



COMMONWEALTH OF AUSTRALIA

# SENATE

## Official Committee Hansard

ENVIRONMENT, RECREATION, COMMUNICATIONS AND THE  
ARTS REFERENCES COMMITTEE

**Reference: Hinchinbrook Channel**

FRIDAY, 31 JULY 1998

TOWNSVILLE

BY AUTHORITY OF THE SENATE  
CANBERRA 1997

### **INTERNET**

The Proof and Official Hansard transcripts of Senate committee hearings, some House of Representatives committee hearings and some joint committee hearings are available on the Internet. Some House of Representatives committees and some joint committees make available only Official Hansard transcripts.

The Internet address is: **<http://www.aph.gov.au/hansard>**

**SENATE**

**ENVIRONMENT, RECREATION, COMMUNICATIONS AND THE ARTS REFERENCES COMMITTEE**

**FRIDAY, 31 JULY 1998**

**Members:** Senator Allison (*Chair*), Senator Tierney (*Deputy Chair*), Senators Hogg, Lundy, O’Chee, Payne, Reynolds and Schacht

**Participating members:** Senators Abetz, Bartlett, Bolkus, Boswell, Brown, Calvert, George Campbell, Chapman, Colston, Coonan, Cooney, Eggleston, Chris Evans, Faulkner, Ferguson, Ian Macdonald, Margetts, McKiernan, Neal, Patterson and Woodley

**Senators in attendance:** Senators Allison, Hogg, O’Chee and Tierney

**Terms of reference for the inquiry:**

1. The relationships between Federal, state and local governments and developers in the Hinchinbrook Channel.
2. The effect of developments on the environment of the Hinchinbrook Channel and surrounding environs.
3. Whether governments have met their obligations under the various acts and agreements that deal with the Hinchinbrook area.
4. Alternatives to the existing regime.
5. What lessons have been learned and what can be done to prevent problems like this occurring in the future.

**WITNESSES**

<b>ALONGI, Dr Daniel Michael, Principal Research Scientist, Australian Institute of Marine Science, PMB 3, Townsville MC, Queensland 4810 . . . . .</b>	<b>123</b>
<b>COOK, Mr Clive, Manager, Environmental Impact Management, Great Barrier Reef Marine Park Authority, Flinders Street, Townsville, Queensland 4810 . . . .</b>	<b>138</b>
<b>HAIGH, Mr David John, President, Friends of Hinchinbrook Society, 13 Roberts Drive, Hermit Park, Queensland 4812 . . . . .</b>	<b>181</b>
<b>KATTER, Mr Bob, MP, Parliament House, Canberra, Australian Capital Territory</b>	<b>175</b>
<b>MARSH, Professor Helene Denise, TESAG, James Cook University, Townsville, Queensland 4811 . . . . .</b>	<b>162</b>
<b>MOORHOUSE, Ms Margaret Jeanne, Member, Executive Committee, North Queensland Conservation Council, 340 Flinders Mall, Townsville, Queensland 4810 . . . . .</b>	<b>181</b>

<b>POWER, Mr Richard Thomas, Chief Executive, Townsville Enterprise Ltd, P.O. Box 1043, Townsville, Queensland 4810</b>	<b>154</b>
<b>REICHELTL, Dr Russell Evan, Director, Australian Institute of Marine Science, PMB 3, Townsville MC, Queensland 4810</b>	<b>123</b>
<b>SCOTT, Emeritus Professor Edward, Chairman, Townsville Enterprise Ltd, P.O. Box 1043, Townsville, Queensland 4810</b>	<b>154</b>
<b>SILVA, Mr Rowan, Environmental Defender's Office of Northern Queensland Inc., 451 Draper Street, Cairns, Queensland 4870</b>	<b>200</b>
<b>TAGER, Mr Jeremy, Member, Executive Committee, North Queensland Conserva- tion Council, 340 Flinders Mall, Townsville, Queensland 4810</b>	<b>181</b>
<b>TANZER, Mr John Melvin, Acting Chair, Great Barrier Reef Marine Park Authori- ty, Flinders Street, Townsville, Queensland 4810</b>	<b>138</b>
<b>TRINDER, Mr Colin Leslie, Manager, Ministerial and Parliamentary Liaison, Great Barrier Reef Marine Park Authority, PO Box 791, Canberra City, Australian Capital Territory 2601</b>	<b>138</b>
<b>VALENTINE, Mr Peter Sinclair, TESAG, James Cook University, Townsville, Queensland 4811</b>	<b>162</b>
<b>WILLIAMS, Dr David McBeath, Associate Director, Research, Australian Institute of Marine Science, PMB 3, Townsville MC, Queensland 4810</b>	<b>123</b>

**Committee met at 9.05 a.m.**

**ALONGI, Dr Daniel Michael, Principal Research Scientist, Australian Institute of Marine Science, PMB 3, Townsville MC, Queensland 4810**

**REICHELDT, Dr Russell Evan, Director, Australian Institute of Marine Science, PMB 3, Townsville MC, Queensland 4810**

**WILLIAMS, Dr David McBeath, Associate Director, Research, Australian Institute of Marine Science, PMB 3, Townsville MC, Queensland 4810**

**CHAIR**—Welcome. I declare open the second public hearing of the Senate Environment, Recreation, Communications and the Arts References Committee's inquiry into the Hinchinbrook Channel. The committee prefers that evidence be given in public, but should you at any time wish to give your evidence, part of your evidence or answers to specific questions in camera you may ask to do so and the committee will consider your request. However, I must point out that evidence taken in camera may subsequently be made public by order of the Senate.

The committee has before it submission No. 84 which it has authorised to be published. Are there any alterations or additions before we proceed to any opening statement that you would care to make at this stage?

**Dr Reichelt**—We have no alterations to make, thank you.

**CHAIR**—Do you wish to make a brief opening statement? If not, we can proceed straight to questions.

**Dr Reichelt**—Thank you very much for the invitation to speak to the inquiry. I will make a very brief opening statement. Our submission really arose from a question that I was asked in the estimates hearing by you. I was asked to try to pull together all of the available scientific information that the institute had been working on for the past 20 years in the Hinchinbrook Channel area and to try to put an environmental or an ecological perspective on the channel as a whole. That was what we were aiming to do with the submission. Other than that, I would be happy to answer questions.

**CHAIR**—Dr Williams and Dr Alongi, do you wish to say anything?

**Dr Williams**—Not at this stage, thank you.

**Dr Alongi**—I too will wait, thank you.

**Senator O'CHEE**—I have a question about the movement of water through the passage. The suggestion yesterday from Sunfish was that the passage does not flush, in that the same water goes backwards and forwards. Exactly what does happen? You have quite a deep channel in the middle of that passage and you have got shallow water on either side. What happens as the tide goes through? Does the water go backwards and forwards? Do you get turbulent flow around the edges of the passage?

**Dr Reichelt**—I will start and my colleagues can correct me if I am off the scientific track. The channel itself is like a bathtub with openings at either end, and a major river flushing through it. So when the river is not in a state of high flow the tidal movements of water in and out at both ends mean that the water near the centre of the channel has what we call a high residence time: it is not flushing through very fast; it oscillates backwards and forward.

The physical evidence of that is that when you look at a satellite image of the channel you can see that the extensive mud banks and mangrove growth is all near the middle section of the channel. But when a major flood happens huge volumes of water flush through and a fair amount of that is diverted northwards up through the channel. So there is a scouring effect in times of flood.

**Senator O'CHEE**—Is the middle bit the area around Anchorage Point?

**Dr Alongi**—Yes, from that area south to the other end of the island. The residence time in the dry season is in the order of several weeks.

**Senator O'CHEE**—But north of Anchorage Point it basically moves out into Rockingham Bay?

**Dr Alongi**—Yes, it does. It is a bit slower than what you think is a simple bathtub even in that area because what you get is what they call trapping and lateral diffusion. That means, to put it in a simple way, you can have a situation where at low tide the mangrove creeks are still draining into the channel and tidal water from the lagoon is still coming in, so what you have is what you call enswirling effects. That creates a very complex situation where you can have water in some areas of the channel that is fairly fresh in the sense of only several days and other indications of where it has been there for a while.

**Senator O'CHEE**—So it is difficult to characterise any particular part of the water because it is so complex?

**Dr Alongi**—Generally, yes.

**Senator O'CHEE**—If we are talking about water coming out of, say, Sunday Creek or one of the other creeks near the islands, most of the run-off is going to occur in periods of high rainfall. Is that the case?

**Dr Alongi**—Yes.

**Senator O'CHEE**—We heard from Dr Reichelt that in periods of low rainfall you can have a long residency period. But, in periods of high rainfall, how long does it take for that water to move out into the bay or out the other end?

**Dr Alongi**—It depends on the level of rainfall. For example, if there were a severe cyclone—which is the extreme case—it could be in the order of hours. On the other hand, if this is a typical wet season in Cardwell, probably within the same time span as the tides.

**Senator O'CHEE**—So in a normal February, for example, where you have 460 millimetres of rainfall, it will be just flushed out with the tide?

