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HOUSE OF REPRESENTATIVES

STANDING COMMITTEE ON ENVIRONMENT AND HERITAGE

Reference: Employment in the environment sector

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HOUSE OF REPRESENTATIVES

STANDING COMMITTEE ON ENVIRONMENT AND HERITAGE

Wednesday, 26 February 2003

Members: Mr Billson *(Chair)*, Ms George *(Deputy Chair)*, Mr Barresi, Mr Cobb, Mr Hunt, Mr Jenkins, Mr Kerr, Mr Lindsay, Ms Livermore and Mr McArthur.

Members in attendance: Mr Billson, Ms George, Mr Jenkins and Mr Lindsay

Terms of reference for the inquiry:

To inquire into and report on:

- The current contribution of environmental goods and services to employment in Australia;
- The future potential growth, including barriers and opportunities for growth, of environmental goods and services and impact on employment;
- Current status and future requirements for an appropriately skilled workforce;
- Appropriate policy measure that could encourage the further development of the environmental goods and services sector; and
- Information and reporting systems that would support the uptake of environmental goods and services to enhance overall business performance and development of the sector.

WITNESSES

Committee met at 9.11 a.m.

MEEHAN, Associate Professor Barry Joseph, Environmental Science, Faculty of Applied Science, RMIT University

CHAIR—Welcome. I declare open this public meeting of the House of Representatives Standing Committee on Environment and Heritage. It is our inquiry into employment in the environment sector. This hearing is the sixth for the inquiry. Today the committee will receive evidence from Associate Professor Barry Meehan, the Civil Contractors Federation, GreenChip Pty Ltd, Melbourne Environmental Jobs Network and the Water Industry Operators Association.

Although the committee does not require you to give evidence under oath, I advise you that these hearings are formal proceedings of the parliament and, consequently, warrant the same respect as the proceedings of the House itself. It is customary to remind witnesses before they provide testimony that the giving of false or misleading evidence is a serious matter and may be regarded as a contempt of parliament. Do you wish to make a brief statement in relation to your submission, or would you care to make some introductory remarks?

Prof. Meehan—Yes, I will say a couple of things. Firstly, I apologise for Dr Ian Thomas not being available this morning—he has teaching duties. We come from very different areas in environmental education. I am a physical scientist and Ian Thomas is a social scientist. We work closely together on a whole range of cross-faculty interdisciplinary things. I suppose a lot of the content in this submission is from his research, although I am fairly aware of most of it. My background is about 18-odd years working in the area of human impacts on land and water and more recently, in the last 12 years, developing environmental undergraduate and postgraduate programs at my university.

CHAIR—The range of those courses that you speak of: are they specialist courses or are they elements within broader courses offered by RMIT and the other—

Prof. Meehan—They are both. I coordinate an environmental elective program within our department. Effectively, I think the simplest way to explain it is that, in most programs across the university, they have free electives. We have developed a series of about eight subjects—although we call them courses now; we do not call them subjects any more; and that is another story, and a very complicated story, I might say. A course has a whole range of components in it. What we have been able to do is basically put all of the components on the table as a smorgasbord and the student comes to me and says, 'I want to do an elective in environment,' and I will say to them, 'Well, what do you want to know about?' Then they can effectively put together their own subjects from all of these bits and pieces that are available. It is very flexible. It is very student centred and it is extremely popular because the students have a unique ownership of what they are learning.

CHAIR—Is that because of the design or the content or a mix of both?

Prof. Meehan—It is because they are picking what they want to learn. Every subject they do, in any course, will probably have bits they like and bits they do not like. There is a good chance that if they get to pick the content—within reason; we do not let them pick content that we do not think is suitable for them, depending on their background and so forth—it will enable them to design their own learning. That would not just be what they learn, but also the way they go about it, the way it is assessed and even the way that the stuff is delivered. It may well be that

they do not do any formal class work at all. For example, last year there was a student in the country who had one subject—this annoying elective which he had put off forever. He was in Tatura. It so happens that I am a member of a consortium that looks at resource use in different regions across Victoria. We had a contact at Tatura, and we did a waste audit on a company up there, with their permission. There was a double issue there, because there was a benefit for both the company and the student in getting his degree.

CHAIR—I imagine that, beyond those practical reporting, monitoring and information gathering elements of what you do, the components include impact assessments and environment law. What kind of spread is embraced by the components you speak of?

Prof. Meehan—Most of the students coming to us come from areas—and this is my relationship with Ian—like social science where they have a lot of that stuff already. We are looking for more information about physical science. We know that they do not have to read any more literature than the newspapers to know about salinity, water resource use and so forth, but to understand those areas better they can pick on components of our courses that specialise in the science of those areas. They can do it in a way that is not too demanding as far as their background goes.

CHAIR—I should declare a pecuniary interest. The postgraduate programs at RMIT are widely recognised as very innovative and as embracing some new learning concepts. They are usually well regarded by industry. They are also quite contemporary in that some of the elements of them tend to pick up germane, current issues. In the management stream, I notice one glaring exception. I thought the mainstream postgraduate management courses were crying out for an element about the environmental and management implications of sustainability. Is that an area that you are planning to move into?

Prof. Meehan—Probably not myself. It may well be that the drive comes from somewhere else, such as our business school. It is possible, but I am not looking at it. I have enough to do at the moment. Within the university there are certainly moves to get people from the various environment programs together more. At the moment, most of that is bottom-up, and it comes from people around the university like myself and Ian. However, I see a change, in that management is looking at getting people from the different programs together. I am sure they know how to go about it. We have just had one meeting with business to explore where we go regarding the development of course work in the postgraduate area. The comment I made at the meeting was that we really need to go out and identify what a person's role would be before we start tinkering and saying, 'We can do this, this and this in a course.' We need to do our research in the area.

CHAIR—The reason I ask is that we have taken evidence about inculcating the ethos more broadly into industry—into workplaces—and that it is helpful to have appropriately skilled hands-on folks on the ground; it is also handy to have boards musing about these things. But to bring about change and improved performance you actually need something that works its way right through the organisation and is a part of the everyday workplace like—as I think the deputy chairman said—occupational health and safety. One or two people might be drivers of it but everybody owns the issue and everybody can play a role, and that kind of thinking has emerged in evidence. I wonder whether the course work is reflecting that kind of approach or whether we are still focusing more on operatives or people at the coalface.

Prof. Meehan—I think there has been a tendency for courses or programs to develop whereby, yes, it is sort of a knee-jerk reaction to a perceived need and then, 'Okay, how can we put things together?' We will do a bit of this, a bit of this and a bit of that and say that this is a postgraduate degree in environmental something or other, rather than have a look at the particular sector we are interested in and work backwards. We need to ask questions. What is the need? What does this person look like? What do they need to know? What skills do they need?

CHAIR—I suppose the thought I had was that if it is good enough for, say, MBA students to study international relations as being relevant to corporate success in the future, then up the food chain an earlier pecking order issue was recognition that sustainability and environmental considerations are equally important, if not more important, in terms of risk profiling and getting them through.

Prof. Meehan—Absolutely.

Ms GEORGE—I got the impression reading the submission that one of the complaints or concerns you had was that there was this array of courses, like a smorgasbord of opportunities, but it really lacked integration so that you could not confidently say that the graduates who are coming out of the institutions are, as you say, well versed in environmental literacy or sustainability education. What kinds of positive things could be done to give greater effect to the declaration that a number of these universities have signed up to?

Prof. Meehan—I guess anything like this gets down to proper resourcing and provision of materials for people and for staff programs to learn a bit about these things. It also needs direction from the management within the universities. It is all very well to sign declarations like Talloires and have a warm fuzzy feeling about it, but there is a commitment there to do a whole range of things, so there has to be direction and policy from the university to do what they have said they are wanting to do. Ultimately it is up to us to deliver on those sorts of things, so we need resourcing. I would have to say that a lot of the propagation of this sort of literacy at our level is coming over and above everything else that you are doing. There are very committed people involved here, yet I think there is a perception that there is not the support. It may be at a department level, faculty level or university level.

Ms GEORGE—You make reference to some interesting programs in the USA at Tufts University and the Georgia Institute of Technology. What do they do that is so different to what is happening in Australia?

Prof. Meehan—That is in Ian's territory. They have embraced the principles of greening curricula. My understanding is that there are some courses for staff to learn a bit more about sustainability. Very simplistically, asking somebody who does not have much of an interest in this and feels uncomfortable working out of their own comfort zone, discipline or whatever it may be, to go and research something, understand it and see their industry or discipline in another context is a big ask for some people—particularly when we, like all the universities, struggle as far as what we are able to achieve with our resourcing and so forth. The material needs to be easily available and there needs to be some tuition to learn what it is all about.

CHAIR—It is professional development internally.

Prof. Meehan—Absolutely. It needs to be supported. I am not suggesting that everybody should do this, but I am sure there are key people within any program. It makes sense to me that, if you have people who are willing and have a bit of a fire in the belly about it, it is better to encourage and support them, and maybe they will also get everybody else on board. This gets back to the comment you made before that this really should have happened way before the postgraduate level. In graduate capabilities, they should understand where their discipline fits as far as sustainability issues are concerned.

Mr LINDSAY—Could you point to any jobs that have been created in the environment industry as a result of what you have been doing over all these years?

Prof. Meehan—Yes, I can. As I said, I am not a social researcher like Ian. The comments I will make are based on my experience, not surveys or anything else. I will go back to the environmental science courses again, because they raise a whole lot of other issues. We were asked to develop an environmental science course in the early 1990s. I am actually a physical chemist. I come from a department which has a 105-year history of excellence, particularly in analytical chemistry. Our skill base was chemistry—particularly analysis—and there were a number of people with a lot of expertise in, particularly, the monitoring and measurement of trace amounts of materials in all sorts of complex matrices—for example, soil, water, air and that sort of thing. We designed a course that had a broad amount of environmental education in it but also had a core that focused on what we were good at and what we knew would be a skill that would get these students work when they finished. That has proven to be correct. We have found a niche in the environmental monitoring and assessment area.

There is another thing, apart from the way we designed the course. I have a passion for integrated learning. We seamlessly integrate a lot of our undergraduate, honours and postgraduate projects with industry. We work particularly closely with the agriculture department and their various institutes, not just around Melbourne but in all sorts of regions of the state. We do a lot of collaborative work with them. This is feeding back into the way the course has developed, and we are finding that our students are getting jobs that traditionally might have been jobs for agricultural scientists. These students have some experience in soil and water. They know quite a bit about land degradation, and they are getting work in agricultural institutes both in and around Melbourne and in the regions. That is one area. There are others as well. The Environment Protection Authority in Victoria is another agency we work closely with. We have had a long partnership with them. In fact, a couple of years ago we had a formal partnership through the Western Port Action Plus Program. In that case, third year students effectively did what is called index and stream condition monitoring.

CHAIR—Was that seagrass?

Prof. Meehan—Yes, we were involved in the seagrass program. In fact, I am involved in the seagrass program. Each student had a reach of a creek or a river and they assessed it. Reports then came in for assessment. Then they went onto the EPA site on the Internet. Some of these students come back and they are working at the EPA.

Mr LINDSAY—You have identified specific jobs that have been created in, effectively, the environmental monitoring area. What about either side of that—the identification of potential impacts on the environment, and the remediation of those potential impacts? Can you talk about jobs in that area?

Prof. Meehan—Yes, I can give you a couple of examples. I will go back a bit. My role is developing research programs for our environment programs at undergraduate, honours and postgraduate levels. We work pretty closely with various institutions et cetera. Generally, the way it goes is that I will ask the students, 'What area do you particularly want to work in?' A case in point is that a couple of years ago we had a very good student who, from the day that she walked into the university, wanted to work in remediation of mining sites in Western Australia—she was that specific. I said, 'Oh yes, that's very good.'

Mr LINDSAY—She identified a market demand.

Prof. Meehan—She knew exactly where she wanted to go. I have another student who wants to work in Antarctica. The way I generally operate is that I ask the student what they want to do and then we try and facilitate exactly what they want so that they can get to where they want to be. Since there is not exactly a huge number of mines around Melbourne, I thought with the remediation side of it it might be useful for the student to learn a little about pest plants, invasive species and that sort of thing with some experts. So we spoke with the Keith Turnbull Research Institute. She did a project on a particularly nasty weed that is around the Ballarat area. In that, she learned a heap about plant propagation, managing weeds and so on. She is now working as an environmental officer for Alcoa in Western Australia, which is where she wanted to be, and she is going from strength to strength.

Mr LINDSAY—Earlier in your evidence you said, 'We let students pick what they want to learn.' They were your words. How do you rationalise that against what dinosaurs like me would think: that there should be structured courses in universities and the students should learn what they are told to learn? That is the old model. Can you tell me the benefits of the model you have and whether there is some contribution to jobs in the environment that way?

Prof. Meehan—The very structured model is still alive and well; there is no doubt about that. I was mainly referring to students with free electives. As part of this structure, there is an elective. The student comes along to us and we can say to them, 'Yes, you can do an elective. It is at 1.30 on Friday afternoon.' The student will no doubt say, 'That's impossible. How can I do that?' That was the driver for this model. We thought we had to come up with a flexible way of delivering something that students wanted that would not be subject to timetable restrictions. So that is there, all right.

We are remodelling our environmental science degree at the moment. It is undergoing a huge change, largely driven by information about where the opportunities are for graduates and what sort of people are coming to us. The current environmental science course has derived from a chemistry department. It has a very strong chemistry component, but it has a lot of other stuff as well. The chemistry component will stay as it is, but we are inviting input from biology—a fairly big slice of biology—geology and some engineering. This will add other streams so that students can move across them. The logistics of that are still to be negotiated, but it will happen next year, 2004.

Mr LINDSAY—If you accept that tertiary institutions—both the staff and the students—are more environmentally aware than most in the community, why is it that tertiary institutions are not embracing environmental issues within their course work, as your evidence suggests?

Prof. Meehan—It may well be that it is not seen to be as important as other issues. In my university the vice-chancellor has a strong commitment to environment and is very encouraging. With our course development we are big on graduate capabilities—very simple things. It needs to be there and we put it there; but it is there in the converted course. The environmental science people and the environment people in Ian's courses will say that sustainability is one of their student capabilities, but it needs to be in all courses.

CHAIR—Is it still very technical in the sense that it is looking at natural systems performance and impacts? I guess my interest, coming from a different faculty, is in how to apply those learnings, those insights and that capability in a business or legal context. What is the application of it beyond being a technical specialist? It is my view that is there is not a lot of broad application of the thinking into other streams. Why has that occurred, given that there have been environment education initiatives driven by governments? I have spoken at a conference of environment educators—there were hundreds of them—and I have been to schools where there is a lot of stream-watch work going on. There is an understanding about natural systems at a primary and secondary school level. Does it fall off at that point? Is it looking for a home at tertiary level, or does it open up other pathways?

Prof. Meehan—I think it comes off the rails a bit in the upper years of secondary school. There is an awful lot of confusion. In our area, environmental science, we get a lot of students in our program. They have been there for three days now, and I will bet a number of them are in the wrong place. They just have the wrong idea about what our environmental science course is about. It is very common when we have open days, career markets and so forth, for a student to ask, 'What is the difference between an environmental engineer and an environmental scientist?' That is a very common question. Defining an environmental engineer is easy; 'environmental scientist', though, can mean anything to anybody. They may be a social scientist, a geographer, a physical scientist, a statistician—they could be anything.

CHAIR—They might be an environmentalist who is interested in policy issues.

Prof. Meehan—Exactly. When these people come in they say, 'Whoa, all this physics, maths and chemistry. Goodness me, where are the animals and trees and stuff? That's what I came here for.' And I think, 'Well, goodness me, you're in the wrong place, buddy.'

CHAIR—What is the TER on your programs?

Prof. Meehan—It is in the mid 60s at the moment.

CHAIR—So it sits alongside biology?

Prof. Meehan—Yes, but I think that, in our particular program—being a sort of 'boutiquey' course—the TER does not mean a lot. The median TER probably means more. I have a real issue with this. A student will rock up to me and say, 'What's your TER?' They will say, 'That's the measure of how good you are.' It has nothing at all to do with how good you are. I say to them, 'Look, forget that. This is what we've got to offer. We've got a program that will set you up to get a job.' Our job rate is very good. Once we get rid of these—well, we do not get rid of them; they get rid of themselves—

CHAIR—The people who are in the wrong place?

Prof. Meehan—Yes. But, unfortunately, we are examined, found guilty and punished based on that part—the front end. When the DEETYA statistics were released last year, our environmental honours program, heavily integrated with the outside world, was ranked as the No. 4 program in the university, and there are a lot of programs. Environmental science was ranked 20th, and that is still a very good result. That was based on our customer satisfaction: they are getting good jobs and they are being well-trained in the areas they are getting work.

Ms GEORGE—Just talking about jobs: you predict that in certain sectors of the industry there could well be a shortage of trained and qualified professionals into the future.

Prof. Meehan—Yes, I think so.

Ms GEORGE—Would you like to elaborate on what areas you think are underperforming in terms of the required number of people to go into those roles?

Prof. Meehan—I think there are a couple of areas. Again, it is really based on my experience in particular industries. The food industry is a good example. I think it is absolutely astounding that a student can do a food science degree and be involved in an industry that can be causing absolutely massive environmental damage in a region, and be completely unaware that the processes going on in those factories are unsustainable. In recent years we have had a few international students. Our food science program has a lot of international students, particularly from Singapore. Many Singaporean students will say to you, 'We don't worry about the environment; we don't have one.' They have a strange idea about things. But it is a very common attitude.

