to the environment, which is a very strong desire amongst people in society, and perhaps waste management is one where they really like to direct their efforts because they have some sense of control in being able to contribute something tangible to the environment in their belief, whereas in the greenhouse gas/ozone layer - holes in the ozone layer - they are also a mass of problems and they feel pretty powerless in being able to contribute something tangible to us there.

So waste management has been very much a focus for the community as an avenue to contribute to environmental - or to allay their environmental conscience, maybe I should say. There has been a lot of resistance to that in the last 10 years, 15 years, amongst local government to some extent because they - especially in the domestic waste area - because they have a very strong sense of ownership of that waste stream and the management capability was quite capable of managing waste going into landfills. But recycling and diversion and secondary waste treatment plants, which really take it to an industrial level, as both a challenge that local government - and to, I suppose, postpone the confrontation of that and for a long time sort of resisted providing recycling and other services; also, because we were really very unclear whether there were tangible outcomes - economic, socially, environmentally or otherwise.

We are probably 10 or 15 years into that transition and now there are very large investments being made in secondary waste treatment, although I have a lot of concerns about that, partly because of the enormous deficiency of tangible data about waste treatment quality, what is in the waste streams, who is collecting and who is paying for what and how this whole system is being operated. And, you know, there are decisions being made about plants that cost 50 to 100 million dollars, based on data that are basically non-existent.

One of the main causes of failure of those secondary waste treatment plants is the lack of information during the planning stage. I suppose it's also very much my view that there's an over-focus on technological solutions. Even though I come from a science and technology background, I feel technology really only fills the gap between the policy framework, the economic framework, the legal framework of an integrated waste management system. I suppose I've developed eight different frameworks that combine to form a successful waste management system. And technology is only one of those frameworks - the engineering framework.

Really, most of the waste problems - the waste issues - are founded in

economics, and policy and regulatory failure, if I can use that word in this way. But technology really only should come in at the last moment. It's all the other frameworks that ensure an economic foundation of suitable products being recyclable, when materials are easily recoverable, and new products can be made for which there is a demand in markets. At the moment it's still very much an attitude of changing the market from landfill to society, without all the critical work that needs to go with it: product development and, you know, developing products for which there is a demand.

I suppose landfills are a pretty easy market in that regard. It rarely says no, whereas society obviously is much more critical of what they buy and are price-conscious, et cetera. At the moment there's virtually no effort in creating markets for products that are made from recycled materials and I don't necessarily think it's critical that it's identified as being recycled material. It should just be seen as a material that does not come from a virgin source. I don't think quality should be compromised either in that regard. But at the moment the price and the price incentives - economic incentives - are very much driven towards the preferred use of virgin materials. I suppose the solution I see for that is to increase the cost of virgin materials through royalties back to the community, so because of the loss of those resources to the general community - and that way making recycled materials more economically attractive for manufacturers to use.

MR WEICKHARDT: What's your objective in wanting to do that?

DR HOFSTEDE: I'm sorry?

MR WEICKHARDT: I mean, is using recycled materials in their own right an absolute mandatory objective in your scheme of the world? If the recycled material is more expensive than the natural or virgin material and there's no sort of stupidity about specifications inhibiting the use of the recycled material, why do you want to inhibit people having the choice to choose a cheaper material?

DR HOFSTEDE: I don't think that's the point I'm making. I might give you an example that does really clearly show that. In Perth there's about 400,000 tonnes of concrete generated from the demolition industry and most of our roadbase comes from the granite that's mined from the hills. So that's blown up in the quarries there. At the moment the pricing is such that it is cheaper to produce roadbase from the granite from the hills than from the 400,000 tonnes of concrete, and so the 400,000 tonnes of concrete is being landfilled.

MR WEICKHARDT: And what's your problem with that?

DR HOFSTEDE: I would say that it would be a lot better use of resources if - and

the basis - and that's because of price. It's entirely because of price. I suppose there's a few aspects to the price. One is, perhaps we are undervaluing the resource in the hills.

MR WEICKHARDT: Well, you say "perhaps", but I mean these are important issues - - -

DR HOFSTEDE: Yes.