**Dr Alongi**—Pretty much. It also gets mixed, though. The fresh water sits on top, so there is also the impact of wind as well. If you get mixture, which is pretty common, essentially it dilutes the whole channel, but in that case it is fairly slow in the mixing. But the total time frame is fairly short.

**Senator O'CHEE**—Does the fresh water sit on top because of specific gravity?

**Dr Alongi**—Yes. Saltwater is denser than fresh water.

**Senator O'CHEE**—One other question relates to that. There was talk of nutrient run-off from cane fields and so on. Nutrient run-off is more likely to occur in the wet season than the dry, I assume?

**Dr Alongi**—That is true in terms of basic logic. The thing that complicates it is that if you do have a lot of rainfall it is also diluting those nutrients. The other thing that we do not know about, which puts some limits on what you just said, is the ground water input, which is subsurface water. So it is hard to answer that question in that sense.

**Senator O'CHEE**—We have had two conflicting suggestions about acid sulfate run-off. One suggestion is that when the acid sulfate mixes with the sea water it basically gets neutralised. Another suggestion—and maybe it is not mutually exclusive—is that when acid sulfate run-off mixes with sea water you get an iron floc as a result of the chemical process. Could you comment on either or both of those, please?

**Dr Alongi**—I do not know about the iron floc, but it is true that sea water has a very high buffering capacity, and it can tend to neutralise acid sulfates. But again it depends on the amount, and it depends on the pH of the soils. All I can say from AIMS's work and from other work that I have seen is that the wetland areas do have a high capacity for pyrite formation, which is the precursor for acid sulfate soils.

**Senator O'CHEE**—I think they were talking about iron as opposed to iron floc.

**Dr Alongi**—The dissolved concentrations of iron in the sea water are very low in that area. I would have to do the calculations for that to find out whether that is true. I have not done that.

**Senator O'CHEE**—So is it the case that concentration of iron in sea water will vary according to the region?

**Dr Alongi**—That is correct.

**Senator O'CHEE**—Is the ambient temperature of the water relevant to the sort of chemical reaction that takes place?

**Dr Alongi**—The warmer the water the faster the reaction, generally.

**Senator O'CHEE**—Thank you.

**Senator HOGG**—What monitoring projects or programs do you have in place covering the Hinchinbrook Channel area, and what might their purpose be in broad terms?

**Dr Alongi**—You are talking about monitoring at the moment?

**Senator HOGG**—Yes.

**Dr Alongi**—At the moment there is monitoring of the prawn ponds in the central area, the channel. That has in fact just started this month. There recently was a project by the institute in association with the Kansai power company. We had a large grant looking at the carbon dynamics of the entire system, so it was a large scale ecosystems study. It was not monitoring in the way you would normally think of monitoring—of just looking at one specific problem. Another one I can think of is where one of our research scientists has been doing some water flow modelling and sediment transport modelling in the northern end of the channel from around the Oyster Point area to about Anchorage Point.

**Senator HOGG**—Regarding the one on the prawn ponds, is that the aquaculture which is virtually slightly south of the Oyster Point area?

**Dr Alongi**—That sea farm—that is correct.

**Senator HOGG**—What about the barramundi nets there?

**Dr Alongi**—I know of no work being done to monitor that site.

**Senator HOGG**—Is there any coordination of research done in the Hinchinbrook Channel by various authorities. If so, is that done by your organisation?

**Dr Reichelt**—There is no specific regional coordination that I am aware of. The main research groups would be us and the Queensland Department of Primary Industries. There are other organisations like the Great Barrier Reef Marine Park Authority that have an interest in the world heritage area, of course. But, for that specific area, there is no detailed plan that I am aware of for monitoring. In fact, one of the points we raised in our submission is the importance of a regional approach to these sorts of environmental issues. I would hope that whatever process is in place now to do a regional plan for the Hinchinbrook Channel area would include some kind of coordinated ongoing monitoring or evaluation.

From a research point of view, and from our organisation's point of view, we have had a long association of focused studies in and around that area because it is relatively pristine and it has huge areas of mangrove forests; it is probably the best place in Australia to study relatively undisturbed mangrove systems. Our work has been focused more in Missionary Bay and at the north end of Hinchinbrook Island. If I could springboard off your question, I would say that that is a good idea. But the research is different from monitoring. The research being done is focused on a problem—understanding a process. The monitoring—and I guess I was reading it into your question—is about who is looking at this area and whether

it is being coordinated. The answer is that I think this regional plan should focus on that issue and make recommendations.

**Senator HOGG**—It seems to me that there is a reasonable lack of ongoing scientific data by which people can test what changes have taken place in the area over time. There seems to be no baseline that says, ‘This is what the area was like in 1950; in scientific terms this is what it was like in 1960. We can explain the changes between 1950 and 1960 because of greater sugarcane generation down at the bottom end, or we can explain the change from 1960 to 1970 because there was a huge cyclone through there and it did this to the system.’ This seems to me something that is lacking along not just this area of the coastline but the totality of the coastline—that we are not in a position to be able to say in any definitive way what changes are taking place and why they are taking place. It seems to me it is because of lack of proper research and proper monitoring processes in place.

**Dr Reichelt**—That is fair enough. My reaction is that it is a pretty fair observation. From AIMS’s point of view, particularly with the Great Barrier Reef and the offshore reefs of the Great Barrier Reef, this issue loomed large in the late 1970s, early 1980s, and a program of monitoring of the entire length of the Barrier Reef was put in place by AIMS in the mid-1980s and has been continued since. As technology has improved, it has become more effective I think over the years.

As to the issue you raised, hopefully we will not be caught in that position for the Great Barrier Reef region generally. I think your observations are true for the coastline and changes in land use, although I would say that the Herbert catchment is one of the better studied ones in Queensland. I wonder if my colleagues could comment on what is known about that to answer your question. Dan, can you comment on what is known about the changes in that area, or is there a general lack of data?

**Dr Alongi**—Generally there is a lack of data. Looking at a lot of the early photographs—in fact from the World War II time period—there has been some change in the mangrove areas, for instance, but the problem is that this has all been very piecemeal and you do not get a constant time line in any of the data. The other point, too, is that one reason why there is not all this historical data is that AIMS really only started working in this area intensively in 1979, which is, from an ecological point of view, a very short time period. I realise you are probably not going to like this answer but, if you look at coastal systems around the world other than the Baltic, Chesapeake Bay and the Mediterranean, there are really no other areas in the world where you have that sort of time span of research that you are talking about.

**Dr Williams**—There have been several serious efforts to try to retrospectively find out what the extent in the change of land use has been and what the impacts have been. Two of the major areas are, firstly, looking at a series of aerial photographs of the terrestrial areas, and the second one is looking at histories from sediment cores in the muds in the Hinchinbrook Channel. In the first one, the studies of aerial photography which have tried to work out changes in the amount of different vegetation types in the region since European settlement have suggested that the lowland rainforest in the Herbert region has decreased by 50 per cent since European arrival. The melaleuca woodlands wetlands, which are the

biggest wetland areas, have decreased by 60 per cent, but there has been no net change in the mangrove areas.

The work on the sediment cores, which is being done by AIMS, looks at histories over the last 100 years or so, and there are clear signals in the recent history of the cores that show indications of impacts of run-off that coincide with the changes in land use. So the message from that is that the changes on the land are sending a signal into the Hinchinbrook Channel.

**Senator HOGG**—Are you able to put together a computer model which shows that if this happens, that will happen and this will be a potential consequence at this part of the channel or that part of the channel? In other words, if we open more land to sugarcane growing, we would expect an increase in the amount of acid sulfate soil and we would expect it to leach into these areas. Is that sort of sophisticated modelling available, or is that something well into the future?

**Dr Reichelt**—I will start the answer and see if my colleagues can help me out. The capacity to make regional models is there now—a computer model similar, say, mathematically to weather forecasting models where you know something about the forces acting and the spatial arrangements. The physical modelling I would say, yes, is probably doable now in terms of water flows and what physically will happen if you put a wall here, a dam there or impound this area. Even those models would probably not be terribly precise once you get a few years out, but you might be able to predict where sediments may build up or be eroded away. I think the answer is probably, yes, you could make that kind of a model.

When you extend it to the biological system, it gets much harder because in mathematical terms of the discontinuities and non-linearities a little push there can lead to a big reaction over here. We may know and even understand the process that caused it but not be able to forecast it. It is the same problem that weather forecasters have in knowing whether more rain will fall in this suburb or that suburb. All I would say is that, once you add in the ecology of the system, to be very precise starts to become very hard.

I actually think that is one of the problems with coastal management generally, the fact that we tend to look at the small changes in the system and we are not very good at understanding the cumulative effects and the big changes, so what you end up with is very well qualified ecologists who have been spending their lives working on these systems saying to people such as you, ‘All we can really tell you is that if you take away all of this particular part of the system it’ll be different. You may not have the fish there or the seagrasses or the dugongs. If you take away another two per cent, we can’t tell you whether that is critical or not.’