I had some students come to do some programs with me two years ago. They came to see me and they were expecting to do something about rainforests, salinity and all the other stuff. Again, I got on my, 'What do you want to know?' and 'What would you like to learn about?' stuff. They found that very threatening. So I said, 'I'll tell you what. I'd really like to know something about the broiler industry in Singapore. They grow a lot of chickens up there, and chickens produce a lot of waste and that waste goes somewhere. Where does it go? What sort of impact is it having?' They were right into this and then, over a period of six months, I think they were about to take the broiler industry in Singapore by the scruff of the neck.

But the same could be said of things like canning industries and dairy production areas, which is an area close to my heart because we are now involved in a huge program to look at resource management across Victoria in the dairy industry, particularly waste streams. For example, a food science student working in a dairy processing company may be unaware—although they should be—that the huge volumes of liquid waste leaving that site are creating massive problems for a water provider—Goulburn Valley Water happens to spring to mind. They may be completely oblivious to the fact that that water does not just go to the waste water treatment plant; it actually has to go somewhere else, and that place is on the land. The things that are going in there at the factory level are going to have an impact on soil, which is going to cause long-term problems. They need to know about those things and to influence decision making within the company as to whether it really is sensible to be cleaning out all their plumbing with sodium hydroxide when they know damn well that it is going to cause a problem for the water company.

CHAIR—Most of the trends that you detect and seek to embrace in your course design and the directions in which the students work collaboratively are largely your observations based on anecdotal or first-hand experience. Does that point to a weakness in the sort of data that is available to you about employment prospects in the sector?

Prof. Meehan—Yes, it does—very much so. It is more than just collecting people working in particular areas.

CHAIR—It is competencies.

Prof. Meehan—Yes—it is what they do rather than saying, 'These people are environmental officers' when 'environmental officer' could mean anything. You see this in municipal offices. I work closely with three councils in Melbourne doing all sorts of different things. I know the environmental officer in one council is an environmental engineer, another one is a social scientist and the other one is an environmental scientist from our program who worked with the irrigated agriculture institute on waste management. This demonstrates that in these three places they have completely different environmental issues. In the one with the engineer they have a massive problem with discharge into Port Phillip Bay—it is a drainage thing. For the waste people it is litter recycling programs. The other issue is community education.

In many councils they have an environmental officer who does everything. They say, 'We need an environmental officer, so we will advertise for one.' They are not quite sure what they want the person to be able to do, and they say, 'You've got to write a strategic plan for the place and, by the way, the litter problem is a bit serious and we have a problem with pollution from such and such.' And so on it goes. We really need to identify what people are going to do and then that has to come back into the course development.

I guess another issue is the way many of the programs are developed. Environmental engineering is a good example. I am not too critical of them, because most environmental engineers are basically civil engineers—it is a civil engineering course with a smattering of environmental bits and pieces. By a bit of accident and design it all comes together and out the other end comes an environmental engineer. But there are no environmental engineers teaching these people. They are geologists, civil engineers and perhaps hydrologists, and they all put their bit in to massage this person into an environmental engineer.

CHAIR—Where is the profession going? Before we started the meeting, I shared a concern I have that anybody can produce an environmental impact statement; anybody can hang their shingle up as an environment consultant. There is no credibility testing or verification of capacity to carry out what is claimed to be their talent. Is the challenge for your profession and the nation more broadly to make sure that people of talent are carrying forward that brand so as not to damage the brand in the longer term?

Prof. Meehan—When we design courses, one of our concerns—and I am sure this is the case in environmental engineering—is that the students have sufficient wherewithal to get accreditation in particular associations and so forth. In our case it is the Royal Australian Chemical Institute, although the environment association—

CHAIR—Yours is hard science though, isn't it?

Prof. Meehan—Yes, it is. I am a member of the Australian Society of Soil Science. Around the university I would be regarded as a soil scientist, mainly because that is part of the research area I am in and that I teach soil science. Within the Australian Society of Soil Science you can be accredited as a soil scientist by putting evidence before that organisation. You can say, 'Yes, I have published, worked and taught in this area.' It is then assessed by a panel of eminent people around the state.

CHAIR—Your situation is probably more straightforward than what a lot of employers, consumers and the broader economy have to deal with. People claim they are ISO 14000 accredited. That process review and an undertaking to be a little better than you were last year might have a QA picture to it and you might not need any of the hard science that you talk about to deliver it. But how do people know? How do we communicate that message more broadly outside the hard science area and more into behaviour, product virtue and thoughtfulness and sensitivity about sustainability as a core corporate objective? How do we get that message out and make sure it is credibly delivered?

Prof. Meehan—It is quite a challenge, isn't it?

CHAIR—Up in Scandinavia you get a swan—the Nordic swan—stuck on your product if you are virtuous in their ideas of environmentalism.

Prof. Meehan—I think there needs to be proper accreditation through the environmental industry association. I am a not a member because they will not accredit our students, which I was a bit disappointed about. An institution like that accrediting environmental scientists or environmental people would be good. They may well do that at the moment but they certainly were not a while back.

CHAIR—I have a question about the training side. You talked about professional development within the university as an example of how to make environmental consciousness more of a mainstream course element across all of the faculties. Is there a need to more directly develop the educational horsepower to actually focus in on the hard science, on behavioural change—that must have hit Ian Thomas's buttons and that is where he has become involved—and on commercial application of sustainability as an essential business precondition for long-term profitability—or even on environmental law and how one can bring about change through the legal system? Is there a need to start breaking up this environment thing?

Prof. Meehan—Absolutely. This will sort of answer your question: about this time last year—as I said earlier, Ian and I worked pretty closely together in a lot of multidisciplinary exercises—almost to the day, I was in Vietnam. I was looking at trying to develop partnerships with different organisations, their environmental watchdog—like our EPA—and the universities, primarily for two reasons: (1) our environmental science course is going to be offered up there on our new campus and (2) I wanted to have a look at what the proposals were, what they were building and so forth. Our development in Vietnam is fairly well publicised.

This achieved a whole range of goals for me. I came back to RMIT and approached management with a proposal to take students from four different environment programs at RMIT to Vietnam. Here we had a wetland in a developing country, a very polluted water body, with people being relocated and they were going to build a huge building in the middle of a swamp. I thought, 'Wow. This is a bit of a challenge.' When this university is structured, how

will it operate in a sustainable way without adding to the problems already? How does it enhance the immediate environment and contribute to the community?

We had students from social science, environmental biology, environmental science and environmental engineering looking at a sustainable campus in a very tricky place. I brought the reports along, if you are interested. Ian and I wrote a report on how we went about it and what we did and the students wrote another report, which was part of their assessment. You have the student report. The report by Ian and me was passed on to our pro vice-chancellor of students as a model for a multidisciplinary program looking at a sustainability issue in a developing country. There is a lot of work to be done here as well, but this is an opportunity we seized upon to do something which we thought was pretty worth while.

CHAIR—It is focusing on the water and waste management issues and so on.

Prof. Meehan—We worked our way up to that. Around this time last year we advertised for expressions of interest from students. We got together the engineers who were involved in the program and the architect, Norman Day, and his staff, and had a number of workshops with them. Out of that we distilled the main issue for sustainable management and operation of the facility—water. When I was up there on two occasions that was certainly the message I got from talking to the research institutions and universities et cetera.

The issues that keep coming out are water and solid waste management. Some photographs have been taken inside Ho Chi Minh City landfill, which is not a pretty sight. Solid waste management is a massive problem for them, as is water—waste water and fresh water. These had to be the key issues we looked at. If you are going to plonk a university in the middle of a swamp, how is it going to operate sustainably, be of benefit to that community and not just add to the problems that they already have?

CHAIR—Do you have any closing comments that you would like to leave us with? Are there ideas or directions you think we should canvass further?

Prof. Meehan—I made the point before about environmental science—my area—meaning a lot of things to a lot of people. As much as we try, I would like to see what people do in environmental science and the roles these people perform made clearer to students in secondary and upper secondary school: what environmental engineers and environmental scientists do—all of them; social, physical, biological, whatever it might be. So there needs to be more education at that level. Certainly there needs to be support—

CHAIR—To clarify that, are you are saying that it would be helpful for us is if we lifted a bit of the fog on the language and tried to describe different streams of capability and the contribution each area makes to the community, the workplace, that kind of thing?

Prof. Meehan—Exactly—the roles that these people play. As I say, environmental science is very foggy, because it can mean anything. But we do not have any choice about that: the argument of what we call our degree was lost in 1991. Of course, it has undergone a metamorphosis recently, because it is starting to broaden for perceived needs. I do not know that that was a perfect process—I would like to see more attempt to look at the roles these people play rather than where graduates are going. I do not know that it is quite what we should be

looking at. It is what they do, and what they need to be able to do, to do those jobs effectively that is important.

CHAIR—Are you submitting those.

Prof. Meehan—I can supply a copy of that and everything else to do with that project on CD, if you wish.

CHAIR—That would be helpful, thank you. Thank you for time today. We appreciate your input.

[10.05 a.m.]

CHILLER, Mr Kenneth, Chief Judge, Case Earth Awards, Civil Contractors Federation

SNARE, Mr Richard James, Director, Projects, Civil Contractors Federation

CHAIR—I welcome witnesses from the Civil Contractors Federation. Although the committee does not require you to give evidence under oath, I should advise you that these hearings are formal proceedings of the parliament and consequently warrant the same respect as proceedings of the House of Representatives itself. It is customary to remind witnesses before they provide testimony that the giving of false or misleading evidence is a serious matter and may be regarded as contempt of parliament. Do you wish to make a brief statement or some introductory remarks before we proceed to questioning?

Mr Snare—Not in any detail—I just have a couple of queries and an apology. I apologise for the lack of appearance today of John Stewart, our national manager of the prequal system, who is conducting some sessions in Albury today and was not able to attend. He would have been very handy in fleshing out some of the details of the prequal system. I can certainly ask him to provide whatever materials you may seek from him about that. I have a question for the committee about focus. I can understand the focus of these hearings regarding employment in the environment, but the federation were a bit curious as to the linking of environment and heritage, because that can tend rather to limit environment. We have also been asked about 2004: Year of the Built Environment. I am not sure whether that comes under your bailiwick at all, but we have some mild concerns.

CHAIR—We can have a chat to you about that after the hearing. Our purpose today is very much limited to the terms of reference—

Mr Snare—That is fine.

CHAIR—so we will not have much free rein to go into heritage areas, although we are interested from a civil contracting point of view in how your membership assess and accommodate those requirements when they emerge in contracts and the like. Would someone like to give us a thumbnail sketch of your integrated management system, in the absence of our friend in Albury?

Mr Snare—In essence, with the national prequalification scheme—or the integrated management system—we sought to take the most apt parts of ISO 9000, ISO 2000 and ISO 14001 and put them into a consolidated package fairly specifically for the civil construction industry. We have a saying that our members build everything except buildings—roads, railways, tunnels, dams, mines, you name it; you have a civil contractor in there. Obviously sections of those standardised approaches had no relevance or no wide acceptance within the civil construction industry, so we have put together our own IMS. We looked at picking up those things that were relevant to an accreditation scheme of qualifications that our members would be happy to complete—because they are keen to move in that general direction—and that also had true relevance to the industry. That is being proved by acceptance by local government, state government and, to a limited degree, federal government.

The reason for that is perhaps the continuing dealings between the federal government and what we call the majors—the big 10: the Thiesses and the Lleytons—who are, for all intents and purposes, project managers for us, and still our blokes do the work. We call it prequalification because the idea is that you reach the standard, you get accredited, and then you go on the lists of approved tenderers for various authorities and the growing number of privatised and statutory authorities.

CHAIR—You mentioned acceptance, to a degree, at a federal level. Is that more to do with the big 10?

Mr Snare—No. It is more a case of the federal government being in a position where it mainly deals with contractors of that size. One of the areas we are trying to push is alliance contracting, joint ventures and so forth, which has proved to be not only a very good way of doing business but also quite profitable for all parties concerned. I mean that from the client's perspective as much as from the supplier's perspective.

CHAIR—So the CCF has gone through those ISO standards and other related requirements, picked out the bits that matter to your industry and then provided a how-to guide to your members?

Mr Snare—Yes. We provide full training for them. There is a full pack, templated documents and the whole thing, so they can develop a system of their own that is specific to their own company. That is then externally audited by the range of auditors that we have across all states now.

CHAIR—So on its own it does not deliver a premium on your contract prices; it is merely an entree card to some of the business that is looking for that level of performance from your members?

Mr Snare—What we are saying is that they are accredited. As such, they might be prequalified for certain contracts. Under the old rules the local state government departments—the DMRs and so forth—would say, 'All right, you've done a bit of work here and all that sort of stuff. We're happy with you. We'll put you on the list and, as far as we're concerned, you're accredited to do $2 million, $10 million or $50 million projects.' These things are a way of satisfying the demands of those major players in the industry by prequalifying members for those sorts of tenders. So if they have the national prequalification certificate or accreditation from the federation—which, I again say, is externally audited—they are automatically prequalified for those parties who accept the accreditation. As I have said in my submission, there are a growing number of state authorities, particularly—but also statutory authorities: water boards and so forth—that have accepted them.

CHAIR—Do the big 10 look for it as well?

Mr Snare—The big 10 look for it. The big 10 are also very good at getting the maximum out of our members for nothing.

CHAIR—What is the take-up rate?

Mr Snare—We have 1,250 full contractors Australia wide. We have around 400 who are either already accredited or undergoing the training, and that number is growing almost daily.

CHAIR—So it is about a third at this stage?

Mr Snare—It is about a third. When you bear in mind that our guys turn over in the range of $0-$500,000 through to $60 million, $80 million and $100 million, there is an extreme range of the industry covered by that. Sixty percent of our membership probably turns over less than $2 million a year.

Ms GEORGE—I am interested in your proposal about the role government can play in setting and enforcing higher standards and greater environmental awareness. You say, for example, that in tendering for capital works projects there ought to be a recognised prequalification in environmental management and training, which would act as an incentive to lift the overall capacity of industry. How would you see that operating?

Mr Snare—We are asking for the government of the day to encourage all its departments, either through direction or stronger encouragement, to adopt these qualifications, to recognise them and make them a part of their tendering process. That is the logical first step.

If a potential client is quite open in saying, 'We will only deal with accredited people', then people will go out and get the accreditation. That has the automatic effect of lifting the standard, lifting the bar everywhere. At this stage we have only been dealing with departments and the authorities, and so forth, and we have had some quite reasonable success in doing that, in lifting the bar. If we get some pressure from the other direction, from the government itself or from the parliament, we can tell these authorities that we have something that meets their new requirements from the government and everybody is better served by having better accredited people running it. For us, we have a code of ethics and so forth. We do not condone in any way the shoddy practices that have been around in the past, and that was one of the reasons that we went with the Case Earth Awards, because we wanted to lift the identity and the feeling of the whole industry.

I think it is a matter of the government, either through some direct form, through some legislation or regulation or from some very strong encouragement, putting these criteria, these accreditation things in place so that their own authorities are acting on what is out there, on what is available. At the moment, there seems to be a continuing trend, I suppose—and we are all aware of it; we do not shy away from it—of taking the lowest price. The lowest price is not always the most cost effective in the long term. If you get an accredited contractor who gets there, you are more guaranteed of getting a good job done.

Ms GEORGE—Would that not be the counterargument to regulation, that it is operating in the free flow of market forces—not that I necessarily agree with that.

CHAIR—I thought there had been a transformation; I thought there must be something in the juice.

Ms GEORGE—No, not at all. That is the kind of argument that you hear, isn't it?

Mr Snare—I use words like 'legislative' and 'regulative' in their broadest possible sense rather than in their definitive sense. I do not hesitate to say that the government needs to adopt that as a principle, as a philosophy first, and encourage its authorities to take that on. If that happens and it works that way, well and good. If it does not, I think the government of the day, the parliament, needs to recognise that the taxpayers funds need to be best spent rather than simply better spent.

Ms GEORGE—The other issue I just want to touch on is the database that is run by Environment Australia, and there is a similar one—one of many probably—run by the environment industry. To what extent are these databases a useful source of information, and would we be better served as a community if one authority took on the responsibility rather than having a proliferation of them. Do you have a particular view about that?

Mr Snare—My view would be, as is the case with many of these ancillary sectors—with all respect to them—that they try a broad brush approach. We need something more specific for industry. If they can tailor theirs to that, that is fine by us, and we can promote it. If they want to do it in conjunction with us, we have the online facilities to be able to put it directly to our members and so forth. I think the biggest problem with a lot of those is that they are not necessarily industry specific, and that is where they fall down. With regard to our industry, there is a lot of innovation that only comes to the fore if it is recognised. We need some kind of recording of that sort of thing.

Obviously, for a piece of machinery or a well-accepted practice, you can have an off-the-shelf solution in terms of environment control or anything like that. But, if you are talking about remediating a situation like the 150-year-old quarry that we looked at in Cairns a couple of years ago which is now premium housing or, if you are looking at putting a 1.8-metre pipeline through 26 kilometres of state forest, which is a job that we looked at for the earth awards two years ago, you do not find off-the-shelf solutions; you come up with some innovative thinking and those sorts of things. Ken can expound upon that, because he has far greater experience with some of the innovation that we have seen over the past 10 years. But there needs to be some way of creating an archive of that material and having it readily accessible. We have the ability to deliver it. I am not sure that at the moment we have the ability to collate it all.

Mr LINDSAY—I know this question is out of left field, but does environment ever come into the negotiations of civil contractors with their work force?

Mr Snare—Are you talking about it in terms of industrial relations negotiation?

Mr LINDSAY—Yes.