MR WEICKHARDT: - - - because you're suggesting the government should start interfering with this, and I think we need to go beyond "perhaps" and to know why the government should do that. Are you suggesting that the cost of some externality associated with mining in the hills is not being appropriately priced in? Otherwise I guess I would say to you, "Well, is landfilling the concrete a big problem environmentally?" Your answer is probably, "No." Is the fact that it costs more than the virgin material a signal that maybe, by the time you've collected it, crushed it, transported it, you've used more resources than it actually is worth using to recycle that material? That's the question.

DR HOFSTEDE: Yes, okay. Well, I suppose the government has one way or the other an influence on the price of the virgin materials as the original owner, I suppose, or custodian of these resources and any companies that do mine those resources generally pay a royalty to the government. I'm not sure what is the basis of setting those fees, but I think there is a shortage of full costing of the picture like that, where - well, essentially, if you could use the concrete in the roadbase, the granite would be left alone, possibly for future generations. It looks like when the granite runs out we're still going to have to go back to the landfills anyway and dig up that concrete because we won't have anything else to use. So does that have any impact on the full picture? Why not recycle it now?

The other issue is, obviously, that the virgin material extraction and processing industry is fully geared up and that's a routine, very efficient operation, whereas the establishing of recycling of concrete, that's a new industry that's going to have to get up and running and there's going to be more cost involved in that. So there is, in the short term, a competitor disadvantage I suppose. But in the end we may need to look at those costings. Obviously, it would be desirable in my view that the concrete would be recycled and that the hill be left alone, if that is economically viable. If it's not economically viable, I would think there would be issues that perhaps are not considered in that equation, where adjustments could be made to correct those, where it's probably more likely that it would be economically viable.

MR WEICKHARDT: I agree it's an issue that would cause you to sort of want to stop and think about why is this so.

DR HOFSTEDE: That's right.

MR WEICKHARDT: But it's a bit of a flashing light when the cost of recycling is higher than the cost of the alternate; that perhaps - perhaps - the cost of recycling is actually consuming more resources than you're recovering, and recycling itself uses resources. People feel good about resource conservation by recycling, but sometimes recycling actually consumes valuable energy for transport and human costs - - -

DR HOFSTEDE: Absolutely.

MR WEICKHARDT: - - - that could be invested better for the environment elsewhere. So that's the concern that we flag that governments need to be very careful about before they intervene here.

DR HOFSTEDE: Yes. I think they do need to consider, given that the industry is in transition, that obviously you would want to have a look at what ultimately would be the situation and accept that in order to get there there is going to be a bit of pain and the economics might not be as good as they will be, but in the end it would be better. And clearly there's an issue that, as resources get more scarce, the prices will increase and as we've seen with oil and a range of other metals - steel - it's demand driven; so that eventually it is almost certain that the resources we're burying today will become economically mineable from landfills because - you know, that situation. So why not preserve and recycle it now?

Maybe it costs a little bit more, and that may be because the industries are not up to speed and there's not enough investment and it's not a fully organised industry. That could happen fairly quickly, leaving some resources in the natural state for the future, rather than digging those up - you know, putting all these incredible resources in landfill. It is a bit an issue of intergenerational equity, I think, here, about passing the buck on to the future generations.

MR WEICKHARDT: Yes.

DR HOFSTEDE: "We can get it from the hills but you can go and get it from the landfills."

MR WEICKHARDT: Governments interfering in these issues - despite the fact they do it for, if you like, good reason - can sometimes have perverse outcomes, and it was drawn to our attention recently that in New South Wales a very major demand for some material that needed to be filled - 500,000 tonnes in fact - could have been satisfied by using some fly-ash that was sitting nearby. For good reasons, I guess, the government wanted to be satisfied that this fly-ash was environmentally benign

and met all the required standards and we're told that it was tested extensively and that it passed all those tests, and ultimately it was not used because somebody deemed that if 500,000 tonnes of this product which was classified as a waste were used, the new site was effectively a landfill and that this "waste" - in inverted commas - would have to pay the landfill levy that the New South Wales government have set in order to encourage recycling. So in that case their supposed good intentions with one policy caused an outcome which was lose-lose: the recycled or waste material was not used, virgin material was used, and the New South Wales government didn't collect their levy.

DR HOFSTEDE: Yes.