What I am really saying is the physical modelling is probably doable because of the few variables, but we might be dreaming about the biological modelling if we think we could be very predictive. We would understand the changes as they happened, but to predict them accurately would be fairly hard.

**Dr Alongi**—That is pretty accurate. Ground treatment would be the biggest problem. As Russell was saying, there are models and then there are accurate models. I guess we have

always taken a fairly conservative approach at AIMS, basically because there are a lot of models out there. They are even packaged in some cases, but they may not necessarily be applicable.

**Senator HOGG**—What I am really hinting at is that there is no way of predicting the impacts if there were to be another major Oyster Point type of development placed somewhere in the channel, is there? Is there any way of predicting the impact that that would have on seagrasses, on water flows, on a whole range of things? Is that possible or is that just pie in the sky?

**Dr Alongi**—It is possible. It would depend upon the size of the operation and where it is actually located. But those are not the first two questions I would ask you if you were to ask me that one and you were the operator. It is an iterative process in the sense that on any one operation, yes, you probably could give fairly qualified answers, but the problem is, as Russell was saying, that two and two does not necessarily equal four. There may be a bigger effect than a combined effect from one or two operations. It is not a linear effect.

**Senator HOGG**—In respect of the seagrasses off Oyster Point: do you have any monitoring process of the changes to the seagrasses?

**Dr Reichelt**—We are not monitoring the seagrasses. The research expertise in seagrasses in this part of the world rests with Queensland's QDPI team.

**Senator HOGG**—The last question is one that you raised and that is about the prawn ponds. What is your actual project doing there?

**Dr Alongi**—We have a grant funded by FRDC, which is the Fisheries Research and Development Corporation, looking at whether or not there is an impact of the prawn pond effluence into the tidal creeks and the channel. Like I said, that was started this month. The other half of that project is actually up in the Mossman area around Port Douglas. As far as the date of the investigation in the channel is concerned, it is the start of this month.

**Senator HOGG**—When could some results be expected from that?

**Dr Alongi**—I would be comfortable making some estimate about whether or not there is an impact after the wet season, so we are talking about late summer of this coming year.

**Senator HOGG**—Thank you very much.

**Senator TIERNEY**—Just following some of the earlier points Senator Hogg raised about working out the effects of developments and what happens, you state in your submission that there are economic and scientific models for ecologically sustainable use of renewable land and sea resources but that they do not suit the Hinchinbrook Channel area. Could you just elaborate on that a little further? And what is so different about the Hinchinbrook Channel that you cannot apply those models?

**Dr Alongi**—Most of those sustainable models are actually based on temperate areas in other countries. What is unique about Hinchinbrook is the fact that it is a tropical river delta

with a very large barrier in front of it, namely, Hinchinbrook Island itself, so any water motion and any contaminants—if there are any—coming out of the Herbert River or any of the other catchments would be somewhat constrained by the fact that that big island is sitting in front of the delta. I am not a modeller by training, but it would seem to me, as an ecologist, that we would have to modify any existing models to account for that effect. I am not personally sure how you would do that, though. That is just one of the problems involved with that sort of situation.

**Senator TIERNEY**—You might have answered my next question about a site-specific model. You seem to be saying that would be very difficult to develop.

**Dr Alongi**—Difficult but not impossible.

**Dr Reichelt**—I can answer that one. A site-specific model is the only way you could do it. That is the summary, if you like, of the discussion to date—that the system is not like other areas that have been modelled. In fact, the large scientific modelling effort has tended to be away from the tropics because that is where the wealthy Western science has been done for the last 100 years or so. It is only in recent times that, with places like AIMS and others elsewhere in the world in the tropics, people have focused on modelling tropical ecosystems.

I think the answer to your question is that a site-specific model would be the only way to go and that it would be a difficult undertaking. But I think some kind of regional modelling would be essential, for instance, to help design a monitoring program for a regional plan and to at least make a first approximation to some of the predictions that would be needed if proposals were to alter the pattern of human use, say, in the Herbert catchment.

**Senator TIERNEY**—From what you were saying earlier to Senator Hogg, I assume that with any sort of modelling you could probably do things that were relatively clear on the physical effects but the biological effects would be incredibly difficult. So effects on particular species off the coast or in the channel—in particular, things like seagrasses—would be a bit difficult to predict, would they not? Are we really guessing at this stage?

**Dr Reichelt**—I should clarify that. In the extreme, things are quite predictable. If you take away all of the food for a species, it will not survive there or it will move away. So, if there is a removal of seagrasses, all the things that depend on seagrasses will not occur there any more.

I think we are interpreting your modelling question as: if you make a two per cent adjustment here, will it have a five per cent effect on that species? That is what we are saying is hard. But I think it is important in regional management to take account of the uncertainty and say, 'Because we are unsure, the regional plan may resolve to retain a certain proportion of a particular type of habitat because of the association of other species with it or for biodiversity reasons or whatever.' So large-scale targets for environmental management are appropriate. They can be supported with some modelling, but I would not let the problem of not being able to make fine-scale predictions prevent environmental managers from taking decisions about the overall status of regions.

**Senator TIERNEY**—In your submission you indicate that you think there is a need for an integrated regional approach towards I assume all developments across a particular area. Could you explain a little further your concept of that and who would actually be overseeing that?

**Dr Reichelt**—There are some good models around Australia for integrated area management. In my observation the most effective scale seems to be at something like the river catchment scale—this is coastal area management I am talking about—and it involves consultation with the community, involvement with all the users of the land areas, the people impacting on the land which flows into the ocean. So something like a catchment scale and there has to be a strong local involvement. I am not sure whether I would chance my arm on which arm of government or how that should be organised administratively. However, I think the scale of a catchment is a workable scale because it is a kind of natural boundary. In terms of the workings of it, Dan, do you want to say anything more about coastal management?

**Dr Alongi**—No. I think the problem, again, is the ground truthing of it. It is very complicated trying to trace a particular material, whether it be a contaminant or something natural, from a river all the way down into an estuary. So I just want to reiterate what Russell said: the problem is coming up with the fine-scale modelling, with the fine-scale estimates, not the severe consequences.

**Dr Reichelt**—I would also add that integrated management means integrating all of the uses of the environment, of which cultural is one. You have probably focused on World Heritage values in your review as well, because of the area there. These are all things which need to be taken into account. Particular regions may have different cultural value or societal value. The work that we have been involved in has been more of the environmental, the ecological, not the socioeconomic, for instance, or the cultural. When I talk about integrated planning for an area, I actually mean it in a much broader sense than the work of our institution. So I would not put the scientists in charge!

**Senator TIERNEY**—You mentioned that there were other areas where this integrated approach had worked in Australia. To go back to that question of who should oversee this, what happens in those other areas—who does oversee it?

**Dr Reichelt**—This is second-hand for me—I am probably the wrong person to ask—but the local governments are involved, with support from state governments, and modelled on the landcare style of operations, so it is at community group level. I probably should not chance my arm on this. I would be happy to do a bit more investigation for you, or leave it with you as an issue to be followed up, because it is not in my direct expertise. But my understanding is that where there is community involvement at a local scale or at the catchment scale, it might be groups of local governments that are involved in an area—

**Senator TIERNEY**—I would be interested if you could follow that angle up, if that is possible, because in a totally different sort of inquiry we have been looking at cooperation between local governments acting on a regional basis on a range of issues apart from this and it seemed to be an interesting model. If you can find any examples elsewhere in

Australia where there has been inter-local government cooperation on a regional basis that would be useful.

**Dr Reichelt**—Yes.

**CHAIR**—In your integrated regional approach, is the coastal management plan—which is reaching finality, we understand—a part of the picture, in your view? Have you been involved in that plan and what is your view of its likely success in terms of protecting the environment?

**Dr Reichelt**—I am sorry to say I have not been involved. I wrote offering services several years ago now, but I have not had direct involvement. Can I just check whether any AIMS staff have been involved?

**CHAIR**—Can I ask you if you think that is a problem.

**Dr Reichelt**—It is hard for me to comment because the inquiry may be going tremendously well—the planning process—but I cannot comment. What I will say is that all of our information is publicly available. However, it would probably be a good idea for people to get it much more quickly, and synthesised, by talking to the authors of it rather than ploughing through the several hundred references that I have here.

**CHAIR**—Will the document come to you at some stage for you to check and make sure the science has been taken into account?

**Dr Reichelt**—I do not know. I can follow that up. I think it is a good idea that people involved in that planning process get all the best available scientific advice. When I said before that I would not put the scientists in charge, I was really saying in a light-hearted way that this is a much bigger issue than a straight scientific investigation.

**CHAIR**—Nonetheless, you would expect some science to be in there, wouldn't you?

**Dr Reichelt**—Exactly, that is the point I wanted to make. I would hope that this planning process at some stage taps into the information that is available.

**CHAIR**—Is the Port Hinchinbrook Acid Sulphate Soil Management Plan something that you have been involved in?

**Dr Reichelt**—No, I have not been involved in that.

**CHAIR**—Have you seen the document?

**Dr Reichelt**—No.

**CHAIR**—Is that also problematic?

**Dr Reichelt**—That is probably best directed to the environmental managers of that project. I understand they did appoint a scientific adviser and I have not had direct exchanges with the independent monitor.