Mr Snare—I would hesitate to say yes. In terms of the environment, there are work practices that we have adopted, and some of that flows from the IMS. One of the things that we have said repeatedly in the past couple of years is that it is becoming more and more difficult to judge the Case Earth Awards, because what was extraordinary and innovative practice 10 years ago is now such common day practice that people are simply doing many of the right things. A lot of the environmental concern is coming from the workers. They are proud of their jobs and they are pleased to come up with solutions. They are very much aware of the environment through the toolbox meetings that they hold. All of our people that I have come in contact with hold

regular toolbox meetings and talk about the environment and the things that they do. It is not a formal part of any negotiation for awards or anything like that. There are accepted practices.

Mr LINDSAY—That is where I was going. I know that this is really frontier stuff but, if you are doing an EBA, are there opportunities to incorporate environmental matters into it?

Mr Snare—I would hesitate to say yes because, quite simply, each job is different and each job is the same. Take building a house: you have certain things you have to do repetitively and all that sort of stuff.

Mr LINDSAY—I do not know, but there might be a benefit to employees if, in their workplace, they do things that improve the environment. That is pretty general, but what if, for example, workers on construction sites got a benefit that translates into dollars by not using so much fuel or something? Is that being too difficult?

Mr Snare—I see a myriad of problems flow from it. Who is going to assess whether there has been a benefit? How much of a benefit is it? Is it coming from the same person who is going to have to pay for it?

Mr LINDSAY—Too early days.

Mr Snare—Yes.

Mr LINDSAY—Why is the earth award not the air award and the water award?

Mr Snare—The earth awards were simply a reflection of the environment. An example under the banner of the water award is on the Northern Gold Coast beaches, where one of our entrants effectively put in some 120 tonnes of sandbags to protect the beach. The sands are back, and it also had a couple of other little benefits like fishing and what I am told is a delightful left-hand break that the surfers are absolutely rapt with. The material used on those bags was the same material that covered the surface of the Olympic stadium for the opening. That was what the horses roamed across.

Mr LINDSAY—Thinking of the contracting industry, where are the emerging jobs in the environment?

Mr Snare—One of the areas that is neglected is rehabilitation and remediation. Of course, you talk about emerging jobs. We have a very distinctly ageing work force. I think a recent survey found that the average age in WA was 48.

Ms GEORGE—It sounds like teaching.

Mr Snare—We talk about where our next generation of operators is coming from. Those operators are obviously going to go into an environment where they need to be fully aware of their responsibilities to the environment and so forth. So the training of new operators and so forth is an area for employment of necessarily skilled workers. We run a national training scheme, and we have a scheme of carded operators. They get their red, white, yellow and gold cards for certain pieces of plant and machinery. The cards are recognised nationally. You could

not do it before but nowadays, if somebody gets their red card in Victoria, they can work on a site in New South Wales. It is immediately recognised. In fact, I had a call yesterday from a contractor at Eden who said, 'I'm doing a defence department contract and the bloke has lost his card. Can you send me some evidence of his card?' because they were about to close the job down.

CHAIR—No card, no start?

Mr Snare—No. This is a qualification card. We faxed it through. That is good because that means that they are insisting on trained, qualified operators to do this work.

Mr LINDSAY—Was that the naval ammunitioning facility?

Mr Snare—It may be. I did not go into too much of the detail.

CHAIR—It probably would have been.

Mr LINDSAY—Expanding on that, in your evidence you talked about—these are your words—the 'lack of willingness of some state governments and government departments to require higher environmental standards and compliance for their own goods and services.' Do you want to name the state governments?

Mr Snare—I do not think it serves any purpose to name them. It is one of those things that is of varying degrees, varying departments and so forth. One arm might insist on prequalification for their contractors, while another arm might make an internal practice of dumping rubbish that could easily be recycled.

Mr LINDSAY—But the problem is that you are lumping state governments which are doing the right thing in with those which are not.

Mr Snare—I admit I am applying a broad brush, but it is something that we should all be concerned about.

Mr LINDSAY—You mentioned that state governments could be doing more to reduce the volume of potential recyclable materials going to waste depots. I do not think there would be any disagreement with that. You went on to say 'even mandating policies for that'. Would you mandate policies across the economy or just in the construction industry area? What are you saying?

Mr Snare—I am reluctant to advocate any mandating of policies across any economy because it does not work.

Mr LINDSAY—Why did you put it in your submission?

Mr Snare—When I say that, I think you need to address it on an industry-by-industry basis. There are certain smart things to do in environment that are not being done as a matter of course at the moment. Regulation and legislation may be one way of doing it. Education and a greater emphasis by clients is certainly another way of doing it.

Mr LINDSAY—The other side of the coin is that businesses say to me, 'Governments are increasingly mandating things,' and some businesses suspect it is a way of increasing taxes. Governments are requiring all sorts of things: you have to pay a fee, you have to get a licence—or whatever. Would you agree with the view that there is some suspicion in the business community that this is happening—that, in the name of trying to do better things in the environment, governments are being less than honest?

Mr Snare—I do not think it is my role within the federation to make such a comment, with respect.

CHAIR—He is trying his best to lead you somewhere you will regret going at a later point in time. Are you done, Mr Lindsay, or would you like to regroup and we will come back to you?

Mr LINDSAY—I will go on a gentler tack, if that is the case.

Mr Snare—This obviously makes me more aware of what I should and should not put in submissions.

Mr LINDSAY—I warmed to the witnesses when they said that Cairns was built on an old quarry.

Mr Snare—Some premium housing up there is on an old quarry.

Mr LINDSAY—In relation to encouraging further development of the environmental goods and services sector, you talked about government incentive programs. Are they really effective? Does a government incentive program really make a difference when a contractor decides to do something—or should governments put their money in an area that might be more effective?

Mr Snare—In our view, the biggest challenge for a government is to make sure that whatever project or program it comes out with is in manageable—almost bite sized—chunks and not simply farmed out to one group to subcontract out. We have an increasing problem with billion-dollar projects being let and then that person breaking it all down into $5 million, $10 million, $15 million, $30 million and $50 million jobs and sending the work to us. We do not see why that should come directly from the authority—the state government or the federal government. The programs would work then because the people doing the work would be directly answerable to that program rather than to somebody in the middle. If a program, for argument's sake, focuses on rehabilitation and remediation, there is a lot of work to be done. We have the expertise and Ken could expand on some of the projects that we have seen where some absolutely destroyed environments have been brought back—using some very sophisticated methods—to very viable land.

CHAIR—So there is a cascading effect of a main contractor delivering up projects of a size that your membership ends up implementing. Do you think that the government or government agency should put the leg work in at the very beginning and be quite prescriptive in the contract specs—to make sure the ideas are carried forward, whoever gets the contract—or handle the divvying up themselves? Are you saying that there should be a little more work at that end rather than the obviously attractive billion-dollar project? 'Here is one crowd that have said they will deliver it; now go away and deliver it, and we only have to talk to one human.' That is

obviously attractive to whoever is handling the contract, but you are saying it is suboptimal in getting the outcomes you are looking for.

Mr Snare—I am yet to see any weir across any river deliver the full amount of water from one side to the other.

CHAIR—You could look at the Parliament House construction itself. I think that 2½ times the amount of concrete was paid for than was actually used—but that is a discussion for another day.

Mr JENKINS—I want to revisit the questions about the ability of state governments or governments to be the drivers for change. In doing that, I want to discuss not only the future but also the past. You said that many of the things that would have been seen as innovative 10 years ago are now commonplace because of the change that has occurred. Was it the situation a decade ago that a lot of that initial change came about because of, for instance, EPA regulations on projects, dust suppression, making sure that run-offs were well handled and things like that? Was it initially prescriptive regulation which led to the sector understanding that the best way to handle this was to skill up the organisations and the work forces? What was the order of events?

Mr Snare—I agree to a large degree that the prescription came first and then the cure was emphasised by the way the industry adopted it.

Mr Chiller—That is essentially right. However, I started out as a civil engineer. Because my specialty was in water, waste water and that sort of thing, I became a sanitary engineer. In later years I was known as an environmental engineer. That is just the phase. Having said that, it depends on your definition of the environment—taking it that that is the surroundings. In the consulting engineering practice I was in we always kept in mind protecting the environment, and that was 20 or 30 years ago. There is a feeling among some people that they conformed to what is now practice. Admittedly, it was not laid down then. There were no regulations about it. It grew from there. I do not know when the starting point was, but it got a lot of impetus by the fact that that was regulated by the government, the EPA and that sort of thing. But there was a lot of lead-up before that.

Mr JENKINS—Now the situation is that, because of the accreditation and management systems and the other work that is being done, there is a sense of frustration that perhaps the rest of the world has not moved on as much. Is that right?

Mr Snare—People are reluctant to take on things like quality and accreditation—not necessarily just straight quality but accreditation—because there may be some perception that it is not truly required. But it is like all regulation and legislation—it responds to and is enacted by a need, albeit a perceived need in this case. There was a perceived need 15 to 20 years ago when most of the EPAs were established and started to grind up. I can well remember in a previous guise and era reporting on a lack of success, the fact it was not working and that sort of stuff. All of these things require time, and that is starting to flow through. Some of the voluntary work that is being done, such as with the awards program in our industry, is starting to reflect the way that people are starting to take those things on as a part of their day-to-day business and activities. It is a pleasure to go around some of these jobs and talk to some of the workers who will take great pride in showing you things that they came up with just to stop a little run-off or something like that. I am sure Ken can also relate a couple of instances like that.

Mr JENKINS—As an aside, Mr Chiller's description of his career and the changing terminology of what he was is instructive for us as we come to grips with a definition for environmental goods and services, because he was doing it all along, and it probably was not recognised as that.

Mr Chiller—Yes, and I was not alone. A lot of people were, of course, but some were not. It is interesting how it has grown on the civil contractors. When we first started the earth awards some time 10 years ago, they were reactive to the regulations which were just starting to get severe on environmental impacts on construction projects. Now we find they are very proactive and they, right down to the workmen, are taking a great interest in it. Most civil contractors have their own environmental management systems apart from what is laid down in the contract. They have their own system which they conform to. In fact, most contracts ask for them to contribute those as they go. But there is certainly a growing interest in them. It is perhaps a little out of context to mention this now but, whilst there is still plenty of employment in the environmental industry—in on-site remediation particularly, clean-ups and similar things—the amount of employment in that industry is perhaps shrinking simply because of the professional indemnity insurance. Either the insurance is too expensive or they just cannot get insurance in that sort of work.

CHAIR—We found in another industry that the building awareness of environmental impacts and of treading a little more lightly on the earth is reducing employment because, as in your case, they are not making a mess to start with, so nobody needs to come in and clean it up. There is a bit of that going on.

Mr Chiller—They are also reducing because we have done a lot on-site. My firm did lots of on-site clean-ups, but gradually the major ones are disappearing. To be honest, the time will come when that will not be a popular phase because most of them will be done.

Mr JENKINS—Has the indemnity issue arisen because of the risks that the contractor has to take on regarding the outcome and the ability to rehabilitate or remediate? Why is it becoming a problem in those sorts of projects?

Mr Snare—I think it is a two-fold thing. Ken will have some ideas on this as well.

Mr Chiller—I was speaking from the consultant's and engineer's viewpoint when I talked about professional indemnity.

Mr Snare—The contracting side is where we suffer from a permanent confusion with respect to the other side of the table. The building industry is one thing, the construction industry is another.

Ms GEORGE—And civil construction is yet another.

Mr Snare—Civil construction is a major part of construction, but it is civil construction. You have a large and growing problem in the straight building industry, particularly in the home building industry, where people cannot get insurance and so forth, and we are simply reflected in that because we get lumped in with the same risks and so on that they have. It is becoming a very big issue from an industry point of view—and from the point of view of the Civil Contractors Federation, with members not being able to get anything.

Mr JENKINS—Can Mr Chiller talk about some of the innovative stuff that is happening with the earth awards?

CHAIR—I would like to hear about the awards and particularly about what won 10 years ago and what kinds of things win now. Also, was the motive for the awards not only to meet perceived performance requirements but also to create a how-to exercise, with award winners celebrating and publicising what they have done so as to inform other members of how they might tackle a job down the track? Can you walk us through some of that stuff?

Mr Chiller—No doubt they get a lot of publicity out of it, and it means a lot to contractors. They are very keen to get the awards; there is no question about that. There is innovation. When the civil contractors initiated the awards, they were really to encourage and then reward contractors for showing best practice and innovation in reducing environmental impacts.

One thing that has come out of it, a very significant thing that has happened with later winners, is that producing solutions to manage environmental impacts has resulted in a more efficient method of doing the job and saved money. There are many instances of that. To quote some instances of this last year, in the demolition of a big building in the centre of Adelaide—right beside the law courts—we saw very strict requirements. Because he had to control the dust and noise, the contractor developed a sliding curtain that went up outside the building and contained everything. That enabled them to do it much more quickly and effectively, and it has now become standard practice.

For little things like protecting pedestrians walking past, he came up with the idea of purchasing quite cheaply big shipping containers, knocking the ends out of them and putting them side by side. Other contractors are following that and it has become standard practice. A lot of things that have been brought about because of having to meet environmental standards and requirements have actually improved construction techniques and practices. You could go on forever talking about examples.

Mr Snare—One example comes to mind, simply because of the demonstration we have outside here today. On the radio this morning I heard that the purpose of that demonstration is to protect employment in these smaller companies. Moran Logging Company here in Victoria won a national environmental award from us in category 1, because that logging company sat down, applied the IMS and developed their own environmental management scheme for a logging company.

Mr Chiller—The judges had great difficulty with awarding an environmental award to a logging company, but they developed a system of logging which enabled them to do it all the year round, which saved a lot of money. It made things more efficient and was also a great protection for the environment. It was the environmental impact plan that they produced to do it that got the award, not the logging.

CHAIR—Tell me about how the awards go the other way—to form life in local government. 'You cannot make strawberry pie out of chicken excrement' was the phrase often put to me by contractors. If the design and the specifications are poor, are your awards and the work of your members contributing to better specifications and designs to try and avoid some of the environmental impacts that you have talked about? Even in road construction these days, you see that there is a little more thought given to whether you want to cut straight through a huge

hill and have all the environmental consequences and costs of that, where the guys doing the work can say, 'Hang on, have you though of maybe altering the design specifications for the work?' Does that happen?

Mr Chiller—Yes, that happens, particularly when you design and construct and when there are meetings between the client and the contractors beforehand, who get together and actually—

CHAIR—So you are at your best when you both design and construct?

Mr Chiller—Yes.

Mr Snare—The philosophy behind design and construct, at its best, provides the ultimate outcome. It is when the design and construct is all about—

CHAIR—Yes, 'We want this here; we want that there,' and you go and do it.

Mr Snare—But also shaving every dollar rather than shaving every shoulder.

Mr Chiller—That has countered many fallacies in the specs or documentation. In partnering projects now, the contractor and the client are working together throughout, so those problems are sorted out.

CHAIR—How do you compare the performance of your members with in-house construction crews on local councils and things like that? Is that friendly rivalry still alive and well?

Mr Chiller—As far as the earthworks are concerned, they compete with each other. Not only contractors but government departments enter, and they win in some cases.

Mr Snare—The City of Wanneroo in Western Australia—the city, not the contractor—is entering two projects this year.

CHAIR—Unless it rains soon, they will be telling you how to build things with no water over there!

Mr Snare—Probably. I mentioned earlier about the pipeline through the state forest. That was actually an alliance contract between the water supply authority and two contractors, because there were a number of roads that needed to be reconstructed and realigned to allow for this pipeline. The pipeline itself was about 40 kilometres and only part of it went through the bush. That proved to be a really good job in the way they ended up doing it. People came to the table and said: 'Okay, this is what we want to do.' 'Yes, but if we do that, that and that, you'll get X outcome.' 'Oh, I like that.' So they moved on with it. That degree of cooperation proved to be a boon in almost every aspect. I have not heard anything negative about it from anyone—and there have been some people who have wanted to find something negative about it. Somebody might come along and criticise it, of course.

Mr Chiller—As far as employment is concerned, a lot of these environmental requirements are certainly increasing employment, because it is making the projects more expensive. This is

borne out particularly in fauna overpasses and underpasses. We looked at a job this year where there was a fauna overpass built over a highway as part of a job to allow the animals to cross the road safely. The cost of that overpass was $5 million. So, obviously, that adds employment to a project.

Mr Snare—That was over a dual carriageway, wasn't it?

Mr Chiller—Yes.

Mr LINDSAY—Going back to your alliance contract, in an alliance contract all of the people involved try to share the benefits of the contract—

Mr Snare—They share the risks and they share the benefits.

Mr LINDSAY—Yes. Thinking of the environment, does that come up in alliance contracting and are there cash benefits that can occur under those contracts?

Mr Snare—I am sure that there are. I used the phrase earlier: 'It is a matter of spending the dollars the best way, not simply a better way'. Through better communication and better cooperation between client and supplier in alliancing, there are benefits all the way round. That is not to say that in other forms there is not that cooperation; it is just that we have found that it is a particularly good way of doing things, because everybody is more properly sharing the benefits and, therefore, more keen to work together to create those benefits. We joked last year about the number of fauna overpasses—or underpasses in one case—that we looked at, but they are becoming a very important factor. They are being put in by the authorities simply because there is the recognition that that is what they now need to do—not necessarily that they have to do it, but they need to do it.

Mr LINDSAY—Is the tertiary sector in Australia producing people who are appropriately qualified for your industry and people that your industry would seek to employ, or could the tertiary sector be more responsive to your needs?