MR WEICKHARDT: So I guess this is the reason - and there are multiple examples where these sorts of perverse outcomes can be found - why we said governments need to be very cautious before they intervene to ensure that what they end up with is a good outcome for all the community, not one that we regret.

DR HOFSTEDE: Absolutely. This brings me to another point that I think is very fundamental as well and that is the definition of waste materials and how they are looked upon. I'm aware of that situation in New South Wales where whatever is deemed a waste - you know, wherever you want to put it, you have to pay the levy. In that example you gave there, I think that is a fundamental problem, the way they're defined. It's a simple definition. It's not even a regulation or a policy. It's just a definition that prevented that from happening, and I notice in your report as well you outline the definition - you're defining the waste by municipal waste, C and D waste and commercial and industrial waste.

I personally am very much opposed to that. I think it's completely non-functional to define waste by the source. It serves no function at all to look at where it's generated. What I think we need to do is to look at what it is. I mean, grass clippings can be household waste; it can be industrial waste if it's collected from an industrial site; it can be commercial waste; food waste is commercial waste if it comes from a restaurant, if it comes from a household it's municipal waste. So defining waste by the source doesn't say anything about the waste. In fact, it taints the waste, or the product, the material, more than it should.

MR WEICKHARDT: We have about five more minutes.

DR HOFSTEDE: Okay.

MR WEICKHARDT: Can we wrap this up then?

DR HOFSTEDE: Sure.

MR WEICKHARDT: You've got a couple of points, I think, about organics.

DR HOFSTEDE: I've got a lot of points and not enough time. About the organic matter?

MR WEICKHARDT: Yes. You were sort of expressing concerns about the fact that we're not using organics properly.

DR HOFSTEDE: Yes. I mean, 20 years ago I started looking at organics. That was my original claim to fame, I suppose, in the waste industry, but I worked out then already that Perth does not generate - no city in Australia generates - enough organic waste to maintain fertility of the land around those cities. There is not enough waste basically.

MR WEICKHARDT: And yet we've had endless participants in this inquiry tell us that there are mountains of compost that can't find a home.

DR HOFSTEDE: Exactly. There are a number of reasons for that. I suppose the recovery of organics for land rehabilitation and maintaining soil fertility has been entirely driven by the waste industry, and so clearly the demand for disposal of organics was greater than the demand for receiving organics; it preceded it, which does, to some extent, surprise me in a country like Australia which has such challenges with the soil fertility and water issues and food production, as an island-type nation. I think the core of that problem, that stockpile, is a lack or insufficient recognition of the value of land - of the value of fertile land and productive land.

MR WEICKHARDT: Why don't landowners have a big interest in that? I mean, they pay a lot of money for fertilisers and other products. Why is it that if organics are so important to their future fertility, that they're not investing in that? If you were in the government and all powerful, what would you do about it?

DR HOFSTEDE: For one, there is no incentive for them to use organics because water is for free. Water is free, and I know a lot of farmers that will actually deliberately waste the water to maintain the licence and there is no incentive to cut back on water use at all. So that's one reason. Obviously there's a great lack of understanding in potential markets for the use of compost where the potential benefits - economic benefits, long-term economic benefits - have been shown. If we can't make compost work in a country like Australia, it wouldn’t really work anywhere else. But it does work in other places as well, notably in Israel where you have a similar climate; they do a lot with it.

MR WEICKHARDT: So if you were the all-wise policy-maker, what would you do?

DR HOFSTEDE: Which I'm not, but - - -

MR WEICKHARDT: Just project yourself into that role for a moment.

DR HOFSTEDE: I certainly would start charging for common natural resources that are input into agriculture at the moment that are currently being wasted. There is all the fertilisers, for example; virtually all the fertilisers that farmers use are imported into Australia.

MR WEICKHARDT: I must say as an ex-chairman of a fertiliser company in Australia, I'm surprised by that comment.

DR HOFSTEDE: Yes.

MR WEICKHARDT: There's urea, diammonium phosphate and superphosphate and a few other things that are made here in Australia, but I accept the fact that there are a lot of products that are imported too.