**CHAIR**—How much work has your organisation done on management of acid sulfate soils and their impact on coastal management?

**Dr Alongi**—We do not have anyone who is an actual expert on acid sulfate soils per se. It is a fairly complex subject. There are only a few people in Australia with that capacity and no-one at AIMS.

**CHAIR**—Do you accept that the impact of acid sulfate on the marine environment is a consideration for your organisation, especially in this region?

**Dr Reichelt**—I think it is a priority for research. If we had the capacity to recruit new coastal science experts, that would be a high priority for us. I have personally inspected a number of estuaries in northern New South Wales which are much further advanced in being affected by acid soil run-off, and my impression is that it is one of the large environmental problems for the east Australian coast. So, yes, it would be a priority for us in the future.

**CHAIR**—How far into the future? How much further do we progress with aquaculture and developments of this sort before we have the science?

**Dr Reichelt**—I am trying to tease the question apart in the sense that the problem of the acid run-off has been around since about the late 1980s, which is quite recent when you think about it. It is well known that it occurs and it is known that a lot of the east coast has a lot of iron sulfides that could contribute to acid run-off problems. In a sense, I would not wait for the science. It is known that it is a problem so I would get into managing the problem.

**CHAIR**—Have you made representations to the government for extra funding to put on the scientists to work in this field?

**Dr Reichelt**—Not in this field specifically. We make frequent representations for increased funding, but it is a difficult task. I took your question more to be, ‘Will we rejig priorities towards this?’ and the answer is that we will. We have a three-year planning cycle and within this year we will rejig our priorities. I think there will be a lot more focus on issues like the impact of coastal aquaculture, specific types of disturbances and the acid run-off problem. We will be addressing it in the coming 12 months and seeing what we can do with the resources we have and the expertise we have.

**CHAIR**—Dr Reichelt, you have already said that there is insufficient research in the marine environment. I am wondering where you are going to take the funding from in order to fund this area. I suppose what I am doing is giving you an opportunity to make a recommendation so that the committee can make a recommendation to see that better science is funded.

**Dr Reichelt**—I would like to see a number of the R&D corporations pick it up as a specific priority—and I have an opportunity, being on the board of one of them.

**CHAIR**—By R&D, do you mean industry?

**Dr Reichelt**—The research and development corporations, of which there are 13 or 14, are joint industry-government funded. A number of them have high public funding. The Land and Water Research and Development Corporation has already, I think, started funding on this area. For AIMS to pick up new work in this field, we would be targeting groups such as that to support proposals for research that we would make to them in this area.

I would very happy to see a recommendation come from the inquiry. As I have already said, I think this is one of the major problems for coastal ecosystems on the east coast of Australia and needs considerably more research focus. In parallel, I think it needs responses from management to deal with it. In other words, decisions on land use, drains, impoundments and drainage of wetlands are all contributing factors.

**CHAIR**—Dr Reichelt, as I understand it, it was your report commissioned by Senator Hill two years ago which led to the go-ahead on this development. This issue has been characterised by, I suppose you would say, conflicting scientific advice and difficulty in coming to terms with the science. Can I ask you whether your report accurately reflects the convergent scientific opinion from within your organisation and elsewhere.

**Dr Reichelt**—This might be a lengthy answer. I will try to keep it short. The minister did not commission my report. I was asked by the Great Barrier Reef Marine Park Authority to assist them. They had received six reviews of a technical report, with a consulting company making a proposal to the minister to approve the project. The technical reviews were quite voluminous—there were six of them—and I was asked, with my scientific background, could I try to synthesise them and summarise them, which I did. That was what my report was. It was a report to the marine park authority summarising some technical reviews. In those reviews there was some conflict, but not very much. They were critical reviews of a report which focused on very local impacts. The report that they were reviewing by the SKM company did not look at—

**CHAIR**—Sorry, by very local impacts, does that indicate the project itself or—

**Dr Reichelt**—The project and its immediate surrounds. When I looked at the reviews and the original paperwork, it was referring to the local impact, what will happen at this site and what will flow off the site, if you like, that will cause impacts.

**CHAIR**—And you did not include that data?

**Dr Reichelt**—Sorry?

**CHAIR**—Are you saying you did not include that?

**Dr Reichelt**—No. What I am saying is that the six reviews which I summarised were themselves reviews of another technical analysis of the site which all had a fairly local

focus. The report itself was to do with the effects of making a marina and the effects of disturbing the soil in that area.

The reviewers identified a range of problems, and I summarised them. The problems were eliminating the acid soil problem, managing the dredging operations to minimise impacts, ensuring all available techniques are used to control dispersal of sediments and seagrass shading, developing a full annual baseline of water quality data, establishing a long-term environmental monitoring program at the site and taking action to improve the knowledge about the status of dugong in the area, and particularly managing the local boat traffic. These were all points made by these reviewers which I summarised.

However, all of the reviewers noted, and which I noted in my report, that these may not be the major issues in the area. The major issues may be more to do with regional impacts and heritage values, but none of those were the substance of my review, and that is why I have repeatedly been a proponent of regional approaches and looking at the bigger picture before taking a decision about a specific site.

**CHAIR**—You have heard criticisms of your report, presumably. Tony Preen made representations to the committee when it was in Townsville on the Commonwealth powers inquiry. He suggested that the report was cooked up to give the government the result that it was looking for. How do you respond to that?

**Dr Reichelt**—I had not heard that, but it was not my intention to cook up a report for anybody; it was to summarise six technical reviews which the environmental managers of the project wanted to see summarised. I went a little bit beyond my brief but not really, in the sense that the reviewers themselves made this comment about regional approaches.

**CHAIR**—Are you aware of criticisms about the terms of reference of the report being too narrow?

**Dr Reichelt**—Yes, I have heard people comment on the fact that it addressed the local issues, and I think that is a fair criticism. I make that point even in the summary of my report.

**CHAIR**—You would be aware, too, of the number of scientists around the world who have criticised this development for its science and yet, as I understand it—correct me if I am wrong—your report says that the impacts of this development are not significant. Is that a fair summary of your summary?

**Dr Reichelt**—I would have put it slightly differently. The impacts of the development at the site are huge. That bit of habitat is now totally changed. The reviews that I summarised were all pointing to the fact that the impacts were local and that they would not expect to see disturbances because of that development beyond some hundreds of metres away from that site. That is what I reflected there. I repeat my point that I do not think the issue of incremental change on coastlines has been solved by any government, certainly not in Australia, and this is yet another example of incremental change. As of the early 1990s there have been 13, or some large number, of government investigations into coastal modifications. I think there was one called ‘The death of 1,000 cuts’ or words to that effect.

Incremental change is the big problem for managing coastal habitats, and site-specific focused inquiries and evaluations contribute to the problem.

There needs to be a will on the part of local, state and federal governments to tackle the problem regionally and handle it that way. In a sense, if a scientist is asked if a specific disturbance will have regional impacts and the scientist says no, it does not mean that information is irrelevant to regional planning, but it might tell you something about how many of those sorts of developments you put in. I do not think you need a scientific evaluation to know that putting a resort on top of a coastal habitat will alter that bit of coastal habitat. How much of that coastal habitat do you want to retain? Are you happy to see that little bit changed? Those are the sorts of questions that could be addressed by a regional approach.

**CHAIR**—Did your report address the question of acid sulfate soil management?

**Dr Reichelt**—Yes.

**CHAIR**—You said earlier that you do not have the expertise in this field.

**Dr Reichelt**—No, a number of the reviewers mentioned this problem and recommended that it be managed, and my report fairly reflected their views. I reflected it in the summary as well: eliminating the acid soil problem is a key criteria for handling that site.

**CHAIR**—And yet, as I hear it, there is not a check on the current plan that we have, apart from the one scientist who is the independent monitor. Is that correct? You have no further role—

**Dr Reichelt**—I do not know.

**CHAIR**—You do not even know what is in this document, let alone being able to—

**Dr Reichelt**—No. There are a few places in Australia which have good expertise in acid soil management and I would look to them. If I were handed the document and asked to review it, I would say ‘No, give it to the experts.’

**Dr Alongi**—There are others. I do not know the precise names involved in the Murray-Darling Basin project, which is something that we would like to aim for as well. That is the one coastal management plan where the integration is coming into it. It is a bit more complicated down there.

**CHAIR**—There are many questions we would like to ask you. I am just wondering, if we put those on notice to you, whether you would be happy to answer them.

**Dr Reichelt**—Yes, I would be happy to answer them.

**CHAIR**—Thank you very much.

**Senator O'CHEE**—Dr Reichelt, let me get this very clear. When you did this review there were six technical experts who had made reports. You were brought in for the sole purpose of bringing that together in an intelligible fashion. Is that correct?

**Dr Reichelt**—In a shorter and plain English fashion, yes.

**Senator O'CHEE**—So that other people could then make judgments about what was in those reports and how they should be dealt with?