Mr Snare—It depends which end of the tertiary sector you are looking at. If you are looking at the TAFE colleges, which are generally responsible for training our operators—though several of our branches have RTO status of their own—

Mr LINDSAY—What is RTO?

Mr Snare—Registered training organisation. They usually work in conjunction with a TAFE body. They have the capability to produce the operators and so forth. Our problem is probably encouraging people to go into that industry in the first place.

Mr LINDSAY—What about graduates?

Mr Snare—As we say, we employ engineers, and outside the large consulting firms such as Mr Chiller's experience. They are producing them all right. I do not know that there is any shortage of supply of engineers, is there, Ken?

CHAIR—They have been doing it for a generation, so there is nothing new; a new tag.

Mr Chiller—It varies sometimes in some fields but normally in environmental there is not at the moment. The interesting thing is that on the construction projects now most major contractors employ full time on-site either an environmental engineer, environmental scientist or environmental officer. In some of the big projects they have a fair degree of control over what happens. With construction techniques they have to get it okayed by the environmental man, who works for the contractor, before they can do it. In fact, some of them have a staff of more than one on a major project. That is something that has never happened before, and I suppose that is an employment opportunity that has opened up.

Ms GEORGE—Talking about employment opportunities, you mention in your submission the potential for growth in the environmental impact instrumentation systems and equipment. Just what is the state of play in that industry? Are we importing technology?

Mr Snare—No, we are actually selling. There is a firm called Road Services Australia in Melbourne which is exporting to the whole of Europe and the US in terms of profiling equipment and things like that. There is a lot of work being done by some of the major manufacturers in adapting or coming up with various ways. By the same token, we had an example last year where a West Australian firm building an underground cable from Victoria to South Australia had an idea of being able to dig it up in such a way and fill it back in and so on. They went to all of the major manufacturers and were told, 'No, it can't be done.' One said, 'We've had requests for that but it can't be done.' So they went back to their workshop in Perth and did it, and now Vermeer are most keen to talk to them. They did 180 kilometres of twin 220 volt DC line over a metre underground and built within a construction corridor of four metres.

Mr Chiller—It was a ridiculously tight restriction. They had to invent and develop this machine to be able to do it. It is a world first. That is another example that has been brought about because of the environmental constraint that they had to stick within this very narrow corridor for the whole 180 kilometres.

CHAIR—One last question before we wrap up. It is sometimes hard to trap the pay-off for being environmentally responsible, and the value in being so might have to come from being obliged to because you think it is the right thing. We have talked about that so far today. What I am interested in, though, is that the CPAs have done work with Environment Australia where they are looking at the way charts of accounts, costings and internal cost control systems can actually highlight waste disposal costs to very graphically illustrate the price of doing something poorly so as to encourage doing something that is less expensive and maybe more environmentally acceptable as well. Is that something your association would look to share with your members, that there is a way of capturing some of that activity based costing kind of idea and, where you can generate savings, look at claiming some of that?

Mr Snare—I am sure that we would be keen to look at it. I suppose my immediate thought was, 'They have come up with this way and who are they aiming that at?' Who is doing the work? That is what it comes down to. We are actually doing the work. We are taking that waste and we are putting it somewhere or we are recycling it. We are turning the concrete from an old building into subbase for a new road and those sorts of things. We are actually doing that work. Ninety-nine per cent of the building that Ken talked about in the centre of Adelaide was recycled.

CHAIR—So your members would claim that saving anyway.

Mr Snare—We are the ones who are actually doing it, yes.

CHAIR—I am just thinking about Mr Lindsay's comment about how you reward it and whether that got down to the tenderer saying, 'We will give you half of what we save and we will keep the other half if you're happy for us to change the way we go about this.'

Mr Snare—You are rewarded quite simply because 10 years ago they would have gone and dumped it somewhere.

Mr Chiller—It is making money.

Mr Snare—Now they are making money out of it.

CHAIR—Thank you very much, gentlemen. We will suspend the hearing until after lunch and we are off for a quick site inspection. Thank you for your time today. If you have any thoughts that come up reflecting on today, we would be happy if you would send them in.

Mr Snare—This document on the Year of the Built Environment will be of interest to you. The prime movers appear to be the Royal Australian Institute of Architects.

Proceedings suspended from 11.02 a.m. to 1.34 p.m.

[1.34 p.m.]

PEYTON, Mr Anthony Peter, Managing Director, GreenChip Pty Ltd

CHAIR—Welcome. Although the committee does not require you to give evidence under oath, I should advise you that these hearings are formal proceedings of the parliament and consequently warrant the same respect as proceedings of the House itself. It is customary to remind witnesses before they provide testimony that the giving of false or misleading evidence is a serious matter and may be regarded as contempt of parliament. Do you wish to make a brief statement in relation to your submission or some introductory remarks?

Mr Peyton—The preliminary thing I want to say is that I have been working in the environmental industry for a while and I have moved out of different parts of the industry. Initially I was in areas of correcting environmental damage and now I am more involved in avoiding it in the first place. On the question of environmental jobs, in the future I would like to see some environmental jobs decreasing in number because they will have less to fix and so there will be more jobs in the areas that are avoiding the problems in the first place. So people like me will be more popular and people who are fixing problems will be less abundant around Australia.

CHAIR—From what you have seen, how would you characterise the damaging activity that remains today compared with what you saw when you first came into the sector? Where is the bulk of your activity these days?

Mr Peyton—When I first started, the decision to start in that correctional area was more because my engineering qualifications led me into the more technical area of doing landfills, design and construction and also cleaning up contaminated lands in Sydney and Melbourne. Then I got into the waste management field, understanding a bit more about waste, and I am now involved in waste brokering, so I broker deals between industries that create waste and I get them to find another company to use it. I broker between two organisations to make sure waste does not go to landfill; it actually replaces virgin materials. I mostly work with businesses these days, making them more efficient and with cleaner production programs. My company is called GreenChip because not all companies can become blue chips. I try and say, 'Look, there's probably a dollar in there somewhere if you look hard enough. Whether it be by becoming more efficient or through your product selection, there will probably be opportunities in the future by changing your company over time.' I try to develop strategies with companies to gradually move them across to the green side of being commercially viable.

CHAIR—What prompts them to come to you in the first place?

Mr Peyton—I am a good salesman, Bruce! There are different niches that I fill. I will go to one company in an industry and do some work and hopefully get some successes and then go to their competitors and offer the same sort of service.

CHAIR—A 'here is what I can do for you' kind of thing?

Mr Peyton—That is right, yes. Sometimes when you knock on a door people do not trust you because they do not know who you are, but you then build up their trust and show that you have actually done a similar thing before—and that is generally how I get around it. The industry is not very big so your name gets around as well. You do subconsulting work for other groups and you gradually get involved in large projects as time goes on.

CHAIR—So, more often than not, are they not aware of the opportunities you see? Or is there a sense amongst your clients that there is something that can be done and you are the 'how to' kind of guy?

Mr Peyton—One of the things I have learned over time is that when you first go and talk to someone in a business about being green, you do not even mention the word 'green'. You develop jargon that suits their language so that you are talking in their business speak. But eventually you are a wolf dressed up in sheep's clothing because you really want to bring about some changes, but it is the jargon often with them. And that is what happens in business; they do not necessarily understand. If you say 'green' up front, they will think that you are going to cost them money, and so jargon is very important. What I have learned over time is to go forward with a business mind approach to resolving things. At the end of the day, when you have actually provided the solutions, they will come back and say, 'Hey guess what, this also had an environmental benefit,' and you will say, 'Good to see you recognise that.'

CHAIR—What is the government's role in promoting a greater emphasis on sustainability within the private sector?

Mr Peyton—One of the things about the environmental jobs is that we have to get away from thinking that we want to have more environmental jobs and instead have more 'normal' people, I would say—I am abnormal, maybe—or regular folk in any line of business actually seeing that no matter what they do they can also take responsibility for the decisions they make in their own work. I do not think there should be an industry called ecoarchitects. I think every architect in Australia should understand the basics of solar passive design. It is a simple thing really: when you build a home you should have simple things in place that minimise the amount of energy you use. When you are advising people on investing money, you give them the option and say, 'Did you realise that the ethical investments funds are performing commensurably with other funds,' so that client then knows that they have got options out there. It is really not necessarily saying that everyone has to become an environmentalist. If the government were providing that leadership and support and maybe bridging training for certain industries which have got their core business, and if they were also aware of some of the other sides of the environmental side of things in their core business, that advice would propagate.

CHAIR—So that would inculcate the ethos and virtues of sustainability throughout the organisation.

Mr Peyton—That is it. I think that governments are doing it now in their agreed purchasing policies, so there are things happening in local government, state government and federal government whereby they are looking at things. I did some work with Parliament House a couple of years ago with developing an environmental management plan. There is an awareness there at different levels of the bureaucracies that purchasing policies can make a difference. If that can go into the private sector similarly where you have the purchasing officer also understanding these things and having databases where they can actually look at things—the

specifications still met; the cost is still competitive; the choice can be made—over time, that sort of information will alter thinking and bring about some major changes.

Ms GEORGE—You make a point that existing environmental management systems are pretty well geared to the manufacturing production process but that in time you see these being developed for a company's products to provide better information about in-use and end-of-life environmental impacts. Can you expand on that a little? It is not my area of expertise.

Mr Peyton—What we have is a standard called ISO 14001. Companies become certified to that standard. I am not too sure of the numbers of companies certified; it might be a couple of hundred companies which are now certified. It is like a QA system: they have been certified and what they are actually certifying there is their activities. When they manufacture a widget, they will know what the emissions are to land and to air and to water and they will be able to resolve those and have targets set and actions in place to minimise the impacts associated around that activity.

But what they are producing might be a cigarette or it might be a high-polluting car. It may be a very ecoefficient practice to manufacture that high-polluting car but the car then goes on to the market and through its life it will have impacts. Or it might be a washing machine that uses twice as much water as another one, or a house design. So these are different things. The product that goes to market is not covered by that certification process.

It is the choice of the company to say, 'I will have certification on my manufacturing but now what I'm going to want to do is to also certify my product because then what I'll be doing is setting targets for reducing the energy used during life, and I will also look at certifying things such that I'm setting targets to reduce the impacts at end of life'—in terms of disassembly of a car, for example. We have seen things happening in Europe where 95 per cent of a car has to be recyclable. They are the sorts of things. This is not necessarily government; this is a decision that companies will make. They will want to get some differentiation in the market and therefore they will certify the product rather than the activity.

Ms GEORGE—Does ecolabelling do the same job in a different way?

Mr Peyton—It does. That is right. I think the Australian ecolabelling association—I am involved in that as a registered auditor—is one of the things which is almost, from a consumer's point of view, like the Heart Foundation tick. The standards that are set for that ecolabelling are quite limited.

For instance, if you were talking about this chair here, the standard might say, 'If this chair is going to have an ecolabel it must include at least 50 per cent recycled content in the plastic arm.' That might be the standard set for this product. So ecolabelling is quite specific. They have almost got to dumb it down because you cannot do a full life cycle assessment on every product. So what they will do is they will ask, 'What is the key factor associated with the chair?' It might be recycled content. 'What about this paint? I want low toxicity paints.' Therefore, the degree of toxicity will be the metric, I suppose, to work out whether that paint should have a label. It is one single thing, or maybe two things—for example, recycled content or toxicity—and that is basically it. Certification is a much more comprehensive program of certifying the product. It is not there now but I would think over time people will start looking at lifecycle assessment.

At the moment, people are concerned because they will be comparing themselves to their competitor and they might get the wrong answer so they do not want to publish the result. But those companies who are being positive will use that on the pathway to learning more about their products—not just how they manufacture them but the impacts of them through the course of their life and at end of life as well.

Mr LINDSAY—Earlier in your evidence you alluded to what we have heard before as a committee: that the number of jobs in the environment could in fact be going down because things are getting better. The committee has just been to the Australian Conservation Foundation and received a brief about how bad Australia is in many environmental areas. If their figures were to be believed—there were 140-something countries in that list—we were sitting at 133 or 134 on the bad end of the scale. How does that kind of information to the committee sit in relation to what you said to the committee about how you think the numbers of jobs are dropping?

Mr Peyton—In my submission I listed five categories of environmental jobs. One of those categories was called 'correcting environmental damage'. I think that is the one that will, hopefully, come down over time. I am not saying that it will; I am saying that, hopefully, it will because we will start fixing things up. The other four are at different points. My forecast is that environmental engineering will continue to go upwards, compliance and risk management will go upwards, preventing damage will go upwards, and educating and mobilising the mainstream work force will go upwards. My hope is that the first one—only the first one—will come downwards because we will have fewer issues with pollution, salinity and greenhouse issues and, therefore, those sorts of things will come down. That is also my hope when it comes to industrial sludges, and contaminated land and ground water—places like Perth are, obviously, a lot more susceptible to this sort of issue because of where the ground water comes from, but we know all that. But I certainly concur with what you are saying. Those sorts of figures are pretty startling when we know where we are as a country. I do not think I am necessarily conflicting with what those messages are; it is more that I am trying to break them down into categories of jobs.

Mr LINDSAY—In relation to your written evidence about the initiatives which you suggest could be put into place, you say:

> … these types of initiatives can be commercialised … To accelerate green projects and generate Environment jobs, the Governments should be considering all externalities when estimating the costs and valuing the public benefit associated with such subsidies.

What sorts of externalities are you talking about?

Mr Peyton—Let us take two examples: farming and the coal industry. We are talking about subsidies for farming in terms of supporting current industries that are causing problems. Take, for instance, subsidising rice growers and their use of water. Because there is a drought and there is not enough water to go around, by using all that water and supporting that industry we are taking water away, and we then have the salinity issue in South Australia. That is one example of an externality: there has been a cost to the environment that has not been reflected in the cost of the grower running that business.

Similarly, coalminers might be very ecoefficient in the way they pull coal out of the ground, but they will not necessarily recognise the impacts of emissions to air and the subsequent causes

of global change that we are possibly seeing. That is the thing: there has been such a debate over the last 10 years about whether that is related or not. I do not know; I just ask a lot of questions and try to find out more about it, rather than say that there is no connection. That is an example of an externality as well, which I think is not necessarily reflected in the cost of coal power that is sold to a consumer.

Mr LINDSAY—You told us earlier that, when you go to your customers, you do not speak green speak; you speak business speak. In business speak the thing out there is triple bottom line reporting.

Mr Peyton—I have heard it mentioned.

Mr LINDSAY—Do you talk about that and sell its benefits?

Mr Peyton—I think the triple bottom line is a scary thing because of its social arm. The debate and the maturity of the environmental industry is probably 20 years ahead of the social in business. There are things in the social that you put under the banner of philanthropy or in terms of the staff members—they have that human rights side of things locked away. But is that what your bottom line is talking about, or is it talking about more than that in terms of the way corporate governance type things come in? We are finding that that is coming into it a lot more. There are probably a lot of other things in the social realm in terms of their obligations in relation to child labour, their investments overseas or their purchasing policies.

CHAIR—It is about being a good neighbour.

Mr Peyton—It is, but it is also about knowledge. If you do not necessarily know what you are buying and you are mostly buying because that is the way you have always done it, are you exerting all your responsibilities in that matter or do you have your head in the sand a little bit? We are seeing that environment reports are quite prominent. There are more environment reports coming out.

When I worked in companies like Pasminco and they said, 'What are we going to do for social?' they started talking about Aboriginal rights, mine sites and so on. So things will come in. But they are not very comfortable reporting on it because of the metrics to report against. The benchmarks are not comparable. In environmental you can: you have the NPI, you can do all these different metrics, you can look at your pollutant loads and you can measure it. With social it is very difficult to report on it; therefore, people might say, 'Is it dollars per employee spent on philanthropy, number of people who have lost limbs or number of people we moved off the land?' They are not comparable between the textile industries and the mining industries; therefore, it is harder to compare. So I think there will be a bit of hesitation on the social side of things.

Mr LINDSAY—When you sell your services, is triple bottom line ever talked about?

Mr Peyton—Not very often, no. Double bottom line is—environmental and economic—but social does not very often come into it.

Mr LINDSAY—Do you deal with small companies as well as large companies?

Mr Peyton—Yes.

Mr LINDSAY—What sorts of incentives do you think small companies should be given in relation to their responsibilities to the environment?

Mr Peyton—The regulations are in place to make sure you keep them in check, but usually it is dollars that will give them incentives—that is the thing. The role of government is not necessarily a subsidy thing; it is more for them to go on searching for opportunities, seeing whether there are commercial gains to be made. When I look at small companies I see that it is generally the dollar that speaks.

Mr LINDSAY—Do you think the ecolabelling that Jenny touched on will ever take off?

Mr Peyton—It is going to take a while. Some companies are a bit miffed about the fact that they are being measured on one small standard. The fabric might be beautiful but all it is measured on is the amount of recycled plastic. So I think people are seeing that it is tough to have a generalist labelling system. I am still pushing; I am still marketing my service to offer that.

Mr LINDSAY—Would your advice to the committee be that the standard should be looked at again?

Mr Peyton—No, not necessarily, because there are a suite of standards that are commensurate with the New Zealand standards and the ones in Europe, so I think we are generally getting consistent—

Mr LINDSAY—But you said that you did not think it was going to take off very quickly because it had limitations. We all want it to take off and be effective, so you are really saying that something should change.

Mr Peyton—I do not really have an answer on how it should change. Some companies that are more proactive than others will adopt it regardless.

CHAIR—It will be an evolving thing, though.

Mr Peyton—Hopefully it will. For instance, if a company like Amcor says, 'Yes, I am going to sign up,' then Visy will come on board. If Arnotts sign up, their competitor will come on board. It is going to be market forces that drive it but hopefully those big leading companies will step up and take the label.