DR HOFSTEDE: I suppose I'm referring to the raw material like phosphate rock, which, okay, the manufacturing can be done - but one way or the other we don't have a lot of nutrients to mine within Australia. So I mean, that's a point there. In any case the manufacturing of fertiliser, of course, is enormously energy intensive, and as a result also enormously greenhouse gas intensive. These are aspects that are going to be pushing up significantly and have been pushing up, of course, the fertiliser production. In Perth we generate probably at least 500,000 tonnes of organic materials which has a good 25,000 tonnes of nitrogen in it, 10,000 tonnes of phosphates and these are - we can either choose to put them in landfill and deal with them there over a period of 25 years before closure, or integrate them back in our soils.

There are other issues with salinity which is another enormous challenge in Australia. Fertilisers being salts - pure salts themselves - are obviously not helping salinity, whereas organic blends of compost being integrated in soils have a positive effect on salinity in soils that suffer from salinity.

MR WEICKHARDT: I'm afraid we're really out of time.

DR HOFSTEDE: I appreciate it.

MR WEICKHARDT: But thank you.

DR HOFSTEDE: I could go on for a lot longer.

MR WEICKHARDT: Thank you very much for your input. You've raised a number of interesting challenges and thank you for that. We will take those into consideration when we prepare our final report.

DR HOFSTEDE: Right.

MR WEICKHARDT: We are going to adjourn very briefly.

MR WEICKHARDT: Our next participant is Earth Carers, and if you could please just give your names and positions or roles in which you are appearing, for the transcript, and then we will get under way.

MS PETTIT: My name is Anne Pettit. I'm the Earth Carers officer. Perhaps I'll introduce Helena Clayton who is an Earth Carer volunteer, and Joyce Roberts who is also an Earth Carer volunteer.

MR WEICKHARDT: Thank you.

MS PETTIT: I'm just going to take the opportunity perhaps start with a few words about Earth Carers itself and about how the submission that we did came about. Earth Carers is a community based education program run by the Western Metropolitan Regional Council. There are about 80 Earth Carer volunteers who, through their individual interests, knowledge and skills, encourage and support householders, schools and businesses to reduce waste. We are particularly interested in inspiring changes in behaviour with regard to waste and not just in giving information. Many Earth Carers' activities therefore have a very practical focus to encourage people to think of waste as potential resources and to make small changes to everyday habits that result in waste being diverted from landfill.

We encourage people to do a few things: one is to choose products with less packaging and related things, and also to make the most of the services offered by their councils for recycling and green waste collection, and we also have quite a focus on teaching and supporting practices such as composting and worm farming that keep the benefits of organic wastes where they are created. At our regular meetings we share information and ideas and we plan waste education events. At one such meeting of the Subiaco-Nedlands Earth Carers group a media release about the draft report was brought up.

Some of the content seemed to be at odds with the type of impressions and experience that volunteers with the program have gathered over the five or six years that the program has been running. We thought that as a community based organisation and with experience at that level, our input into the debate could be of value. So a meeting was held to put our thoughts together, and Helena - a volunteer - has worked to weave those comments into a response to the draft report, and she's presenting it here today.

MR WEICKHARDT: Okay. Thank you very much for your interest and for your participation.

MS CLAYTON: Just to give you a bit of an overview of what I'll be going through - Anne has already given an introduction, so I'll go through just a summary of the

issues we raise in our submission, and there I've got some questions associated with those issues. In particular, I wanted to highlight things around consumer choices and values, and then we've got some concluding comments. That was just Anne's overview.

One of the first issues we raised in our submission was what we felt to be a limited focus on options for reducing waste, and we found it quite disappointing that the report doesn't address options for waste reduction. It seems to be very comprehensive in terms of looking at some of the economic inefficiencies that you see currently in how we deal with waste generation disposal but it doesn't actually - we found it disappointing in that it didn't look forward into options for reducing our waste. I guess our question is: are there really no options for waste reduction that make good sense for community wellbeing, which was the sense that I certainly got from the report. In exploring that, I've just got a quote there from an in-press article about European waste management. I'll just read it out:

> According to European Union guidelines, the reduction of the present levels of waste generation and the increase in energy and materials recovery represent two of the most important future requirements for environmentally sound waste management practices.

The second issue we raised in our submission was the need for positive forward-thinking leadership in waste. I guess I'd like to ask a question of you today, Philip, about what leadership messages does the commission recommend the Commonwealth give to urban communities with regard to waste generation and waste disposal?