**Dr Reichelt**—That is what I understood at the time that I was doing it, yes.

**Senator O'CHEE**—You never purported to be the person who was going to make the decisions on this. You were providing the information in an unbiased fashion to people who would make the decisions.

**Dr Reichelt**—That was my aim, and at the time I understood that there were other groups assessing cultural values. I understood there was a world heritage group in Canberra looking at that side of things. But that was my aim, yes.

**Senator O'CHEE**—You do not let politics get in the way of making your scientific summary of that work?

**Dr Reichelt**—Certainly I aim not to.

**Senator O'CHEE**—Thank you.

**CHAIR**—Thank you very much.

**Proceedings suspended from 9.57 a.m. to 10.17 a.m.**

**COOK, Mr Clive, Manager, Environmental Impact Management, Great Barrier Reef Marine Park Authority, Flinders Street, Townsville, Queensland 4810**

**TANZER, Mr John Melvin, Acting Chair, Great Barrier Reef Marine Park Authority, Flinders Street, Townsville, Queensland 4810**

**TRINDER, Mr Colin Leslie, Manager, Ministerial and Parliamentary Liaison, Great Barrier Reef Marine Park Authority, PO Box 791, Canberra City, Australian Capital Territory 2601**

**CHAIR**—I welcome representatives from the Great Barrier Reef Marine Park Authority. The committee does not have a submission from your organisation. Do you wish to make a brief opening statement? If not, we can proceed to questions.

**Mr Tanzer**—Thank you, Chair. I will table for the committee a submission that we have here. I would also like to take the opportunity to make a short statement. As I said, I am presently Acting Chair of the Great Barrier Reef Marine Park Authority while the chair, Dr Ian McPhail, is overseas on business and could not be here. He apologises for that.

I have been with the authority for the last seven months, so my knowledge is somewhat limited in terms of the details of the Port Hinchinbrook project. However, with me today are Mr Clive Cook, Manager of our Environmental Impact Unit and Mr Colin Trinder, Manager of our Ministerial and Parliamentary Liaison Office. Both have a thorough knowledge of the history and project management of the Port Hinchinbrook development, so I will obviously defer to their experience in answering detailed questions from the committee.

Environment Australia has prepared a formal submission to the inquiry incorporating the views of the different elements of the portfolio. GBRMPA has coordinated the preparation of this submission. GBRMPA will not be making separate written submissions in its own right. We understand that representatives of Environment Australia will be appearing before the committee at its hearings scheduled for Canberra on 10 August 1998.

The marine park authority's role is to ensure that the Great Barrier Reef is conserved while not unnecessarily restricting reasonable use of the reef. In relation to world heritage, the marine park authority is charged with ensuring that the world heritage values of the Great Barrier Reef are not compromised. World heritage values are those characteristics of the reef referred to in the 1981 nomination document prepared for the inscription of the reef on the World Heritage List.

In relation to Hinchinbrook Channel, the most significant of those values identified relate to the protection of seagrass and dugong. As the committee has seen first-hand, the Port Hinchinbrook development site is not on Hinchinbrook Island. It is several kilometres from the Great Barrier Reef Marine Park and is adjacent to, but outside, the Great Barrier Reef world heritage property.

The Hinchinbrook Channel is also outside the marine park but is, from the low water mark, inside the world heritage property. There are no world heritage property values

associated with the landward construction site of Port Hinchinbrook itself. The proclamations by Senator Faulkner in 1995 came about because of concerns about the impacts that the development outside the world heritage property might have on world heritage values inside the property.

The principal aspects of the construction of Port Hinchinbrook with the potential for impacts are related to: dredging of the access channel, the construction of the marina, foreshore works—mainly mangrove clearing in relation to those works—and the management of acid sulfate soils. But, as was discussed with the gentlemen from AIMS, there are other potential impacts that relate to the operation of the resort at Port Hinchinbrook, including water quality issues, sewerage, turbidity and so forth, and those stemming from the management of increased numbers of people at the site accessing areas nearby, including the Great Barrier Reef Marine Park.

The Commonwealth's ability to influence and control activities on the Queensland mainland outside the world heritage area is limited by the scope of the World Heritage Properties Conservation Act 1983. The Great Barrier Reef Marine Park Act 1975 can only be used to control activities outside the marine park that generate pollution that might harm animals or plants in the marine park. The authority has been appointed the Commonwealth representative under the deed of agreement entered into by the parties to the Port Hinchinbrook development. These parties are the Commonwealth, the state of Queensland, the Cardwell Shire Council and the developer of Port Hinchinbrook, Mr Keith Williams.

GBRMPA's role has been to ensure that world heritage values are not adversely affected and that the deed of agreement is complied with to the satisfaction of the Commonwealth. Thank you for the opportunity to speak.

**CHAIR**—As neither Mr Cook nor Mr Trinder wishes to make an opening statement, we will move straight to questions.

**Senator HOGG**—I wish to go to an issue that was raised late yesterday afternoon by an air charter operator in Cardwell. Apparently, the air charter operator says that they have access to fly over the Hinchinbrook Channel on only one occasion per day, and they cannot understand why they are limited to one occasion per day to fly over the channel. Can you give us some explanation as to that?

**Mr Cook**—We would have to take that on notice because it is the peculiar interests of an individual potential permit holder and I am not familiar with the details of that particular operation. There are general provisions for permitted activities inside the Great Barrier Reef Marine Park relating to commercial activities and, in addition to that, there are provisions within the coastal regional plan that is in preparation, but I reiterate that I will take that on notice, if I may.

**Senator HOGG**—Yes. The other thing that you may well also take on notice is the height at which the operator is able to operate. We were led to believe that a ceiling is placed on the operator of 1,500 feet minimum altitude, whereas other commercial flights that might go from Cardwell through to Ingham can fly at 500 feet, as can military aircraft that

fly over the Hinchinbrook Channel. It seems to me that there is a disparity there. Could you please check that out as well.

**Mr Cook**—Yes, but if I could just add something on that particular matter: there are provisions within the Queensland legislation for the operation of aircraft in their respective areas of jurisdiction as well, which may be the particular area of interest for this operator, particularly if it is the channel. There are provisions within the current zoning plans of the Great Barrier Reef Marine Park for the operation of aircraft below 500 feet, except for landing and taking off. As I said, we will take that on notice because of the particular details you have provided.

**Senator HOGG**—Thank you.

**Mr Tanzer**—We should be able to get the answer to that today before you leave.

**Senator HOGG**—Excellent. Specifically I wish to address the issue of the seagrasses. We saw on our inspection of the Oyster Point site that there was an area of yellowy-brown water and one can assume that it is beyond that that the seagrasses grow. What research has been done on the extent of the seagrasses there and the changes that have taken place over time?

**Mr Tanzer**—The seagrass work, as Dr Reichelt pointed out, has been undertaken by Queensland Department of Primary Industries and in particular by Dr Rob Coles, who is generally regarded—in this part of the world at least—to be the expert. His team has done some survey work in the channel, as they have along other parts of the coast as well. As to the extent of it and actual location, I will ask Mr Cook to comment on that, but I will make the comment that surveying seagrass is not an exact science, particularly if you have to enter into the water as they like to do to ground truth it, so to speak. I know they have done some work in the relatively recent past on that.

**Mr Cook**—I would refer the committee to figure 1 of our submission. You do not have it in front of you at the moment, but that actually describes the location of the seagrass beds. It is attachment H on the Environment Australia submission. The location and mapping of seagrasses was deemed to be an important baseline information requirement, certainly since the Commonwealth became a party to the deed. As Mr Tanzer has indicated, the Department of Primary Industries in Queensland have actually been commissioned to do that and have recently submitted the last report for that baseline monitoring. It is against that baseline information that we are able to judge the effects of the particular activities; specifically, dredging at Oyster Point itself.

**Senator HOGG**—Do we know whether the seagrasses are regenerating and expanding or contracting as a result of the development at Port Hinchinbrook?

**Mr Cook**—I think it would be fair to say that we could not say it was a direct result of the construction of Port Hinchinbrook, but there is certainly evidence that the seagrasses fluctuate to some extent. It appears from the evidence that there has been a relatively narrow strip, as it were, straight out offshore from Stoney Creek and there are two patches of seagrass, one to the north and one to the south, the density of which I would have to refer

back to the reports to give you specific details on. From our understanding, it seems to be relatively dynamic and comes and goes. We would have to defer to the experts in that regard.

**Senator HOGG**—So we would really be better off talking to Rob Coles about the impact of boating and sea traffic as a result of the full operation of Port Hinchinbrook?

**Mr Tanzer**—I recommend Dr Coles to the committee. He is a well regarded expert internationally as well, particularly on seagrass in this part of the world. A few years ago there was a major collapse of seagrasses in the Hervey Bay-Sandy Straits region due to the flooding that came through there. The level of disappearance was extremely high. They seemed to collapse overall with major implications for the fish and the marine mammals that depend on those seagrasses. They seem to be coming back again. As Clive was saying, they are quite dynamic and they fluctuate a lot in terms of extent and abundance.

**Senator HOGG**—As I understand it, the seagrasses off Oyster Point are used by dugong as one of their feeding habitats. Is that correct?