Mr LINDSAY—Do you think the label would contribute to more jobs in the economy?

Mr Peyton—If more people like me were going around auditing it—but that is not a big volume thing. Research is probably the main directly related area.

Mr LINDSAY—As a self-confessed marketeer, do you ever think about opportunities in the countries to the north-west of us where the environment is in a dreadful state?

Mr Peyton—I see enormous opportunities.

Mr LINDSAY—What could Australia do?

Mr Peyton—Working with a business, even if they are a fairly well-run business you will still be able to walk in and pick up something to make them more efficient and greener and save them money. If you take yourself to somewhere in Asia and look at the same sorts of things, your list of opportunities is probably as long as your arm rather than a few. It is reasonable to expect that you can help them as well, because often solutions are management changes rather than capital things; therefore they are low-cost changes. That is the thing about trying to get that message out. If you go to Asia you overlap with cultural things as well, but I would have thought there were enormous opportunities.

Mr LINDSAY—So your advice is that there are Australian and international jobs in the environment?

Mr Peyton—Absolutely—massive opportunities.

Mr JENKINS—You championed an environmental effects database underpinning the environmental assessment. What would be in that database?

Mr Peyton—We are looking to get to a point where we have a database we feel reasonably comfortable with. In the interim it would probably be a mix of European and other international data as well as Australian data. For instance, on aluminium the database would say that, if you were to produce a tonne of aluminium and use that to build a car, the aluminium component—smelting it and so on—would have certain emissions. You would be able to pick some of those critical things—high-energy things or more toxic things—out of the database and say, 'Let's look at those ones as a priority and therefore let's Australianise those critical ones so we definitely know that those aluminium numbers are Australian rather than UK.'

I think really you are just building that because we have different electricity sources, land use patterns, temperatures and so on. You have got situations in cold countries where they are running a boiler and there are totally different emissions than in a warmer country where you are running a boiler because the ambient temperature is a lot warmer. That is a simple example of the fact that Australian data will not be the same as international data.

Mr JENKINS—You mentioned in your submission the work that Ford did with its suppliers about raising standards. I accept that we would not clearly see any employment coming out of that in smaller enterprises, but there must be not only a switch in attitude but a switch in responsibility for the way people tackle their work to comply with the standard.

Mr Peyton—I mentioned the medium-size companies and how you might see some people wearing a different hat. You will probably find that the production manager has attended a three-day training program on how to manage an environmental management system and therefore it will not necessarily be a new job, it will be a new role for that person. The Ford Motor Company, which is a very large employer, has probably got three or four, and that is three or four professionals, employed in its environment centre that services all the Asia-Pacific region. I was making the point that in terms of the EMS side of things and services to

companies you will probably find that people will be trained up to take on roles rather than there actually being a new appointment in a small or medium company.

Mr JENKINS—So we are at a stage where we are not really arguing about more environmental jobs but arguing about jobs being done environmentally.

Mr Peyton—That is right. That is why I think we should not worry about the number of jobs. If more and more is being done by a wider group of demographic that is environmentally positive, that is what we should be aiming for, not X number of jobs.

Mr JENKINS—Your other message is that we should be trying to encourage outcomes that are positive environmentally as well as the systems type approach.

Mr Peyton—Yes, but hopefully the systems will lead to outcomes. If the system sets up targets and allocates certain budgets that would not otherwise have been allocated to actually achieve goals, you have brought about changes compared to the benchmark three years ago. The system is basically a pathway to the achievement of something, not just for the sake of having more paperwork.

CHAIR—The Ford example is an interesting one in that we have heard that business to business specifications and supplier relationships probably are a more effective driver of change than individual consumers. Is that your experience? Would you subscribe to that view in terms of bringing about behavioural change?

Mr Peyton—Supply chain pressure is certainly powerful, and that happened when I was working with Telstra and developing a process for green purchasing right through the supply chain. That is a very powerful thing. But I think it has to be complemented by the demand side, which is us when we go to the shops and we buy things. There has to be that side of things. I just came from the festival that you know all about, the sustainability festival—

CHAIR—Government put some money in.

Mr Peyton—Thank you very much for that. It was a festival that was run by volunteers last weekend at Federation Square. We had 40,000 people come through, which we are rapt about. I am just coming off that cloud at the moment. It was great. It was a festival that was the demand side. It was very much saying, 'There are a lot of choices out there and we are looking at the way to build your home, the way to invest your money and the way to drive your car.' We had an electric car there. We had all these different wacky things but also very simple things about the trees you plant to make your garden water efficient. A lot of people came along not knowing the festival was on but we count them as our own because they still passed by the 100 exhibitors and went to the seminars and the film festival and they were engaged. What we had there was a great festival that had compelling messages about the fact that you can change your life very slightly but still be acting positively. That is really what the festival was all about. That is the demand side. We need more of those sorts of events to get people saying, 'Okay, I can make simple choices.' And the supply side chain is very powerful, but I think both have to be working in unison.

CHAIR—We spoke about the Nordic swan last time we met and how in Scandinavia it was shorthand for sustainably produced product. Do you see the ecolabelling moving that way?

Does that necessarily require the adoption of some standards, which goes against some of the ISO 14000 thinking?

Mr Peyton—The standards are quite simple, but I think that at the moment they are appropriate because that is really all you can do at this stage without going through a full life cycle. I think it needs a lot of marketing behind it and a lot of elevating of its credibility. It needs some big companies to take it on and for them to be used as the case studies to say that this is something we should go for. That will evolve over time, and the standards will evolve as well. There are a lot of issues now with native timber versus plantation timber, and there is that whole debate. It is a very emotional topic. If somebody is going to come in and have an ecolabel on timber, it would want to be right.

CHAIR—Your issue about the externalities becomes relevant there. A private plantation company deals initially with its own fire risk, yet the public resource, the taxpayers, silviculture issues, roading and all those kinds of questions—

Mr Peyton—Forestry is a complex beast. At the event on the weekend we had one company that thought it was sustainable forestry and another company that thought it was not. Over the course of the three days we had an assault and a theft because these two companies were that emotional. One company was collecting names and addresses of interested people, and the other company pinched the list. That is how emotional this is.

CHAIR—Next year it will be the sustainability and love festival. We will try to help people get along with one another. The EMS stuff interests me because it is often viewed as a pathway for individuals to bring about change in their own practice. ISO 14001 means that a company can be certified, but it might just mean that they will be less rotten next year than they were this year. Is there some threshold level of performance that governments or somebody should be putting forward to make sure that the credibility put into those brandings is sustainable itself and not hijacked for its market value?

Mr Peyton—I think that ISO 14000 alone is probably not enough to assess a company, and that has to be recognised. It is the same with the QA standard. Just because they are certified does not mean you will get a good product; it means you will get a consistent product.

Ms GEORGE—It is the same with affirmative action: you can tick the box, but what you actually do on the floor might be quite different.

CHAIR—It means you are a little less rotten than last year.

Mr Peyton—That is right. If you are coming off a really shocking benchmark and you increment downwards by one per cent per year—when actually you need step changes to bring yourself down much further, which is what we want—that has to be reflected in something other than the ISO 14000 standard. Ecolabelling assists in that regard; even though it is simple, I think it does assist to complement the ISO 14000.

CHAIR—Have you played a role in fleshing out—through ASIC and other governance structures that are now charged with having environmental reporting as part of corporate reporting—what that actually looks like and what it should include, so that it is useful information for shareholders and consumers?

Mr Peyton—I have been involved in a number of corporate reports, but not with government. I have been involved with industry wide things, like when we put together a framework for the beverage industry to report on their environment performance. Similarly, I have done that for individual companies like Pasminco, but not for a government agency. I know that in Victoria now government departments are being asked individually to come up with an EMS, and they are going to have a reporting structure through that. Obviously, the work I did with Parliament House in Canberra was the same sort of thing: coming up with a framework for reporting. But I would not call it triple bottom line reporting. Going back to Peter's comment, I think it would still be more on the environmental side of things that you are likely to see reporting over the next few years.

Ms GEORGE—Just going back to the issue Harry raised about the future for green jobs: how would you then get the ABS or another official body to quantify that? It is easy if you are looking at new industry growth but, if you are looking at the existing work force becoming more attuned, do they fit into the parameters of environmental jobs?

Mr Peyton—I think that is right. It is difficult with ABS figures when someone is wearing three hats: what industry do you put them in? If you are talking about a finance company, they are under the ABS's finance figures. It is different if you are talking about an individual within that company who is an environmental person. With, say, Telstra, where you have four or five people employed, those people are not classified in the environmental jobs figures; it is more the environmental consultants, the people who do waste water treatment plants and so on. So it is very difficult.

So, in terms of your mandate to come up with some sort of metric over here, I am talking a lot over here, which is maybe hard to quantify. I would like to see the proof of the pudding: the fact that we are a lot more proactive as a business entity at doing things rather than saying how many jobs brought that about. It is also the training. If you are going to engage people within companies to have the full-time presence of a person, they have to be trained. That might involve environmental mentor numbers going up because they are providing ongoing advice to individuals within the companies who are making these environmental changes.

Ms GEORGE—Would you make any specific recommendations about how one defines the scope of the industry and what fits into those parameters?

Mr Peyton—It would be good to track the volunteers over time. It would be good to be able to track environmental volunteers through the ABS figures, because there is a lot going on. We had 150 people last weekend. That was over three days; so be it, they were volunteers helping out.

Ms GEORGE—Clean up Australia?

Mr Peyton—Yes, Clean up Australia. You have got Landcare, you have the banks now putting money in to support volunteers through Conservation Volunteers Australia, which has a database of projects. I would have thought that those numbers would be startling, taking into account Green Corps and all those sorts of things. It would be useful to understand just how much is going on and to put a dollar value on it. You have records for some of these activities, but we need to get a full picture of how much is actually going on. A lot of these things come

under 'No.1, Correcting environmental damage'. It is hard to quantify volunteers' contributions, but I would have thought that the numbers would be worth tracking.

CHAIR—In terms of the sustainability ethos—treading a little more lightly on the earth while we pursue our higher living standards—do we need to look at having that as a key unit in the training for membership of the Institute of Company Directors? Do we need to make sure that the MBA courses, the university streams and the professional bodies see that to be as important a risk assessment and long-term viability question as cash flow and indemnity? Don't we need that to work through organisations so that that literacy is there amongst everybody?

Mr Peyton—There is absolutely no doubt about that, and that is a most powerful thing. I was talking before about architects and financing and so on. If we can get the CEOs to have this as part of their personal passion—such as at VicSuper, where the CEO is personally passionate about it—it will bring about change. They will then believe that, for the long-term sustainability of the company they have to be playing the game. You have got to be at least putting your toe in the water—not 'greenwashing' it; actually doing it properly. Therefore, to get through those MBA courses, you would have that sort of input, and it would not simply be seen as an elective—a question of 'Do you want to take up environmental management?'—but as part of the core factor of running a business. What you are saying about liability does not only apply to contaminated land; it also applies to corporate governance—it is very diverse in terms of how companies might be affected.

CHAIR—Mr Jenkins and I were on an inquiry a few years back and we had the head of Treasury speaking with us. I put it to him that we did risk assessments on our currency, we did risk assessments on climate and on drought and things like that when we looked at national wellbeing; we did it not only in terms of the impact on the economy but also in terms of the impact on the government being able to afford what it does; but we did not do risk assessment on the health of our natural systems and see where that might take us. Corporate governance would be supported by government itself taking a lead on that kind of thinking and showing that, if it is important at that level, it is important at the company level.

Mr Peyton—When you have a large, individual project, you will have an environmental effect statement looking at all those sorts of things, and government will be working to make sure that they are taken into account in the overall project. The problem arises when you have smaller, disparate projects—little projects, little farms—where none of them have an environmental impact statement. It often slips under the carpet at the overall regional level, like in the Mallee, where individual farmers will contribute to one problem. It will not quite get picked up, because each individual project is not big enough but, in the grander scale, it is significant. In that sense, business is not really involved, because you are talking about individual companies. Government can certainly be involved, but this comes back to the externalities as well. When you are doing a risk assessment, it is not just financial risk but it is also looking at the overall risks associated with trying to build those externalities into the risk assessment process so that everything is being considered; for example, in terms of a drought and the consequences of drought, why not link it to climate change, just as a hypothetical? Just say, 'If climate change was causing the drought, can we then say that there is some relationship between the two? If so, what is the cost of the drought and the cost associated with climate change?'

That is not to say that it is absolute. But from a hypothetical point of view, there is a connection there. Let us link the war on terror to fuel. I saw George W. Bush come up with $1.2 billion to invest in hydrogen vehicles to reduce the reliance on foreign fuel. Was that an environmental agenda? I do not know, but let us take it as such. There are all those connections. There is no doubt that there are connections between the food we eat at the table, me and salinity. I cause it, but I do not know about it. The role of government is to say, 'When you buy that food, you are causing salinity.'

CHAIR—You mean scaling up individual behaviour to almost landscape scale implications.

Mr Peyton—Absolutely, and wider. Let the community know. Just as they have been told about terrorism, tell them that as individuals they are contributing to various problems. That is raising awareness of the demand side. They will be a bit more conscious about the products that they buy and that will assist those companies who are green. Therefore, that will increase the environmental jobs market, because environmental research will be done to assist those companies, and all of a sudden we will have environmental jobs.

CHAIR—Just do not tell Southcorp about the link, after yesterday. Your submission is a credit to you. It is one of the best I have seen in seven years in setting out the themes and some ideas. Congratulations on that. It does speak for itself, and so does your work history, but, frankly, anybody can hang their shingle out as an environmental consultant. Do you see some issues around the knowledge brokers in this area not having any real standards to meet to claim that credential?

Mr Peyton—I am a civil engineer. I have graduate diplomas and so on, and I have stuck with the Institution of Engineers. I understand that the Environment Institute of Australia and New Zealand is thinking about having some sort of a rating scheme. I think that would be well worth while. I became registered in Australian environmental labelling because of my work history. That was reviewed by an independent panel. I think it is extremely important to make sure that the people out there giving the message are reputable, but at the same time I do not want to limit it. If everyone is talking generally in the right direction and there are discussions across the dinner table, we are still moving forward; we are still advancing the goal.

Ms GEORGE—I want to follow up the issue of ethical investment funds. In a global sense, can you argue the case that their rate of return is comparable with other funds that might not have the screen on where they invest?

Mr Peyton—As far as I know, it is. One of the funds has been tracking at two per cent above the All Ordinaries Index over the last three years, so the returns are higher than those you would have received if you had invested in mainstream stocks. In the last 12 to 18 months it has been a shocker. The ethical investment funds have dropped four per cent, but that may be competing against other funds that have dropped six per cent. There will always be the ups and downs of the share market. In the US and the UK, 15 per cent of funds under management are screened. In Australia we have only about one per cent, so I would have thought that there was massive room for movement. The problem is that there are not enough companies in Australia to invest in. When I was chasing sponsors for my festival—I was running an authentic festival—I ran out of companies to speak to. Once you have spoken to Pacific Hydro and a few others, you run out of stock. The problem is that, maybe because of the size of the market, there are not enough companies to invest in.

I am trying to encourage these fund managers to go into green property. If you went to 60L, you would have property trusts that were focused on funding specifically that sort of building. Property trusts are one thing; small capital or venture capital is another. I think we need funds looking at venture capital. If a small start-up company has a special double-glazed window system that could be in every house in Australia because it costs half what a normal window costs, let us get it up off the ground and give it seeding through venture capital. I think that the products offered at the moment by the fund managers are quite limited. They are also more mainstream. There is still a lot of confusion out there about the best of the sector and so on, but I think there is plenty of room for improvement in terms of the number of funds under management.

Mr LINDSAY—The secretariat provides us with suggested questions. Here is a suggested question—

Mr Peyton—Do I barrack for Collingwood? Yes.

CHAIR—We will try to ignore that.

Mr LINDSAY—Even the code of football is wrong.

CHAIR—It does not undermine all your judgment.

Mr LINDSAY—This is a bit out of left field in the discussion we have been having, but it might just introduce another area of interest. How willing do you consider companies would be to have comparative environmental performance assessments conducted on their products and their competitors' products?

Mr Peyton—I do not think they would be interested at all unless they knew they were at the top of the tree.

Mr LINDSAY—So we should not go there; is that what you are saying?

Mr Peyton—Companies are doing it through public environment reporting because they have decided they are going to do that, but they are not comparing themselves directly with the competitor. If a shareholder picks their report up and then looks at the other company, they can compare them. Sometimes a company will report their performance on X tonnes of pollutants and another company will say X tonnes of pollutants but, unless it is linked to production, you cannot compare those two numbers. So they will design their numbers to hide them accordingly. They will still do an environment report, but they will not actually tell you what they are doing compared with their competitors.

Mr LINDSAY—Well, secretariat, there is the answer to your question.

Mr Peyton—Are you hoping that maybe they will be more willing to do it in the future?

Mr LINDSAY—No, I was just interested in your view. You put a realist view that it is not going to happen.

Mr Peyton—I feel that we will see it, but we are not seeing people rushing to be transparent in the way they are being environment friendly, because it is putting skeletons out there.

CHAIR—With your life cycle assessment idea and the default carbon accounting framework that is in place, there must be a range of available data there now that could start that process.