The third one - we looked at the issue around reducing plastic bags, and this is of particular interest to earth carers. In September, is it, we'll be doing a community education program about - it's called BagSmart. We don't necessarily see that a total ban is feasible or desirable. However, we do see that more responsible consumption of resources and of using plastic bags is feasible and desirable. The question I had was: why weren't up-front charges on bags explored in the Productivity Commission's report? Something we found quite interesting in Ireland was the really positive response they've had to charging for plastic bags there.

One thing that - I mean, it's kind of a bit tongue-in-cheek really, but something I found in a report is the arguments about the consumer cost of not having plastic bags - I didn't find convincing at all. I mean, there may well be costs to consumers of not having plastic bags, but I would urge the commission to come up with more convincing arguments. A lot of the costs that are raised on pages 144 and 145, to me, would be covered by alternatives to plastic bags. You know, things like the convenience of having something to carry your shopping home with is presented as

an inconvenience - you know, a cost to consumers if there aren't plastic bags available, but surely there'd be alternatives.

MR WEICKHARDT: Perhaps I should comment on some of these, because otherwise we'll get to the end of this and - - -

MS CLAYTON: Yes, and you'll forget what they are.

MR WEICKHARDT: - - - I'll have forgotten all the questions. Let me just say, on plastic bags, clearly there was a huge reaction when we released the report - about one and a half pages in a 430-page report - all focused around plastic bags. We were at pains, I thought, to try to say we didn't have a view about whether plastic bags should be banned or not or whether there should be a charge for them. We were simply trying to make the point that we made repeatedly throughout the report, and that is that government should not introduce policy until they've figured out whether or not it actually is in the best interests of the community at large. Again, I stress that we are not charged only to look at economics; we're charged to look at economics, environmental and social issues, and we try within our limitations to do those things.

On the point of plastic bags, we haven't made a study and we don't have a view as to whether or not a ban is sensible. What we do have, though, is a concern that the government have not articulated a full cost-benefit analysis of whether or not a ban actually is in the community's interest. What we've seen in many cases where governments have acted with the best intentions is that sometimes they make a decision that seems to be the right thing - intuitively is the right thing - but, because they've not thought through or examined all the consequences - and there can be sort of first-order, second-order and third-order consequences - you can sometimes end up with a perverse outcome that actually is not what was intended.

In the case of plastic bags, we're clearly going to have to either completely remove our comments or make some more comments that try to address the concerns people have raised. I understand it's an iconic issue that people become very emotional about, and lots of people feel it's an extremely important issue that they individually can do something about. I'm not trying to belittle their concerns at all, but what we have heard - and we're trying to investigate more - is in societies and countries where bans have been introduced that behaviours have arisen - because people do make alternative changes in their behaviour. They buy bin liners rather than use a plastic bag as a bin liner, they do certain things - they may use more paper bags. The question is: are those alternative options ones that actually might have worse environmental impacts than the state we're in at the moment?

We don't know. All we were saying is, in a colloquial term, governments

should look before they leap and, you know, there should be a proper debate and a proper study of it. Now, we hope that that's what will happen. Clearly it is an issue people feel strongly about, and we will try to express that in a way that causes less of an emotive reaction and more a focus on the real issue we were trying to get people to focus on.

MS CLAYTON: Sure. I guess, in response, I think that sounds really positive. Did you have anything you wanted to add?

MS PETTIT: Only that, I guess from my own perspective as the officer and watching how people within our group relate, I don't think it's - it's not really that emotional a thing. We're very practical people; not too many, you know, raving greenies or what might be construed as that. We're sort of interested in the way people do things every day that might sort of be done a little bit better, and that's the way we relate to people about it. So, yes, I like what you were saying, and it seems to me that then - the way the report comes out, its final form, just maybe needs to convey that better - what you were talking about - and maybe we've perhaps misread it a little bit. Certainly we don't feel - - -

MR WEICKHARDT: I hope many people misread it, because the reaction we got certainly wasn't the reaction we intended.

MS PETTIT: Yes. I guess I don't want you to think that we're all bound up in this plastic bag issue. It's such a minute part of a whole lot of other parts of what we wanted to be here for, yes.