**Mr Cook**—That is right.

**Senator HOGG**—Do we have any monitoring of the rate of use by dugong of that particular seagrass patch?

**Mr Cook**—There is an ongoing monitoring program for dugong in the area of Hinchinbrook, tagging radio transmission devices on them. It is actually a direct fallout of the issue you have raised about the seagrass providing a food source to dugong. To get a more accurate handle on the actual numbers, the overall population of dugong in the area, you would have to ask Helene Marsh, who I understand is giving evidence to the committee. She was instrumental in setting up the research program to look at those sorts of issues, the location and concentration of dugong in particular areas. For example, it is known that there is a strong concentration of dugong in Missionary Bay but they would not just stay in Missionary Bay, they would travel around. There have certainly been dugong observed at Oyster Point, and there has been evidence of dugong feeding trails at low water in the seagrass beds offshore there. They certainly exist there, but you would need to ask Professor Marsh that particular question for more detail.

**Senator HOGG**—Yesterday we had evidence from Sunfish, I think it was, that there were seagrass beds at the southern end of Hinchinbrook Channel and that those have now disappeared. They were there as late as the mid-1980s, if I recall the evidence correctly. Are you aware of the disappearance of any seagrass beds at the southern end of the Hinchinbrook Channel? If so, do you know why they have disappeared?

**Mr Cook**—It would probably be more appropriate if you asked Dr Coles that particular question. He has done the studies of the seagrass locations throughout the channel and would be best placed to answer that. It is a dynamic environment and a lot of sediment comes out of the estuary of the Herbert River. There is a lot of flushing. There have been some recent flood events and so on. As John has indicated, there had been a large loss of seagrasses in Moreton Bay, for example, due to climatic events. As you would be aware, there has been a

relatively wet wet season up here with the cyclone effects, so there has been a lot of fresh water flushing and a lot of flood plumes going out, particularly out of the Herbert. All of those things would contribute to the health and wellbeing and distribution of seagrasses.

**Senator TIERNEY**—Just following on the seagrass issue, listening to this debate in the Senate over the last four years a lot of us have perhaps formed the view that the seagrasses were fairly fragile, but your evidence seems to indicate that the seagrasses that the dugong depend on are quite robust in that they spring back. I assume this would be because the movement of sediment down rivers like the Herbert in flooding is a pretty natural sort of event, that suddenly they would get inundated with very turbid water. I assume they have evolved to respond and spring back from that. Would that be a reasonable assessment?

**Mr Cook**—Yes, as a general assumption. I think the situation would depend on the particular attributes at the location. Dr Coles has reported in one of the reports that the seagrasses at Oyster Point, for example, are probably pretty close to their threshold of tolerance because of the natural turbidity and the fluctuations that do occur there. The fluxes could tip it over or make it survive. Again, it is probably best to ask Dr Coles that. He is the expert on seagrasses and he would be able to tell you definitively on that particular matter.

**Senator TIERNEY**—What is the role of GBRMPA in the development of the regional coastal plan?

**Mr Cook**—The authority's role goes back some time. It was contingent on the Commonwealth becoming a party to the deed of agreement where the coastal regional management planning framework was deemed to be the appropriate mechanism for looking at the cumulative and collateral impacts of a resort like Port Hinchinbrook. A memorandum of understanding was entered into between the Commonwealth and the state in developing that plan. The authority's role has been to sit on a senior steering committee and also to provide working group—task force, if you like—inputs to assist the Queensland government. The actual plan is administered under the Coastal Management Act of Queensland. That legislation provides for the setting up of advisory committees.

Our role has been very much to ensure that the values that are ascribed to the planning area, which includes bits of the Great Barrier Reef Marine Park and the world heritage area—that is, the little bit that is outside the marine park; for example, the internal waters of the state in Hinchinbrook Channel—and those critical elements (the sea grasses, the dugongs, boat speeds, access and general impacts) are managed through a setting or planning regime as opposed to a strict regulatory regime or an environment impact process. That is how we became involved in that process.

**Senator TIERNEY**—You may have heard a question to the earlier group about where the point of authority should be in all of this, given that you have got federal, state and local government involvement. Were you here for that earlier discussion?

**Mr Cook**—Yes.

**Senator TIERNEY**—Do you have any comment on that in terms of getting an integrated approach to the development and management of this coastal area?

**Mr Cook**—My personal view is that the jurisdictional issues—the tiers or levels of responsibility—associated with that sort of coastal regional planning is always a problem. The proposed Commonwealth environmental legislation attempts to address that to some extent. But I think that, in this particular case, it is quite an interesting exercise to balance those different levels and interests from an international obligation context—in world heritage values, for example—right down to a local government planning approval process. In the middle, just above the local government approval level, is the strategic plan for the shire, for example. Then you would have the coastal region management plan and these sorts of overlaying different types of regimes. I think it is complex and quite difficult to put in place. That is my personal view.

**Mr Tanzer**—There are institutional and jurisdictional complexities in trying to manage a process like that. I agree entirely with Dr Reichelt from AIMS that a regional approach is required. The most important thing is to get a regional approach politically through the different tiers. That is what is most required to make that approach work. If the political direction is there and there can be cooperation at that level, then it is possible to coordinate across jurisdictions and institutions. There are opportunities there.

**Senator TIERNEY**—In GBRMPA's goals and aims you mention the concept of 'integrated development'. Could you just explain a little more fully what you mean by 'integrated development'?

**Mr Cook**—I would need to think about the context in which you are asking the question. Integrated development is the concept of having a whole of government approach to approvals and planning processes and, in the literal sense, integrating it in an environmentally sustainable way. That is the crucial element from our perspective. It is providing for the reasonable and wise use of the Great Barrier Reef Marine Park while conserving it. That is a constant balancing act.

We will never totally win the ultimate conservation goals of locking a place up, nor will we fully satisfy a pro-development ethos. We are in the middle trying to manage a balanced reasonable use. The words 'reasonable use' are subjective ones. We have heard in a number of other inquiries and estimates hearings that some people think it is reasonable and some people do not. Unfortunately for us, we are in the middle trying to balance that with the best available advice, using the principles laid down in our legislation. It is more problematic the further we move away from our core area of legislation, as is the case with Hinchinbrook.

**Senator TIERNEY**—In relation to your role in managing a world heritage area, what mechanisms do you have in place for local involvement in the management of this region?

**Mr Cook**—There are a number of levels to that. If you took it at the broadest level, in relation to the development of zoning plans inside the marine park world heritage area—and I constantly make this distinction in terms of our core function and, if you like, that sort of ripple effect of the coast that is not our direct responsibility—you have a zoning plan which has statutory public participation phases associated with it. We have management planning regimes now that have the requirement for the consideration of world heritage values and the precautionary principle in there. We have, as we have observed, the coastal regional management regimes that are, for example, in place in Hinchinbrook.

There is then site specific planning that could take place as a result of that. There are two that I would flag. One is the Cairns plans that have just been released and also the Whitsunday management plans. Each of those levels have elements of public participation within them. If you go below that through an environmental impact assessment process, we have the ability to involve the public in decision making if the public's reasonable use is affected in the main part. If you can imagine, that is a tier of public input, as it were. Did that answer your question? I am not sure if it did.

**Senator TIERNEY**—Yes, it did. Thank you.

**Senator O'CHEE**—I have a couple of questions about this map of seagrasses with which we have been presented. This map of seagrasses is as at 1996. When did you first start mapping seagrasses in this area?

**Mr Cook**—I think it was 1994. There have been annual surveys done. We have only just received the latest one from Dr Coles. There have been, if you like, an overlay of those over the last four years.

**Senator O'CHEE**—Seagrasses do not like periods of high rainfall because you can get high flushing of fresh water and sediment into the areas where they exist.

**Mr Cook**—That is my understanding, yes.

**Senator O'CHEE**—Was there any study of seagrasses prior to, say, 1982 in this area?

**Mr Cook**—There has been a broadscale survey of seagrasses along the whole eastern seaboard of the state conducted by the Department of Primary Industries. I understand that was about the sum of the broadscale surveys. They have done more localised surveys in areas such as some of the dugong protection areas. But, from a baseline perspective, which is what I would presume you are asking, I would refer you to those earlier broadscale surveys by DPI. Again, Dr Coles would be the ideal person to ask about them because he was instrumental in those early surveys.

**Senator O'CHEE**—My problem of understanding all this argument is simply this: since 1982 there have only been three years, including last year, where the annual rainfall exceeded the mean. Maybe when we do a study of seagrasses in 1994 when the total rainfall was below average we are in fact taking it off the wrong baseline because it is in the middle of a period of very low rainfall. Maybe it is the case that some of the seagrass beds that were established were in fact marginal anyway and are more the result of climatic fluctuations downwards in rainfall rather than a sustainable seagrass bed.

**Mr Cook**—I think those points are extremely valuable. It is the nature of the dynamic environment that they exist in and also the lack of long-term baseline information that we have about the environment that we manage. We still do not know everything there is to know about the Great Barrier Reef Marine Park. We are still learning new things. We have heard our colleagues from AIMS discuss some of those and the extensive research that is going on. I think it would be fair to say that the effects of coastal developments and land use changes, as Dr Reichelt indicated, are an important priority for our agency.