Mr Peyton—I would have thought you could bring things together. One of the problems with the environmental area is that you have conflicting things. Whereas one thing might be very greenhouse friendly, it might use stacks of water or it might be highly toxic. So sometimes you have to try and bring these together to make a holistic judgment on something. I would have thought that, if something is being done by the Waterwise program, it would be very much focused on water. It is the same with the greenhouse calculators and so on. It is trying to work out, for an independent person, how you can bring those data sets together so that you can marry them. That is the difficult thing. When you bring in European data—I gave the example about the aluminium—you need to work out which are the critical elements in that database that need to be Australianised and which are the noncritical ones that we will just take by default in the interim. The academic institutions—the RMITs and so on—are doing this. They are doing life cycle assessments now, so it is not as though we are starting with a blank sheet of paper. But I think there is work to be done to improve the data we are using to be a bit more substantive in our results.

CHAIR—We received evidence about the Nordic Swan and how, up there, water issues are crucial and landfill is available in abundance, so there are no points for recycling.

Mr Peyton—It does not reflect the local conditions.

CHAIR—I do not know how to describe this but I will have a go. I was in an absolutely electric meeting of accountants earlier in the week where we launched an environmental accounting report. The idea behind it was that how one organises one's chart of accounts and costing arrangements can either mask or inform the kinds of things you have been talking about. Are you familiar with that? Would a distinction between utilities—$4 million broken down to what you are actually paying for energy and that part of the production—be a step forward?

Mr Peyton—Absolutely. Generally, what I do with companies is take a traditional accounting system that is very much on silos: you have a budget for the accounts, a budget for the production, for logistics and so on. I actually go right across that and look at activity based costing. When you are looking at the full cost of waste, the waste disposal cost is probably a tenth of the full cost of waste because of the loss of raw materials. That is a fairly fundamental thing that, once again, an accountant should know about, particularly in a manufacturing presence. This applies even from the point of view of some fruit growers I am working with at the moment at Swan Hill. They have a simple business of planting a tree and picking the fruit. That is the way it might seem but, by doing activity based costing, they recognised that every tonne of fruit they lost cost them $2,300. Just by giving them that information, I have made them a lot more aware now, because they thought it was going to be a lot less than that.

CHAIR—This is a joint Commonwealth, Environment Australia and Victorian government EPA initiative that we launched last week. It had case studies in it. There was a plastics manufacturing business and there was a professional services area. The next step is how to convey those 'how to' tools more broadly and look to the finance people to say—

Mr Peyton—Yes, but I think there are two levels there. You might come up with accountancy standards; therefore, they are written for accountants. I try to do a second tier. I get the back of an envelope, and I sit down with a production manager and just write it all down. We have to try and encourage both of those because otherwise the accountant will not get around to doing it. They still have to be part of it, but if the production manager can sit down, quickly work it out and say, 'The cost of waste is 10 times more than disposal,' all of a sudden their awareness is right up. They are now in a different mindset; they are now looking at waste in a completely different way.

Ms GEORGE—Do you follow on with training when you work with these companies or do you just provide managerial advice?

Mr Peyton—It depends on the service. Sometimes it will be a change workshop, and sometimes you might do toolbox workshops where you sit in the factory and do a root cause analysis. I ask the questions; I do not give the answers. The people who are on the machines come up with answers. But, if you facilitate that program, it is really workshop/training where they become skilled in not just running the machine but knowing how to identify better ways of running the machine. It is skilling up in the process of diagnosis rather than learning how to press a button. The training can involve awareness training at a management level to understand the opportunities, but it can also involve on-the-floor toolbox training.

CHAIR—Ms George pointed to the occupational health and safety movement or culture—call it what you will—that has swept through workplaces and into the broader community. Would a duel strategy model of prescribing minimum, 'must do otherwise you are breaking the law' requirements, complemented by saying, 'Hey, positive workplaces can support improved productivity,' be the kind of thing you think would work?

Mr Peyton—It could be, but health and safety has been successful because it involves an individual who is interested in their safety. It is very much a personal thing. If you are saving some raw materials or reducing waste, the boss is the winner because they are now more profitable. If you get, say, a bonus for the Christmas party, then you are a winner but, depending on the culture of the organisation, it is really trying to work out whether environmental improvements will put something in your pocket rather than just in the boss's pocket. If you can provide the incentives, sure, get people along. But health and safety is very much a personal thing.

CHAIR—Thank you, Mr Peyton. Congratulations on the festival and on your crowd control responsibilities.

[2.30 p.m.]

OKE, Dr Cathy Simone, Media and Partnerships Coordinator, Melbourne Environmental Jobs Network

OKE, Mr Michael Rossiter, Acting President, Melbourne Environmental Jobs Network

CHAIR—I welcome representatives from MEJN—Melbourne Environmental Jobs Network.

Mr LINDSAY—Are you related?

Dr Oke—We are brother and sister. I am older.

CHAIR—Although the committee does not require you to give evidence under oath, I should advise you that these hearings are formal proceedings of the parliament and consequently warrant the same respect as proceedings of the House itself. It is customary to remind witnesses before they provide testimony that the giving of false or misleading evidence is a serious matter—it is very bad—and may be regarded as contempt of parliament. Do you wish to make an opening statement or some introductory remarks before we make some inquiries about your submission?

Mr Oke—I will explain a bit about what MEJN is. In a nutshell, it was set up by me and three others a bit over two years ago because we saw an absolute lack of this sort of resource when we got out of university. Trying to get into an environmental career from an environmental science degree, we found that it was like hitting your head against brick walls so often, and you were spending hours and hours looking in the *Age* and the *Australian*, on Seek and in a million different sources. We thought, 'We're doing all this research and we know that all the people we've gone through university with, let alone all the other years and all the other universities, would be really interested in what we're doing as well,' so we provided this service. It acts in two ways. Firstly, it is free for employers to advertise jobs because we believe that the more jobs are easily accessible to job seekers the better the quality of the pool applying will be, so you will get people with greater environmental backgrounds going into the positions and ultimately benefiting the environment. The second part is the web site for graduates and people looking to get into environmental degrees. The site explains how to go about it and has a free jobs and events posting so that you can find the jobs. It also has lots of information about how to get your foot in the door. It explains graduate programs—what they are, their benefits and how to get into them—and the benefits of networking, going to events and stuff like that.

An indication of how much this resource has been taken up around Australia in the last year is that it started as a Melbourne resource and we are going to go national probably by the middle of this year. We have already gone that way but we are going to really push it nationally, because we get so many people saying things like, 'I'm in Queensland. This is exactly the kind of resource I want; is there anything you can help me with?' That is one indication. The other is that about 200 people were using the site every week at the start of last year—it started a bit over a year ago—and in the last year it has grown to over 2,000 people accessing the site every week to get information and access jobs. We have also started a free weekly jobs mail-out which over 2,000 people get in their email box every week. It has been going for three weeks and

every week another 100 or so people sign up as the word gets around. It goes to show that the demand from graduates wanting to get into this discipline is really strong out there.

CHAIR—Where did you do your studies?

Mr Oke—I did a bachelor of environmental science degree at Monash University, with honours, and I am doing a masters in environmental policy and planning at RMIT.

Dr Oke—I did marine biology at James Cook University, North Queensland.

Mr LINDSAY—One for the good guys!

Dr Oke—It is a brilliant university. I did my PhD at La Trobe University.

CHAIR—I do not need to explain Mr Lindsay's behaviour.

Dr Oke—Regarding the structure of MEJN, there is an executive committee with a president, vice-president and secretary. But we also have two other committees: a funding partnerships and promotions committee and a research and web site committee. The only reason for pointing that out is that not only are people getting access to information through MEJN but people are also getting involved and getting skills about how to run a meeting and how to go about researching or finding money. I think that is a really good resource for young graduates.

CHAIR—So how do you pay the bills? Are the employers paying for that?

Mr Oke—At this stage the City of Melbourne is our principal partner—it has been really fantastic in getting behind the resource—and Global Sustainability @ RMIT and Glenelg Hopkins Catchment Management Authority are gold partners. We also have members; over 120 people have paid up as members of the resource. Even though everything can be accessed for free, they are so appreciative of what we are doing that they are willing to become members.

Dr Oke—We held a very successful trivia night last year and that gained us quite a lot of money. We work voluntarily.

CHAIR—Can you talk to us about the employer interface with MEJN?

Mr Oke—In terms of how we get on to them?

CHAIR—Or how they come to you.

Mr Oke—We serve two roles, one of which I guess is starting to become predominant. We actively find the jobs and then get onto the employers and say, 'We want to put your job on our site'.

Dr Oke—We see it advertised in, say, the *Age* or elsewhere and then contact the employer and ask them, 'Would you like to advertise for free on MEJN?'

Mr Oke—We see that as a very important resource because, as I was saying, if everyone were doing it, that would be thousands of people spending 10 or 20 hours a week actually looking on all the different sites. But, if we get one person to do it and then get all the jobs onto a central resource, people are able to go to just the one resource and find all the jobs available. But that is starting to be taken over by people actually applying for jobs, which you can do by posting your job online.

CHAIR—Do you partner with other environment industry organisations?

Dr Oke—Yes. We have cross-links to other job sites as well as environmental sites. We have links to almost all environmental programs at universities around Australia and other information sources and links, and they have links to us. Most universities as part of their environmental careers section have a link back to MEJN. We have brought along something that Michael and I have been working on with the gradlink university program, which I think it is federally funded. It is a careers and environment booklet under the guise of MEJN and it contains information for students of environmental science studies on how to get careers in environment. I do not know if this is at all of use—the draft is copyright gradlink—but we will provide it to you for your information.

Mr Oke—As for working with other organisations, last year we ran a jobs in environment expo with RMIT, which was available to everyone in Victoria. They could come along and learn about going from high school to university and then from university into a job. We also worked with Global Sustainability @ RMIT and went to the Employer of Choice expo to present to people why an environmental discipline and an environmental employer is one of choice—that it is a career path that you want to go down because it is something that benefits everyone.

Dr Oke—That partnership worked quite well—'This is where you can go to get a career' or 'This is where you can go to study to get a career in the environment.' We had the web site on a computer on the stand at the same time, showing people the jobs that they could get after doing the degree.

Also, the Environment Institute of Australia has a young environmental professional students group called YEPS, and we have been partnering them in having young environmental careers groups in Melbourne. We have also been having meetings with environmental engineering students in trying to have a more collective force to get more information out there. That has led now to the Environment Institute of Australia, Victoria, organising monthly meetings with all environmental programs in Victoria; so all the deans and heads of various environmental departments in Victoria are meeting with the young environmental professional groups. We are trying to get to hold one big day all about environmental careers and environmental studies in universities.

We are also—we do not have any time to sleep!—advisers on the youth sustainability workshop with the City of Melbourne, which is going to be a day workshop at the end of March. That is all about getting young people in Melbourne's views on environmental issues and the projects they would like to do to improve the environment they live in. So we are helping on that, too.

Ms GEORGE—I certainly commend you both on your efforts. You are doing a great job. Just based on your observations and experience, what particular sectors of growth are emerging in the environmental industry sector?

Mr Oke—Certainly, there are environmental management systems like ISO 14001. I think I mentioned that it is really coming from a top down approach in a lot of industries. Ford is saying that every component manufacturer must be ISO 14001 compliant. So I see that as an area of real growth into the future and somewhere where we need to make sure that there are enough skilled graduates out there with the ability to jump into these things. When big organisations say, 'We want everyone to be able to have an environmental management system,' we need to be able to get it into place. That would be one growth area.

Dr Oke—Generally, because there is much more acceptance of the environment and the environment industry in all areas of society, there is that growth—and Michael was talking about this—of the need for environmental management systems, the triple bottom line and, as Anthony was talking about, corporate social responsibility and the need for good environmental information. Then there is the issue of increased funds for conservation officers, environmental officers and researchers in other industries as well.

Mr Oke—I think you will see in the very near future that many companies will have at least one dedicated environmental officer, either putting in ISO 14001 or looking at where they can get gains in terms of resource productivity—even if it is just about public perception. The people in the street—the shareholders and the consumers—are really asking for these companies to be a lot more environmentally aware, so they will have to show that they are going down those paths.

Ms GEORGE—You quote a figure in your submission about technology exports in Victoria: there were $400 million in exports, while imports were $1.6 billion, so there was a gross imbalance. What is driving the import sector and what are the missed opportunities for Australia in terms of a huge market on our doorstep that we do not seem to benefit very much from?

Mr Oke—I am sure you have seen this, but it comes out of the strategic audit of Victorian industry. I am not sure whether you know of it.

Ms GEORGE—No, I have not seen that.

Mr Oke—I can leave that for you. It is downloadable from the Web. It also shows that in Australia the imbalance is $1.3 billion worth of exports, compared to $5.3 billion worth of imports. So Australia is importing $4 billion worth of technology and environmental goods more than we are exporting, which is a huge loss. That is probably because so many countries are 10 or 15 years ahead of Australia in terms of these environmental goods and services, such as renewable energies. A lot of the turbines and other things come from Germany or Denmark. Waste to energy products—things like SWERFs—are almost all imported. Then there are the biofuels; a lot of technology needs to go into that area. If I remember the figures correctly, I think a lot of it is also to do with environmental waste products—things like landfill covers and other environmental goods for that area. I think the real chance for Australia is in what will be the growing technological sectors in the next 10 years: renewable energies, waste to energy, biofuels and all those products.

Mr LINDSAY—Did I write down those figures right—$1.3 billion exports, $4 billion imports?

CHAIR—$5.3 billion.

Mr Oke—It is $1.3 billion exports and $5.3 billion imports.

Mr LINDSAY—How current are those figures?

Mr Oke—That is the 1999-2000 figure.

Mr LINDSAY—Where did you get it from?

Mr Oke—It is from the *Strategic audit of Victorian industry* produced by the Department of State and Regional Development, DSRD. I will leave this with you.

Mr LINDSAY—What percentage of your jobs on the web site are voluntary or non-paying jobs?

Mr Oke—Almost nothing at the moment. Basically, every now and again we have one or two come up. But you find that volunteer positions are not very often advertised, partly I think because they want to see people come up with the initiative themselves. We have a section on our web site that is about volunteer positions. It says why do it, and it highlights some web sites and some companies that take volunteers. But it also says that organisations want to see people having the initiative. They do not want to advertise and get someone. They want someone who really wants to be there. That is one of the reasons there are not many volunteer positions actually advertised. Out of about a hundred or 110 jobs there is maybe one every two weeks.

Mr LINDSAY—What is your mechanism for taking them off when they are filled?

Mr Oke—Usually they go straight off as soon as the closing date finishes. Every now and then—once every couple of weeks or so—we might get a letter or an email come to us saying, 'Please, take this job off. We have got an oversupply of people putting their names down.' So we just take it off straightaway. With the computer it is automated now so as soon as it hits the end date it comes straight off.

Mr LINDSAY—Michael, you said you went to Monash, then to RMIT—is that right?

Mr Oke—That is right.

Mr LINDSAY—Now you have been out in the wide world and have been through university, have you got observations on whether the course that was offered was relevant or not and, if it was not, how it should be changed and how you would do it?

Mr Oke—I did an environmental science honours degree at Monash and I think that one of the really big opportunities here is for universities and industry to talk to one another a lot more and, especially the final year of university, link that to something in industry. This did not happen at Monash University, in environmental science anyway.

Mr LINDSAY—Do you think you should have been given the opportunity to say to whoever was running the course, 'My interest is in this part of the economy. Can I link my final year to that?' Is that how it would work?

Mr Oke—I do not think it is really up to the student to take that initiative. Maybe it could be put on us to say where we would like to go. For instance, at RMIT in their environmental management course, in the final year students do a five-week placement—

CHAIR—We had the associate professor in here earlier.

Mr Oke—and that is a fantastic concept. Industry says, 'This is what we want done,' and the people in the degree course say, 'Great, that is really interesting. That is a career path that I would really like to go down.' So they get the real hands-on experience. They get five weeks or six modules—whatever it is—in a certain industry. They might come to the City of Melbourne and then they know how local government works and what it is like working within that sort of team. They know what is going on in the real world. Whereas at Monash, I guess, it was more about being an academic institution and not about developing people for industry.

Mr LINDSAY—Good evidence! Thank you.

Dr Oke—I can add to that, being an employer and having recently recruited someone—only through MEJN. We had over 120 graduates applying for the environmental research consultant position, so it was hard work. We would not really look at anything below an honours degree in our particular area, but we notice that having an honours degree without any other industry or workplace skills is quite difficult because, although you are learning high-level research, management and coordination skills in an honours degree, it is all generally by yourself; it is not necessarily teamwork or workplace skills as such. There are industry programs out there, and our company is actively involved in that. Every summer we have someone from either Monash, or at the moment the La Trobe cadet program, and we generally have someone from a university coming in for one day a week and also getting paid work experience in the field.

Mr LINDSAY—Dealing with another dimension of the education process, do you have any observations to make on how the TAFE type area, which trains operators, performs and whether it needs to be more responsive—or don't you deal with that area?

Mr Oke—No, I am not qualified to comment on that.

Mr LINDSAY—So you do not put any of those sorts of jobs up on your web site?

Mr Oke—Yes, we would, but I do not have enough knowledge to try to clarify differences between them. To clarify what I said earlier, I do not want to badmouth Monash—and I am afraid that is how it is coming out—because I would not give back what I got out of it and I really value the hard science skills I have to back me up now. Working at the City of Melbourne, I am in policy and I am really grateful that I have the science to back up what I put into place. I know about how climate operates, so when I look at climate change I have that to back me up. I am really grateful for that. I think environmental science is pretty undervalued. When engineers get out you know what sorts of skills they have, and they are really valued—BHP take 65 graduates every year or something like that. Again, it is about industry and universities having a greater association and getting across the fact that you do learn teamwork

skills like they are going out of fashion. It is amazingly multidisciplinary—you do so many different components in an environmental science degree. I believe I have gained real skills from that multidisciplinary background. So, as far as environmental science at Monash goes, I am glad I have that.