MR WEICKHARDT: All right, thank you.

MS CLAYTON: Now I just wanted to get a little bit into consumer choices and a sense that I had that the role of consumer choices was somewhat overlooked in the report. I've got a quote here from a recent study by Gilg and Barr that:

> Although personal consumption ranks with industrial technology as a major driver of environmental change, researchers and policy-makers have yet paid it scant attention.

I guess because we are working at the community level and household level, we see really positive changes there, and there was a sense that the commission's report didn't look at the role of consumer choices.

MR WEICKHARDT: Yes. If I may again briefly comment, I think that's an important point. It's clear that consumers do feel strongly - some consumers feel very strongly - about this issue of wanting to recycle product and feeling that that's

an important contribution that they can make, and that shouldn't be undervalued at all. What we were trying to communicate, however, is that governments making a decision, if you like, on our behalf that certain recycling activities should be carried out, which end up costing the consumer money, may be entirely legitimate if that is, if you like, publicly available information.

If you, as a consenting adult and as somebody who elects government, say, "I want to recycle more product, and if that costs $100 a year more in my rates then I'm happy to do that," that's fine. But for it simply to be done within sort of a black box and somebody to say, "We're going to recycle 65 per cent of all the product that comes through here and you, the consumer, just have to wear it," we felt was not necessarily the right way for the policy to be made.

MS CLAYTON: Yes. No, I'd agree, I think. I'm raising this point mainly because I felt that it really isn't addressed in the report.

MR WEICKHARDT: Okay.

MS CLAYTON: I think that there's a role for both - there's a responsibility for both producers and consumers, and I wouldn't suggest that government policy should just target and pass all the costs of waste reduction and environment conservation onto consumers.

MR WEICKHARDT: Ultimately, the consumer pays one way or the other. Whether you pay by paying some sort of advanced recycling fee or whether you pay through your rates in terms of disposal or whether it's built into the product price, somehow somebody pays, and it's ultimately the consumer that pays through taxes or prices of product. Provided you have a choice of electing a government that says, "This is the way we think this should be done, for the following reasons," and provided you have a choice which is informed by the right facts, then that's fine. It's when you don't have that choice that we would be concerned and when the government doesn't share with us all the reasons they've made certain policy choices.

MS CLAYTON: Yes. I guess that's an issue across the board in terms of the way, yes, government policy and - it's not just only in waste. I think it's a big issue across the board, yes.

MR WEICKHARDT: Yes.

MS PETTIT: Can I just add a couple of things there. I was thinking that, as far as consumer behaviour goes and this maybe preparedness to look at alternatives, what we see, I guess, is what you might call an intention to change; you know, an awareness that maybe there are other ways of dealing with your waste at home or

maybe not buying stuff that has packing, et cetera - whatever - but, people being what they are, it's not that easy to change. So what we feel is lacking is actual support for people to change because there's a lot more willingness around than is ever really talked about or you know brought up as something to actually use as a point of lift-off from - so if that's ignored then there can't really be much kind of gathering of momentum - if it is clearly ignored that there's already quite a lot happening at grassroots level, if you like, for people to change.

I also just wanted to say that as a group I don't think that Earth Carers really believe that just recycling alone is the way to go because naturally, yes, it does have its own costs. We would probably rather see more major change with perhaps some - where packaging is at in the first place or - the generation of products. It may be a shift at the very base of where waste is considered rather than looking at it as an outcome - whether we can recycle the packaging, is again a small thing.

MR WEICKHARDT: I guess if consumers collectively sort of vote with their dollars and only buy product that is manufactured that way that will send a pretty clear message to - - -

MS CLAYTON: That's right, and in our discussions - which we have many of - that's often the point we come back to: how can we encourage more people to demand what they want, because that will make a difference with the dollars of who considers they ought to be doing it because that's going to - you know, that's a demand working.

MR WEICKHARDT: Yes.

MS ROBERTS: Can I add something here? Sometimes the consumers don't know how to go about getting the producers to reduce - you know, you say, "Do it with their feet, with their dollars," but if the producers are set to excess packaging, is there any way the commission can maybe encourage less packaging for - as Anne was saying, the beginning of it rather than to choose at the end?