**Mr Tanzer**—Yes. This is a constant problem in natural resource management. When you move into marine resource management and tropical marine resource management it gets more acute, I would argue. My time in fisheries tells me that we have relatively limited information, that is not to say knowledge, to base our judgments on in relation to tropical marine ecosystem management. In relation to fisheries and the seagrass upon which fisheries depend so much, if you go back much further than 10 or 15 years you are really dealing with extremely limited scientific information and quite often not collated or analysed anecdotal information. It is a difficult environment and one in which we have a lot of catch-up work to do.

**CHAIR**—I want to ask some questions about the acid sulfate soil management. I have just had a chance to look at your submission. You say that the Queensland Acid Sulphate Soil Inspection Team has been appointed to the role of independent monitor. I understood that the independent monitor was Professor Saenger.

**Mr Cook**—The relationship there is that there is the overall independent monitor and that monitor then can draw in other experts to assist him. For example, we have not just used QASSIT as a subexpert review, as it were. We have used a geotechnical engineer, for example, to provide advice on the structural integrity of the bund walls that you observed on the site visit, because we do not necessarily hold that expertise. In terms of acid sulfate soils, we required that there be an independent group of people that had relevant expertise in acid sulfate soil. The overall independent monitor, Professor Saenger, who you have heard from, has a responsibility to oversee the overall monitoring regime of the project.

**CHAIR**—Has QASSIT been involved at every stage? Has that advice been given and taken?

**Mr Cook**—It has certainly been given. It was contingent on certain elements of the deed being fulfilled. It has been an interesting exercise in getting those various elements in place. If I could go back a step, the deed requires the developer to prepare a turbidity control plan which has an element of it, which is the management of acid sulfate soils. He initially prepared that report, which was not satisfactory. It was then subsequently prepared by the company SKM. That was reviewed by QASSIT, as an independent acid sulfate soil group peer reviewer. They then commented on that and their comments plus the modified SKM report became the acid sulfate soil management plan for the site.

**CHAIR**—So is QASSIT doing monitoring at all or was that their only involvement in the development of the plan?

**Mr Cook**—They have been involved on about three occasions—initially, as I mentioned, in the peer review of the first plan and bringing the final plan together, which the Commonwealth then accepted as being the acid sulfate soil management plan.

**CHAIR**—So is the inspection team able to inspect when and how they choose?

**Mr Cook**—As required.

**CHAIR**—By whom?

**Mr Cook**—It is usually at the behest of the overall independent monitor or maybe even at ours. There have been circumstances in which we have requested QASSIT to go to the site to inspect a particular issue.

**CHAIR**—On how many occasions has QASSIT gone on site to inspect the work?

**Mr Cook**—To my knowledge, about three perhaps even four times.

**CHAIR**—Over how long?

**Mr Cook**—Three years—something like that.

**CHAIR**—I notice in your submission that the plan includes the burial of acid sulfate soils below the watertable. Is that your understanding of what is required?

**Mr Cook**—Yes.

**CHAIR**—On our inspection on Wednesday, we saw the settling ponds, and they were some metres, I would say, above ground level. We had to climb some distance to get up to the top to have a look. I would have argued that they are a long way from sea level, yet these pits, as I understand it, are simply going to be ‘capped’. I think that was the word that was used. This would seem to be at odds with this requirement for burial below the watertable.

**Mr Trinder**—The burial of acid sulfate soils in the plan that you are referring to referred to the soils that originated from the site. The stuff that is in the spoil ponds comes from the dredge, and it consists of marine sediments. Only some of that material is potentially acid sulfate producing, and a management plan has been developed for managing the run-off from those spoil ponds. What has occurred around the spoil ponds is to ensure that any water that is coming off those spoil ponds is directed into an acid sulfate treatment pond. The pH of the water coming out and entering the access canal has to be within certain parameters otherwise actions have to be taken to neutralise the water before it enters the canal.

**CHAIR**—I understand that. I also understand that not all of this material that is in the settling ponds is acid sulfate, but there are large questions over quite substantial parts of it. Does the plan mean that those will need to be removed in order to be buried at below sea level or will, as we were told, the lot simply be capped?

**Mr Cook**—The plan requires that element of best practice in terms of management of acid sulfate soils. The issue has been one of not knowing exactly where it all lies on the site. Again, it comes back to a fundamental problem of pre-disturbance baseline information. We know, and you heard from Mr Williams on Wednesday, that Stoney Creek had a fork in it, and there was an island, which is where Oyster Point is, where all the building blocks are now. Late 1880s surveys show mangrove lined creeks with a fork. Basically, it went through where the existing marina is and out to the beach. You can see evidence of river wash boulders on the foreshore and so on. Historically, the creeks have silted up or been filled in over subsequent years. So the actual location of acid sulfate soils itself was unclear. It

certainly had been disturbed by the previous developer. You saw some evidence of that on your site visit on the foreshore—the old Tekin spoil dump.

There are two bits of the plan: firstly, remnant acid sulfate soil material that was left lying around from Tekin; and, secondly, material that was exposed by virtue of the construction activities of Cardwell Properties. To address both those issues, the plan does require that they be buried as per the recommendations by QASSIT—below the watertable. If they are not buried below the watertable then that is a matter that has to be raised with the independent monitor and has to be addressed through the due process.

**CHAIR**—Is that the role of QASSIT? Do they do that?

**Mr Cook**—QASSIT could be consulted in terms of saying, ‘This is happening.’ First of all, we have to demonstrate that it was possibly acid sulfate soils.

**CHAIR**—Who is we?

**Mr Cook**—The managing agencies. The ‘parties to the deed’ perhaps would be the appropriate term to use. It is potentially difficult for us from a biologist’s point of view because our head of power is only through the deed. Our bottom line is to ensure that there are no adverse environmental impacts on the world heritage property which, as you know, is offshore from the site. The question then arises, as Colin has indicated, about the subsequent flushing of water that may result from disturbance on the site and the regime that has been put in place with perimeter drains and sumps. The acid treatment pond, for example, is there to ensure that whatever does go out through the outlet, the single point discharge, which is out through the canal, is within the acceptable parameters of the deed. Those elements that you have observed would certainly need to be looked into. The deed says that is what has to happen.

**CHAIR**—Let me ask you the question another way. Are you completely confident that QASSIT, who I gather is the expert in this field, has access when it needs it in order to identify problems before they arise?

**Mr Cook**—In a word, no, because it depends on the nature of the issue at the time and depends on the view of the independent monitor, and also because of the link between the site supervisor from the Department of Environment and Heritage and the independent monitor himself, plus we have in place a technical advisory group which we are involved in as well. When issues like that come up they would be flagged to the technical advisory group, usually the consultants, which are SKM, in terms of the monitoring, representatives of the state, the Department of Environment and Heritage, ourselves and the developer, and of course headed up by the independent monitor.

An issue that you have described would be discussed by the technical advisory group QASSIT, as the independent monitor itself saw it, or any other independent assessment that may be required. I have used the example previously of the geotechnical engineer as well because we would say that wall may look dodgy; we are not qualified to say whether it is good, bad or indifferent from an engineering or structural point of view.

**CHAIR**—Essentially, you are describing to me a process whereby the non-experts have to identify the problem in order to call in the experts. Is that a fair summary of what you are saying?

**Mr Cook**—No, I do not think it is. The management regime on the site is derived by virtue of the site supervisor. The environmental site supervisor, who represents the Department of Environment and Heritage, is the person who walks around the site and says, ‘Ah, I have seen this.’ Their role is to bring that to the attention of the independent monitor or the managing agencies in accordance with the deed. There is a sort of step by step process, which I have just described, in that. It would not be fair to say that it is the non-experts bringing it to the attention of the experts. There is a degree of expertise within the role of the site supervisor because they are actually testing as they go, as well.

It depends on the nature of the particular issue. We have had a number of issues that have come up over the operation of the project which have required us to come in and say, ‘We need to be satisfied.’ We will insist that some regime be put in place. I have used the geotechnical engineer as an example of where we insisted that an independent geotechnical engineer inspect the integrity of the bund walls.

**Mr Tanzer**—In terms of those ponds that we looked at the other day with you, the mention was made to me—and I thought it was by the independent monitor, but I am not 100 per cent sure on that—that there was expected to be some subsidence occur and that those ponds are still operational, as we saw. We would have to wait to see what the extent of that is, but also we will undertake our responsibilities in keeping with the deed. That is, at the appropriate time, when those ponds have ceased their function in terms of draining off the water and then treating it as necessary and putting it back into the channel, we will take whatever steps and we will seek the advice of the experts that we need to in assisting us with that. This is not a closed book at this stage.

**Mr Trinder**—I would also say that at the time that the deed was drawn up, it was not the intention of the parties to the deed, in my opinion, that dredge spoil would be buried below the watertable.