Mr LINDSAY—You said your web site gets 2,000 hits a week. Do you have any idea who is hitting you? Are they coming from overseas? Why are 2,000 people chasing your web site?

Mr Oke—It is because there is that much demand for jobs in the environment, I think, and that is only a drop in the ocean. There are some internationals saying, 'We want to come out to Australia; can you help us?' Unfortunately it is not really our position to do so; we say, 'Yes, sure, keep looking at the web site,' and give them some hints where we can. But the greatest proportion is still in Melbourne, and that is why we are looking to go much more national and try to make it more accessible to everyone. Probably about half are from Melbourne. If you have 1,000 just in Victoria and a few hundred from the other states, if the other states got on board as much you would see more than 5,000. When we say hits, we mean actual visits. It is each person who logs on, not how many pages they go to or anything like that; over 2,000 is the number of people using the web site.

Dr Oke—There are other weekly email jobs mail-outs. Environs do a weekly mail-out now, and so do NRMJobs. From what they say on their web sites, they also have 1,700, 1,800 or 2,000 people getting these weekly mail-outs. They might be the same people getting all three and trying to see all the jobs but, because environmental studies and environmental sciences in all of the universities are such good programs now and they are highly encouraged and highly sought after, there are so many people coming out of these programs looking for jobs, and that is why they are all looking at the web sites for the jobs. If the number of applications I received for the one job is any indication, the demand is huge.

Mr LINDSAY—I remember reading your evidence about a PhD who was prepared to accept—

Mr Oke—That was me. When I finished my honours degree, DNRE advertised a position for $28,000. The area was exactly what I had done my honours in but I did not even rate a mention. I asked why and they said, 'We just had too many people with PhDs and long industry qualifications going for this.'

Mr LINDSAY—Does that mean that industry is not paying appropriate salaries for people with environmental qualifications?

Mr Oke—Salaries are definitely low in the environmental industry.

Mr LINDSAY—Is that because there is plenty of supply?

Mr Oke—It is partly supply and also because people are so keen to work in that area. It is the area I want to work in. It is where my heart lies and where I want to work. If the job were right, I would be willing to not get paid as much to do that job which I really love. So that is probably part of it. I think also that one was a real research based position.

Dr Oke—All the research based ones are a lot lower, but I am sure there are some high-level environment industry jobs with good salaries.

Mr JENKINS—I was waiting for Mr Lindsay to get a forthright comment from Dr Oke about James Cook, but he did not get around to that. Michael, I was interested in your assessment that one of the values of what you have done, besides your stuff in forest communities for your honours, is that it was a holistic sort of approach. It is my arms-length observation that that characterises the development of environmental science courses. Obviously, the number of graduates who have been churned out of the sausage factory is great compared to the number of specific jobs in the environment. You say that your whole purpose is environmental jobs, but I wonder whether there is also a role for the environment in other jobs—whether environmental science graduates are perhaps in a position to change the culture or the outlook of traditional jobs by taking the holistic approach that is in their training, which I believe to be very valuable.

Mr Oke—If I take what you are saying correctly, I think that is like our approach. Every now and then we get feedback saying, 'Why is this job on the web site?' We say, 'If we got someone into that position who has a really strong environmental background, they will be able to turn that position around and really improve the environment through it.' I think that is what you are saying—a much wider view.

Mr JENKINS—Yes, you are taking a wider target for jobs; you are not trying to classify a narrow environmental sector.

Mr Oke—Exactly. If people are willing to get into that role and they have an environmental background and get into it, they will really start to make a difference in these organisations and show what the thinking is. The graduates out there know the latest teachings and the latest environmental thoughts from around the world. Getting them into an organisation as graduates will start to influence how that position or the actual organisation operates.

Mr JENKINS—What is the balance between private and public sector jobs?

Mr Oke—On our web site?

Mr JENKINS—Yes.

Mr Oke—Probably about fifty-fifty or maybe a few more—

Dr Oke—It is slightly more for public sector.

Mr Oke—Every council probably has between one and five environmental positions, so that is quite a lot of jobs that are turning over. Then there are the Department of Natural Resources and Environment, the DSE in Victoria and a few others around Australia. They are the big employers, and then a lot of environmental consultants and engineers make up the major proportion of industry jobs.

Mr JENKINS—What about research jobs in the private sector?

Dr Oke—There are not that many.

Mr Oke—No, we do not see many come across our web site.

Mr JENKINS—So how do we drive that horrible trade imbalance to get people to put money into research and development to make us a bit more competitive?

Mr Oke—It is a big question.

Dr Oke—We need an industry survey.

Mr Oke—Yes, I think it is really important to do a survey of what industry look for in graduates. You would say, 'You're in the environmental field; what do you want to come out of these institutions?' Then universities would get an idea of what the market is looking for. That could be one driver in producing people with adequate skills. But in terms of boosting those industries, I am not sure where it has to come from.

Dr Oke—I guess it is more money in research and development. If there is not the money to develop their ideas, I am sure a lot of these young graduates or people within postgraduate programs might look overseas. Even in our company we have quite a few water saving technology ideas or industry ideas, but because it is difficult to find sources of money to fund the research and development of these potentially good environmental ideas it is difficult to get them started, and that is why we are then importing them from overseas.

CHAIR—Aren't you suffering from the same frustrations that scientists generally suffer from? I have this view that, if scientists were locked in a room with an entrepreneur, they would do wonderful things together. It is just that each looks at the other and thinks, 'There's a bit of a vegie; what would they know?' whereas together they could add some—

Dr Oke—There are only a couple of entrepreneurs like that in Australia, so obviously everyone is knocking on their door saying, 'You're obviously into the environment and have a lot of money.'

CHAIR—It is interesting though that we have heard evidence that, if you pop someone with your competencies and skill mix into a regular workplace, you can improve the sustainability of the enterprise, save some money and have folks present themselves better to the marketplace. I wonder whether the hard biology, hard chemistry, hard science side of environmental science blinds employers to what they might be able to add.

Mr Oke—Yes, it is so much about perception, isn't it? I do not think it is true that all you have is a hard chemistry background behind you. I do not know how to drive it, but it is all about getting industry and universities talking or having careers fairs. It is hard because the environmental industry is so dispersed.

CHAIR—We have found that. Trying to get people to put a submission in, they were saying, 'Are we in or are we out?'

Mr Oke—Yes, and you often have a consulting firm with a small wing of five environmental positions in it. Are they an engineering firm or an environmental firm? Getting them together as a group to have a careers fair where you sell your wares to the graduates is the hard thing, but it is at those sorts of forums where you will start to get employers understanding and saying, 'Jeez, these guys are coming out with this, this and this, and that is something we could really use in our organisation.'

Dr Oke—An increase in industry cadetship programs or graduate programs would greatly enhance that communication between—

CHAIR—Get the foot in the door.

Dr Oke—Get the foot in the door, but it goes both ways. It is not only graduates being able to get experience; the industry or organisation is also being opened up and saying, 'Hang on, these environmental science or studies students can actually do a whole lot of things.' It may not be what they think it is.

CHAIR—So you feel that they are narrow casting your skills a bit?

Dr Oke—Perhaps, yes.

Ms GEORGE—What does Earth Systems do?

Dr Oke—We are an environmental consulting company. There are three different areas. One is water treatment, water technology and water quality, and we have a patent on particular equipment for water treatment. We also have an environmental consulting area, and that is pure environmental impact assessments and life cycle analysis all around the world. I manage the environmental information area. It is all about getting environmental data and creating environmental information products.

CHAIR—So someone might ring you up and say, 'I've got a temperature escape problem from my boiler; I want to do a bit of co-gen. Who can I talk to?'—is that right?

Dr Oke—Yes, and I would put them on to Jeff!

CHAIR—There is the environment industry association and an industry agenda, an action plan that we fund at a federal level. Everyone is having a red hot go. If only we could go together.

Dr Oke—I think that could potentially improve with the development of EIA—the Environment Institute of Australia and New Zealand. They are trying to drive a more regulated industry as well.

CHAIR—Is that pushing the BAT scheme from Europe where you get a little more prescriptive about what people should be doing and then nudge them enthusiastically that way?

Dr Oke—Yes, but more about guidelines on what an environmental consultant is—because anyone can call themselves an environmental consultant—so that when you do that phone call

and ask, 'Who should I call out of this long list of environmental consultants?' you can say, 'Maybe I would prefer to call someone who is EIA registered or has some certification next to their name.'

CHAIR—So I am the guy who has put in the power modulation system at Coca-Cola in Parramatta. It saves them bucket loads of energy and it sounds like the magic black box—'Have we got a deal for you'—and because it is new no-one has been able to test it. How do you guys decide what has credibility to get on your database and to be part of your information service? Do you evaluate these claims? Do you verify them?

Dr Oke—Sorry; were you asking about the information service?

CHAIR—Yes.

Dr Oke—No, that is not the information service; I am sorry, I misunderstood you. No, we do not offer information like that. It is environmental text products, like taking complicated issues and making them easy for people to understand. We also have our environmental map series. I am sorry.

CHAIR—I thought someone was doing something that we thought someone should be doing.

Mr Oke—One of the new things last year was the Enviro 2002 conference. That was held in Melbourne. I think it was the second one they have had and it got a lot of those industries working together. There were big stalls about waste water treatment and waste products. It actually got industry talking to each other as well as trying to sell it to the public. They were going, 'Oh, we could use that and that together.' It was getting people together. Like you were saying, actually getting everyone together in the one area was really important.

CHAIR—My last question was around sustainability literacy among corporate decision makers and whether you feel your contribution would be valued more if company directors, CEOs and line managers were inculcated with sustainability concepts to begin with and were looking towards improvement in that area as a regular matter of doing business. Is that something that would bring about a greater embrace of the things that you have been talking about?

Mr Oke—Definitely. If you look at the model from Interface Carpet, someone—I have forgotten his name—was asked to give a presentation at their workplace on what they are doing for the environment and so he said, 'I'd better have a read of something.' He read *Cannibals with forks* by Hawken and it has just changed the whole business. He thought, 'My God, we could get on to this.' Now Interface Carpet is probably the leader in pushing the barrow in terms of changing an organisation to an environmental focus. The ground that they have made in a few years from the top down—like you were talking about: from the managing directors coming down—has really been extraordinary.

Dr Oke—I guess, if there was hard evidence in dollar value that would impress upon those at the high level—

CHAIR—A business case.

Dr Oke—Yes, a business case—more and more so as more businesses do go down the line of proper credible triple bottom line reports where they are incorporating the environment into their operations and then seeing the economic benefits of it. But when that is more documented and there is more hard evidence then more of the CEOs and managers—purse string holders—will actually say, 'We'd better look at this seriously.' Then it will be more incorporated, I guess, into the businesses.

Mr LINDSAY—Something that I do not think I have heard explored is the role of local government jobs in the environment. Can you give us an outline of what the City of Melbourne does? Is it sort of a leader in local government? What is its investment—that sort of stuff? What can it do?

Mr Oke—I think local government is really one of the biggest drivers of the environmental sector at the moment around Australia or around the world.

Mr LINDSAY—But isn't local government something that just puts more cost on business?

Mr Oke—No. They look at ways to—

Mr LINDSAY—I do not say that facetiously.

Mr Oke—It is about facilitating knowledge. Giving businesses the best practices from around the world is something that we are in the business of—producing seminars for business to go to to find out about these concepts that they may not know of. So it does not have to put extra dollars on to them. In terms of what local governments are doing for driving the environment, we have a sustainable water officer who is developing a sustainable water plan for Melbourne that other councils can jump on board. That is with the International Council for Local Environmental Initiatives—ICLEI.

CHAIR—Then there is the guy from Cities for Climate Protection.

Mr Oke—CCP is another one.

Mr LINDSAY—How does that fit in with Melbourne Water?

Mr Oke—They are partners in the document, so City of Melbourne and Melbourne Water are working together to decrease our water consumption.

Mr LINDSAY—Isn't it inefficient that two instrumentalities are trying for the same goal?

Mr Oke—No, but local government really is working together amazingly and that is where the big strength is. CCP has 140 councils working on the same program. You should add up the amount that each council is decreasing its emissions by. We are looking to decrease it by 30 per cent, so if every council decreased by 30 per cent in 10 years then Kyoto would be way gone.

CHAIR—But you guys also change your contracts too. I launched your CNG garbage truck fleet and that would not have been made possible had you not extended the term of the contract because the cost of CNG technology in garbage trucks needs seven years to recover.

Mr LINDSAY—But it should not have been CNG, it should have been ethanol.

Mr Oke—That is right.

CHAIR—Why?

Mr Oke—But it is, it is about the supply chain. That is where local government has the ability to say, 'We've got a large contract with you, so if you want to keep it—and if you do need the extra years, we might give you the extra years—we want you to produce ethanol garbage trucks or to decrease your water consumption by 50 per cent in our parks and gardens.'

Mr LINDSAY—You are saying local government is important in the scheme of things, but how effective do you think local government is in getting its message out?

Mr Oke—It is very effective. In the environment industry in Australia I think it is the most effective in what it does from what I have seen, especially the councils that are really jumping on board and really pushing it forward. The examples that I have seen coming out of Port Phillip, Melbourne and out of some of the ones in Queensland in terms of their biodiversity strategies are really extremely important. They are really world leaders.

Dr Oke—The New South Wales councils are very active, particularly as they have do their state of the environment reports and triple bottom line reports

CHAIR—But we did not get a submission off the ALGA. No final closing comments?

Mr Oke—I have one final comment. Harry was asking about what we are going to do to change the imbalance. I am not sure where it is going to come from but it really is amazingly important for the future because if jobs are going to grow in the environmental sector in Australia, it needs to be the market driver. If we stay 10 or 15 years behind these European countries, then that driver is not going to be there if we are just going to keep importing their technologies. As important as it will be for us to use them to benefit the environment, we need to jump on, turn it around and really be exporting our technologies back to the world and using them in Australia.

Dr Oke—And we are producing great graduates so they need to be employed in Australia.

Resolved (on motion by **Mr Jenkins**):

That the committee accepts the *Careers in the Environment* draft document, copyright Gradlink, by Les Emery and updated by the Oke combo as exhibit one.

Mr JENKINS—Good luck with your work.

CHAIR—Yes, keep punching. Thank you.

[3.15 p.m.]

O'BRIEN, Mr Paul David, Training Manager, Victorian Water Industry Association

WALL, Mr George, Secretary/Treasurer, Water Industry Operators Association

CHAIR—I welcome the witnesses to the table. Although the committee does not require you to give evidence under oath, I advise you that these hearings are formal proceedings of the parliament and consequently warrant the same respect as proceedings of the House itself. The giving of false or misleading evidence is a serious matter and may be regarded as contempt of parliament. Would you like to make some introductory remarks before we proceed to questions on your submission?

Mr Wall—As an introduction to our association, I will let you know how we started and what we do. We were formed in 1972 as the Wastewater Superintendents Association. It was a Victorian organisation. It was seen at that time that we needed a voice for the labourers in the field. In the old days, the water industry was a part of council function. Quite often, the guy with the crook back or the guy who could not work on the road gang anymore got chucked out to the water plant or the waste water plant, so the level of training for those people was quite low and there was no specific career path for them. So the enterprising people who started our organisation got off their bums and made sure that they worked very hard with the industry in Victoria to develop a training program. That got up and running in the 1980s. There was a certificate in Victoria. That became the backbone of a recently developed national certificate. Our association sticks its hat up to say that we were very instrumental in getting that going quite a number of years ago. We have now expanded our membership to get away from just waste water. We now look at people from water treatment, catchment management and all functions within the water industry. Our membership has grown to more than 300 and has quite a strong corporate membership base as well. We are now starting to look towards the national scene to see whether we can expand what we are doing and give those same opportunities to operators in other states.

Mr O'Brien—I am the training manager for the Victorian Water Industry Association. We are funded by the state Department of Education and Training to provide advice under the rules of the Industry Training Advisory Body. I do not know if you are familiar with ITABs. I am a part-time ITAB for the water industry in Victoria. I am here in response to those questions about the skills of the work force working in the water industry. It was interesting that Mr Lindsay asked a question about TAFE performance. I work much more closely with that system. I am here to talk about the operators and their training as opposed to the engineers and which universities they went to. I would be happy to answer any of those sort of questions.

I have just a couple of other things. I work with the national water training package, and George's submission made some good comments about the water training package as being something very important. When I went through the web site and looked at the other submissions, I noticed that the one from the Minister for Education, Science and Training talked about training packages and forgot the water training package. If you would not mind, this should be mentioned somewhere in your report. The water training package has a number of units of competency directly related to environmental management from the certificate 2 level,

which is your basic entry operator level, up to advanced diploma. We have always thought that was fairly important, and they were among the first environmental units of competency ever written. They should be put back in somewhere along the line. That is all I have in my opening comments.

CHAIR—Is it fair to say that changes in your industry are actually reducing the number of people employed?

Mr O'Brien—No.

CHAIR—Some of the evidence we have had is—

Mr O'Brien—I went around Victoria last year on a project where I spoke to every water business—there are 24—of the state recognised businesses, apart from those in the private sector. One of the questions I asked them was 'What do you expect your employment level to be five years from now?' All of them expected it to be greater than it is at this moment—not by large numbers, but by one to five per cent. My reading of it is that the industry, as you can know by looking at the figures, lost a lot of workers from about 1985 and 1990 through restructuring and contracting out. Those numbers are now building back up. It should also be pointed out that it might appear that a lot of the workers are not still in the industry, but they are; they are working for contractors. Those figures you see showing reductions in the industry are always overstated, I believe.