MR WEICKHARDT: We don't have time to really debate this, but we wouldn't see that necessarily as a role that the government should get involved with as much as provided those people are paying the full cost of those materials and they're paying the full cost - or somebody is paying the full cost - of disposing of them, but consumer preference to buy a product with less packaging or for an environmentally more friendly product is one that's pretty powerful and I think manufacturers and marketers these days would take a lot of notice of. I need to point out that we probably have another five minutes.

MS CLAYTON: Okay. This is just further stuff - there's a really interesting report,

OECD - I notice that the commission has referenced quite a number of OECD reports, but this one I found particularly engaging isn't referenced and this report really focuses on sustainable consumption at the household level and the role of consumers and issues around waste and they've got this interesting traffic lights - they have traffic lights representing household environmental impacts to 2020 and that waste generation and personal travel has a red light - these two of the red light signalling pressures and - and this is the report and I was just wondering if you are aware of the report and, if you are, why wasn't it included.

MR WEICKHARDT: I am personally not, but if the team might, we'll have a look at it. Thank you.

MS CLAYTON: We have actually talked a lot about this just in our open discussion - the point here is recycling and choices for reusing shopping bags - and do reflect consumer preferences or value for reduced waste - and I would say not just in terms of reduced landfill but in reduced up-stream externalities. Their preferences are indicating that they do value a reduction in these up-stream externalities that the report clearly says isn't a waste issue or shouldn't be addressed in waste policy. I found that the report doesn't provide evidence or understanding of consumer preferences regarding waste - of reducing waste - which I have highlighted anyway. In the interests of designing waste policy to maximise benefits to the community my question is: why are consumer preferences and values for reducing waste and sustainable consumption not incorporated into the analysis, given the - - -

MR WEICKHARDT: Probably because we're trying to inform policy-makers and the policy-makers really I guess react to consumer preferences; they shouldn't be setting consumer preferences, I wouldn't think.

MS CLAYTON: Yes, well, what we value is actually of benefit and, in economics, I would say that if you're looking at the benefits and costs you actually have to take into account what people value. The environment has a value because we value it and that's my point.

MR WEICKHARDT: I don't think we disagree with that at all.

MS CLAYTON: I guess just further on what we were talking about, you were saying if consumers talk with their feet and with their dollars - I think what we're seeing in terms of the shopping bags and recycling, given the option people are making these choices to reduce waste, I do think there's a role for government to create these market opportunities or opportunities for consumers to be able to actually express their preferences. There is a market value issue when there are not these opportunities; consumers can't necessarily on their own create these markets. I do think there's role for government to create markets for consumers to express their

preferences to reduce waste. Some concluding comments - I think we've covered that one; that's your main point and that support is needed in terms of education facilitation and available options.

MR WEICKHARDT: Yes, I think we would strongly endorse that.

MS CLAYTON: This is probably as an overall comment - it's a bit critical, but - I find it hard to see areas in which the commission's report could work to inspire positive steps in waste generation, disposal, to meet Australia's ESD aspirations.

MR WEICKHARDT: Okay. I take that last bullet point on board. I guess again we would say our fundamental focus was not necessarily on the community, but was on government policy-makers, but clearly government policy-makers need to be doing things in the interests of the community, so - - -

MS PETTIT: Yes, maybe you have just got a little bit of space somewhere - opportunity - to nudge a little more. I know you have to probably be impartial, but yes, it was just that it seems so uninspiring in terms of something better, which struck us I think.

MR WEICKHARDT: Yes, well, we're seeking to find policies that will make it better, but perhaps we were being uninspiring and impartial in terms of what they might be, but I take your input and thank you for it.

MS CLAYTON: Thanks for the opportunity.

MR WEICKHARDT: Thank you, and I commend your actions with your community group and I think people doing more of that individually has got to have big benefits. Thank you.

MS CLAYTON: Thank you.

MR WEICKHARDT: Ladies and gentlemen, that concludes today's scheduled proceedings. For the record, is there anyone else here who wants to appear before the commission? No. In that case I adjourn these proceedings and the hearings will resume in Sydney on 24 July. Thank you very much indeed.

AT 1.03 PM THE INQUIRY WAS ADJOURNED UNTIL
MONDAY, 24 JULY 2006

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