CHAIR—Is it your observation that, amongst the skill group that you work with, that is reflective of that, or was your question to the water industry about your skill group and not the whole—

Mr O'Brien—I wish I could answer that question. I would like to go back out. That was a first hit, in a sense. I would like to go back out again and ask some more detailed questions. The hard one we get asked by the state government concerns what our skills base is now and what it is likely to be in five years. That is always the hard one to answer. Would you like to add something to that?

Mr Wall—I actually work for Goulburn Valley Water, which is the regional water authority in northern Victoria.

Mr O'Brien—One of the things that George has been discussing with me, in his expertise, is treatment operators. I look at a broader area than that. The skills of the work force need continual upgrading—I suppose that is one way of looking at it—from a number of points of view. We have changes in technologies—we have increased technology and changing technology—and, on the other hand, we have changing regulatory frameworks. Also, in Victoria now, the Essential Services Commission becomes the regulator for all the water businesses. That has not been the case before. There is a training requirement for the people who are operators in the industry.

We were talking about this before coming along and discussing what sorts of things we should mention. One of the things that should be mentioned is that the training of those people who work in the water industry at the operator level is very expensive. It is often covered by the enterprise itself. That is slightly different from what happens with engineers. Engineers go to

university, as we heard from people before. Environmental scientists go to Monash or to the University of Melbourne. The enterprise then tends to pick up the people after they have left university. It is a different thing at the operator level. Those people are often more likely to be trained when they are in the job. One of the problems at the moment is that that training, particularly in the waste water treatment area, happens to be expensive. That is an issue. Who should be paying? Are there any subsidies that should be in place for that?

Mr JENKINS—Are you suggesting that regulation is driving a lot of the growth in numbers?

Mr O'Brien—That is a really hard question in a sense, but I think it is coming from a number of factors. I have only been in Victoria for a couple of years, so I have to be careful in what I say, but certainly I can say something about the businesses in Victoria. The main role of the Victorian Water Industry Association is to ensure that all the water businesses are across all of those changes as they happen. For example, the businesses are now becoming used to triple bottom line reporting. That was mentioned earlier. That is very important. As the businesses become more involved in triple line reporting—and VicWater has been running seminars and workshops on that—it becomes clear to the businesses that they need to look at, for example, the skills of their staff. That is one of the outcomes of that. Or there is the Essential Services Commission, as the regulator. This is a new regime in Victoria that has not actually bedded down yet. We need to see how that might affect things. For example, the enterprises are not under any regulatory requirement to ensure that their staff are trained under the national water training package. You do not have to do that. Am I right in saying that?

Mr Wall—Yes, but one of the big drivers now is ISO accreditation. I know a lot of the authorities are going down that path. We certainly are. One of the reporting outcomes from that is to actually have demonstrated levels of training in your staff. That is an important thing for us.

Mr JENKINS—Is it the case even for the operators? Does it go right through the organisation?

Mr Wall—There are some interesting statistics on our own organisation. We have about 70 out of 150 people who work in the field. Total employment is 150; 70 of those are field staff. You would probably bust that about in half and say that half are purely maintenance people, who fix pipes, breaks and things like that, and the other half are operations people—operators who run water systems or waste water systems. In our organisation, less than 10 per cent of those people actually have an accredited water industry training certificate. They have all done lots of training, but the problem is that they have not actually finished the certificate. What tends to happen in our industry is this. When we bring in a new employee, they would have to know specific things about running water treatment plants, chlorination, sedimentation and other processes within the plant. They tend to get pushed into those courses, but they never go back and finish the environmental stuff. The introductory courses that they need to do that are all part of the national package to get a national certificate. They have quite a few statements of attainment for particular skills, but no formal qualification at the end. That is something that our authority in particular is working on—and a number of other authorities, as I know from talking to members of our association. We are working towards increasing the numbers. ISO is certainly pushing that as well.

Mr JENKINS—It is not packaged together?

Mr O'Brien—It is packaged together. It is a complex situation. You have registered training organisations who are the people who provide the actual training and then you have the enterprises. Then you have the young people coming through. You also have existing workers who may have been there for 15 years. It is a mix of all those things. I would like to say that Victoria does pretty well compared with the other states in terms of this stuff. We have had at least one intake of young trainees per year for about the last four years. I think South Australia is the only other state that could say that. That is something I would like to say. That is not to say it is perfect, but we are doing a reasonable job.

That is part of my role—to go round to the water authorities and talk to the HR managers and the CEOs about why it is a good thing to take on young people. I notice that the CCF, in its submission, talked about ageing of the work force. That is an interesting topic. The other side to demographic projections on ageing in the work force is that now we are hearing that people might need to work until they are 70 because we have a shrinking base. I find that really interesting. What is the truth here? Do we need to replace our existing work force or is it a matter of needing to give our existing work force newer skills?

Mr JENKINS—What about somebody who comes into the industry who has a trade qualification? Over and above that trade qual, what other training are you looking for to make them appropriate?

Mr O'Brien—George would probably like to answer this, but can I just very quickly give a good example. We went along to a presentation at Sydney zoo a couple of years ago. They had a very high-tech waste water plant which was doing great stuff in terms of the waste water wash out from the animal cages. It went through a high-tech treatment process, turned into grey water and then went back onto the lawns. I asked the engineer if he had any other staff. He said, 'Yes, I've got a guy working with me.' I said, 'What's his background.' He said, 'He was a panel beater.' That was a good example to me of what happens in the industry. Because there is no trade called 'waste water operator', what has tended to happen is that employers will pick up someone with a trade because they know that person has a bit of nous. They have had to have the discipline to go through a trade for three years. Even though their skills might have nothing to do with running a waste water treatment plant, it is not a bad base.

Ms GEORGE—If you were to do this new national certificate, would it feed into a trade qualification? Would you get accreditation?

Mr O'Brien—Theoretically a certificate 3 should be regarded as equivalent to a trade. I know that it never will be. Some things are trades and some are not.

CHAIR—How do you handle the recognition of prior learning and those kinds of things if there are transportable competencies from a trade—

Mr O'Brien—We were doing a project here last year funded by the state which was looking at that. We are hopeful of doing some more work with that. Basically, we went out and did a scan or scoping study to determine, with the existing work force, how close they were to certificate 3. It was looking at being about 80 per cent.

Mr Wall—Most of the tradespeople that come into our industry are probably ex-plumbers, plumbers' apprentices or that sort of thing. The recognition of prior learning with the training

organisations can, quite clearly, pick up what their competencies are. It is fairly easy to benchmark what they do and do not need to do to actually get to certificate 3 level in the water industry. The comment I was going to make about our age is this. You tend to find that people in the early 20s, up to, say, their 30s, particularly given that most of these jobs are in the rural areas, want to get to the bright lights and have a good time. It seems that they might come into the industry as a trainee or an early employee, look around, last for a couple of years, and then take off. From our point of view, the training of those people is very expensive. It is not that we are not employing them; it is just that they do not tend to hang around.

Mr JENKINS—More bright lights in Shepparton?

Mr Wall—I am thinking more along the lines of places like Horsham or way out into the scrub, even into New South Wales. It is probably a similar issue. How do you keep your young people in the country towns? What we are now finding—and I think it is the reason for our older work force—is that people get to their mid-30s, they have a wife and a couple of kids, and maybe a mortgage, and they are looking for something secure. They come back to the industry then. It is how you get from that young bit to that bit.

Mr JENKINS—Right through, to retain them for that period.

Ms GEORGE—It is interesting, as we are looking at these new growth areas in the economy—and, hopefully, in the green sector of the economy—to reflect about structured training arrangements in these potential new growth areas. If they have not had a traineeship or an apprenticeship path before, perhaps that is something the committee can look at. I presume that, in your sector, George, you would see some benefit in having an accredited training that goes beyond the certificate, that helps retain people and pays them reasonably well?

Mr Wall—Yes. There nearly is that structure when you move into the engineering side of it. What we are finding, though, is that now there are more and more people with tertiary qualifications coming in and actually running water treatment plants and waste water treatment plants—the jobs that were traditionally done by non-tertiary qualified people. Some people in our industry feel a little bit threatened by that—some of the ones that have been around for a long time. They are seeing their career paths being chopped off because these other people come in. But it can help the delivery of the services and the quality of systems that we have to have in place.

Mr JENKINS—Is that driven by technology? Does it need to be driven by the changes in technology? I suppose that is what I am really asking.

Mr Wall—I think the biggest issue is that there are so many applicants for positions, as we heard before, that, if you are going to take someone with year 10 versus someone with a degree, you are going to grab the person with the degree. That is what the industry is doing.

CHAIR—What are the standards doing? As of 1994, I think, in Victoria, there was that annual publishing of potable water quality. Stock and domestic areas were the hot ones. Some of those results were appalling. And there are increasing demands for tertiary treated or reusable waste water or sewage effluent. Is that more exact and demanding standard driving a change in what your people are doing? Is it driving some of the additional training.

Mr Wall—Absolutely.

CHAIR—Is that seeing some retrofitting of infrastructure with more complicated technology that might be an opportunity and a threat to people that are already there?

Mr Wall—Absolutely. If I can use my own employer as an example, we have a big plant at Shepparton that basically handles that waste from SPC, a big fruit factory, and Campbell's Soups. Only 12 years ago, all the water went in one end of the lagoon system and out the other end straight to the river. Now nearly all of that reclaimed water is used for irrigation on our own sites and to neighbouring farmers. Because of the storage issue and because of the issue of having too many eggs in one basket, we have maintained a balance in discharge to the river. But that is now tertiary treated, so there is a nutrient removal plant. If you look at the skills that the operators needed to have in 1980 versus the skills that they need to have in 2000, they are just absolutely poles apart. Even in 1990, people would not need any skills at all. It was all run by consultants. Now we have taken control of our own enterprise; we have taken control of what we do and how we do it. From that, we take all the responsibility into the water authority.

Another one of my main points concerns the industry in general. We are mainly based in Victoria but we do have members of our association in other states, particularly New South Wales and South Australia. If you look at their industries—and I have been in the game for just on 15 years—you can see the differences. The council run enterprises in other states are really where we were 15 or 18 years ago—in fact, in the mid-1990s, when most of the amalgamations happened. Going back to a question that was posed earlier, we have moved from over 200 authorities looking after water to the 24 that Paul mentioned in Victoria. The big thing out of that is that now there is a structure for people to work through. There are a lot more career possibilities; there is more specialisation in the industry because you can afford to have bigger work teams specialising in water or waste water treatment. There are more environmental roles. And we are seeing more technology put into the field in smaller towns that never would have got there under the existing, council run system, because the funding never would have been there.

Mr LINDSAY—Some of this might have been covered in a sort of peripheral way, but the water industry traditionally has basically been run by local government, depending on the state you are in. In Queensland it is local government. Do you agree that it is a much wider thing now that individual businesses can be in the water treatment business? Is that right?

Mr Wall—Absolutely.

Mr LINDSAY—And that is growing?

Mr Wall—Yes. We have a number of members out of private enterprise. Some industrial sites, for example, are setting up factories and are treating their own water coming into their plant and then treating the waste water before it goes out. That water used to always be handled by either the council or the water authority. It is now solely handled by private enterprise.

Mr LINDSAY—In your view, that is not a bad thing?

Mr Wall—I think it is a terrific thing.

Mr LINDSAY—We are also seeing land developers taking grey water and putting it onto the land—and there will be more and more of that. Does that mean that there will be jobs in that part of the economy?

Mr Wall—I think most of those sorts of functions are run by the plumbing industry rather than the water authorities, and they would gear up based on the demand for that sort of product to be installed. Unless it is a new company, I cannot see that there would be any extra demand for water or waste water treatment from their point of view. Certainly, with the grey water schemes and the new development schemes there are avenues for extra employment in that regard.

Mr LINDSAY—Representing water operators, does that mean that your membership is increasing?

Mr Wall—Our membership has increased a lot over the last five years. We bottomed out in the mid-1990s when the amalgamations were in full swing because people did not know whether they were even going to have a job the next day, so they were not interested in being in an association. Now that things have stabilised, we are growing all the time, and we are hopeful that we can grow into other states. There is another water association, the Australian Water Association. That has traditionally been the engineers group. I suppose you could say we are in competition, because we have similar goals, but we are looking at a different membership base. That is the distinction between the two groups. We run conferences and seminars and we have our own web site. I was interested to hear about the web sites. We are also getting 2,000 hits a month. We organise to put onto that web site our conference papers, technical manuals and anything that we can get our hands on. The surprising thing is that most of the hits we are getting are actually coming from America, not from within Australia.

CHAIR—Does *WaterWorks* go on that web site?

Mr Wall—Not onto ours; it is actually on AWA's web site. I have brought along a copy of *WaterWorks.* AWA have a refereed journal which goes out to all their members, I think, monthly. We have made a deal with them to get our *WaterWorks* section stuck in the middle of that twice a year. The aim is to get away from the technical information that they have. For example, there are sections on how you can fix your plant, how you can save a few bucks and information on some of the latest technologies. A lot of the other stuff tends to be more technical.

Ms GEORGE—Could I have a look at it?

Mr Wall—Yes, you can have those.

CHAIR—Are you drifting into stormwater recovery? Is your membership facing those sorts of issues?

Mr Wall—Not really. It is a bit awkward. We can only advertise that we are available and we rely on people coming in. The stormwater industry is separate again and they have their own association.

Mr O'Brien—I will answer that from a Victorian water industry perspective with respect to this question about the environment industry and the water industry and the linkage. I have estimated that there are 4,000 people working for the water industry for the authorities in Victoria plus X thousand either working as principal contractors to those authorities or working as small contractors—so it is probably around 6,000. There are issues such as reclaimed water, catchment management and trade waste. Trade waste disposal is another fairly important one at the moment, and a fair bit of work is going into that. Do I need to explain what trade waste is?

CHAIR—No.

Mr O'Brien—There are other areas apart from the operating group—and I should also say that that is covered by the training package—but our issue at the moment is to get more people qualified under the actual training package itself.

CHAIR—I understand. Is the EMS push—which should directly have an impact on your membership and on training demands—something that you are feeling through your membership yet, or is it a bit early and people are working out what it actually means for them?

Mr Wall—I think it is a bit early. The other thing is that it is hard for us to promote ourselves within our own industry. We have a stable membership in Victoria of about 300. People come and people go and it just sits around that figure. As Paul said, there are potentially 4,000 people. But we would never get all those people to join because—

CHAIR—Is that including management—everybody?

Mr Wall—Yes. We are trying to move to a national basis so that we can get this sort of information out to people across the board. At the moment, the only way that we have of distributing all of that information is to mail it off to the councils. What tends to happen is that it goes to the head engineer—we do not have a membership base there, so we do not have direct mailing addresses for their field staff—and it will sit on his desk and he will say, 'What's this?' and chuck it in the bin. Occasionally it might get to where we want it to go.

Mr O'Brien—I would like to pick up on the EMS part of that and to table a very short outline of the units of competency from the water training package which directly address environmental management. They are basically EMS type things that people would be expected to do at the operator level. Part of the work we did last year was to go out and look at where people are at in terms of certificate III and certificate II. With all due respect to the operators, there are issues in this industry, which you will find in many blue-collar industries, to do with language and literacy issues. People know how to do their job very well, but the question is whether they know how to report it very well. Because there are now more stringent reporting requirements in a whole range of industries, that is an issue. We are not saying that people do not do the job properly, but the question is whether they are able to manage all the EMS sorts of things which I think you raised. It is certainly important.

CHAIR—As there are no further questions, would you like to make any closing remarks? Are there any thoughts you want to leave us with or key themes we might not have led you into through our questions?

Mr O'Brien—I would like to make a comment—and I will keep it brief. In terms of the industry training stuff that I work with, you may be aware that the Commonwealth withdrew its funding for state advisory arrangements last year. That was quite a shock and it was done without any prior negotiations with ANTA or with the states. We were all pretty stunned by that. I am very happy to say that the state of Victoria has decided to continue to fund industry advisory arrangements in this state. I know it is a mess in New South Wales at the moment because of that withdrawal of funding. That is something that I would like you to take away, because I know that is the level that you work with. We are still trying to do our best here.

Mr Wall—Just in closing, one of the big issues for us is training and access to training. From the work that we have done through Goulburn Valley Water, there is the training around but it is such a niche market. There is not a lot of competition in the marketplace; therefore the training that is available is very expensive. We are looking at around $40,000 to get a person to the certificate III level over, say, an eight-year period. We are talking about $5,000 a year. The cost of those certificate based training courses is almost equivalent to the cost of a degree. That is an issue for the water industry in general. Obviously our bigger authorities are better able to absorb that cost. I do not know how the councils are going to go with that sort of funding allocation to get people trained to that level right across the state, particularly when you consider that there might be one person working in water in a fairly big area.

CHAIR—Is that like the generic or core training, and then on top of that you have to get all that proprietary design technology?

Mr Wall—Another issue is the OH&S stuff. Every time something else moves into the mandatory training side, that adds to the training budget. We had a fairly hefty training allowance within our organisation, but you lose 50 per cent of it just doing mandatory OH&S updates. I am not saying that we should not be doing that, but it is taking a lot of the training budget away.

CHAIR—Thanks for that, gentleman. Is it the wish of the committee that we accept as an exhibit the National Training Package outline document provided by Mr O'Brien? There being no objection, it is so ordered.

Resolved (on motion by **Mr Jenkins**):

That this committee authorises publication of the proof transcript of the evidence given before it at public hearing this day.

Committee adjourned at 3.50 p.m.