**CHAIR**—We saw, in our inspection of the site on Wednesday, the point at which the spill from those holding tanks occurred and some of the area into which it went. There seems to be some conflicting advice as to the area covered by this spill into especially the crown land and the vegetated areas. What is your evidence of the extent of that spill?

**Mr Cook**—Perhaps a simple way of answering that question would be to provide the committee with a copy of this photograph which shows the extent of the spill. I will pass that up. It does extend out into the unallocated state land on the foreshore there, but seems to have stopped short of actually flowing out below mean low water into the world heritage property. Certainly, the issue is of concern to us, and that is why we sought the advice of the independent monitor and a geotechnical engineer in terms of why it failed and what needs to be done to rectify that.

Thirdly, an ongoing monitoring regime should be put in place to ensure it be monitored over time and remediation be taken if necessary because the advice of the independent

monitor is it could oxidise and create a problem in the longer term. I understand that the state has required the developer to provide an environmental management plan for that area. You would need to address those sorts of questions to the state because I am not familiar with the details of that licence requirement under the environment protection act.

**Senator HOGG**—That area also includes the old Tekin spoils as well, doesn't it? Is that correct?

**Mr Cook**—Yes.

**Senator HOGG**—Are we looking at two issues, including the old Tekin spoils plus the spill, or are we just looking at the spill?

**Mr Cook**—The immediate issue was the spill, of course, because the Tekin spoil dumps have been just sitting there for a while. That is the same area proposed for the dredge spoil pond for maintenance dredging for the channel when the maintenance dredging is handed over to the local government. That is still part of the USL, as I understand it. There had been applications made by Mr Williams to require both those leases on the foreshore. I do not know what the status of that is. It certainly does include those old Tekin spoil dumps.

**CHAIR**—There were some different views about the quantity of the spill. You have an aerial photograph of it. Are you able to indicate what that quantity was as a result?

**Mr Trinder**—I cannot recall the actual figures.

**Mr Tanzer**—Can we take that on notice and get back to you? Like you, I heard some figures at the briefing the other day. I have done some checking, but I just want to make sure rather than try and recall off the top of my head. It is my understanding that DEH—the Department of Environment and Heritage—have done some calculations and so I will find that from my colleagues from DEH and let you know.

**CHAIR**—We saw that a couple of wattle trees had been killed, presumably as a result of the spill close to the roadway alongside the bung wall. Is there any other evidence of damage to vegetation in this area?

**Mr Cook**—There appear to be a number of trees that have been harmed by that, whether by the salt in the water or smothering of their roots by the sediments. They seem to be species that are not tolerant of that sort of thing. The melaleucas and the mangroves certainly seem to be coping okay. That is probably a question best addressed to the Department of Environment and Heritage. They are monitoring that and it is, after all, their land. They are interested in the values associated with that. We are a bit offshore, but we certainly have an eye to what is happening there because of the potential effects that could occur.

**CHAIR**—Comments have been made in the last couple of days about the cost of monitoring this project. I think the press reported \$6 million having been spent by organisations such as yours. Can you comment on that? Are we overmonitoring this site? What is the cost to your organisation? Can you make some judgments about its worth?

**Mr Cook**—There are a number of costs attributed to this particular project. For our ongoing costs, our time and reviewing of reports, we do obtain funding from other environment portfolios, particularly the biodiversity unit, in terms of management or instigating reports. Our overall costs are about \$117,000 to \$120,000 a year to the authority. Specific reports have been paid for by the Commonwealth, but they have been specific to the foreshore area. The state, as I understand it, has also funded a number of reports.

We have always maintained that a full-blown EIS should have been done at day one. If the incremental or iterative reports that are derived through this sort of reactionary *modus operandi* at Port Hinchinbrook could have been addressed on day one, I do not think that the amount of money and effort that has gone into this project would have matched at all. We probably would not be sitting here if we had had one of them. That is my personal view.

**CHAIR**—How would you characterise the process?

**Mr Cook**—‘Torturous’ would be a word I would use, if I may.

**Mr Tanzer**—You mentioned cost before. There are a whole range of costs involved. The direct financial cost to the agency does not include the indirect costs of salaries and time. There is also some cost of stress to the organisation. That has been fairly high. It ties up valuable staff for long periods. There are other issues, as you have seen and spoken about, with the coast and offshore that need to be addressed. Overall, whilst the direct dollar figure costs may not look that great, the cost to our agency has been fairly high.

**CHAIR**—Are you saying this could have been prevented with an EIS up-front?

**Mr Tanzer**—It has always been our belief.

**CHAIR**—I could keep you here for another four hours with questions. We may need to put some to you separately. I have another area I want to pursue and Senator Hogg has something else he wants to ask.

**Senator HOGG**—Can you give me a brief comment on the proposal and the management plan to have restrictive speed zones and special channels as a means of protecting the dugong population in that area just immediately off Oyster Point and also into Missionary Bay? Is that likely to be successful?

**Mr Tanzer**—The imposing of boat speeds?

**Senator HOGG**—Yes.

**Mr Tanzer**—Ultimately, it will come about. You cannot base the extent to which dugongs are at risk through boat strikes on hard science. If they are at risk, then what speed is the threshold speed? We will have to wait and see what the impact is of reducing boat speed. In areas we know dugongs frequent and where we can often see fair numbers of them, such as in Missionary Bay, then it would seem appropriate that we take a precautionary approach in terms of boat speeds. In the major thoroughfare part of the channel there is

room for flexibility. You do not want a situation where boats have to crawl along in areas dugongs often do not seem to frequent.

**Senator HOGG**—How imperative is it that these boat speeds be put in place given that, as a result of the proclamation of the Hinchinbrook dugong sanctuary, there has been an exodus of commercial fishermen but an influx of recreational fishermen using both the ramp that has now been constructed and the facilities immediately off Oyster Point? How imperative is it to get some sort of regime in place without knowing the ultimate outcome as to whether this will really protect the dugongs in their environment?

**Mr Tanzer**—That is a good question. Professor Helene Marsh would be able to provide a much more informed opinion. It is our position that discipline on boat speeds in certain areas is certainly required. We would like to see from a precautionary approach how necessary it is in amongst the whole measure of methods. Professor Marsh would be able to provide a more informed response.

**Senator HOGG**—Have you monitored the changing use as a result of the proclamation of that dugong sanctuary?

**Mr Tanzer**—It is really quite early days. You said that there had been an increase in recreational use. It would surprise me if that has occurred in that short period of time. There was not a high level of commercial use in the channel anyhow. I think there were 12 licences, of which probably eight were active. It is at the end of the wet season that they get their best catches. So it was not a heavily fished area, although there was no doubt an impact from gill netting. I think what has occurred will be good for recreational fishing, and the recreational fishermen seem to agree about that. I do not think there would have been a dramatic increase, or even a measurable increase, in the extent of recreational fishing occurring yet. That will occur over a period of time and would have occurred anyhow.

**CHAIR**—I am not sure who to address these questions to, but the issue of mangroves on the foreshore has arisen a number of times so far. The committee visited the site and saw some planting of mangroves just north of the tip of Oyster Point, which had been unsuccessful. Do you know anything about that? Why did they fail? Can you answer that question? Secondly, what is GBRMPA's view about the necessity of mangroves along the foreshore in this area in terms of erosion of the beach?

Thirdly, the proposal that was explained to us by the developer at the site was that the area of mangroves closest to the sea—which are to be hedged—would best be removed. Can I have some idea of whether that is your view too? Is it possible to still have the beach protected with the removal of those mangroves, or is it your view that the mangroves should be allowed to grow along that coast?

**Mr Cook**—Perhaps I could begin in terms of the first part of your question; that is, the planting and what we know about that. I can answer part two of your question as well. The authority has always held the view that some form of mangrove hedge out the front of Oyster Point is better than no hedge at all. It may, as you recall, be one of the reasons why the proclamations were put in place by Senator Faulkner in the first instance, which was the removal of those mangroves.

To give effect to that, there was the cessation of clearing. Then there was the view that we needed to shore up, if you like, the remaining mangroves that were out there on the outer fringe so that we could at least provide some sort of buffering between the disturbed foreshore—as was being proposed at that stage—and the offshore areas, particularly the seagrass beds and the world heritage values offshore there. We have always insisted on some form of robust hedge out the front of Oyster Point.

With regard to the process of planting, once the trees had been damaged by the developer—they had been disturbed previously as well—it was agreed that we should at least be doing something to stabilise that foreshore. One of the ideas that came up was to undertake a planting regime there. The Commonwealth would be responsible for what is known as zone X—the outer fringe, a 25-metre band of mangroves which has some mature rizophera; that is, the tall trees that you would have seen protruding above the canopy—and they would try to reinforce that band. The developer would then replant zone Y. At the expiry of four years, he can then—

**CHAIR**—Is zone Y the area closer to the shore?

**Mr Cook**—The intermediate zone, yes. That is how we had to describe it in terms of the consent as well—what was allowed and what was not. We are not specifically mangrove ecologists; we are marine park managers, as it were. So we sought the advice of AIMS and others about what would be the most appropriate procedure to use. We obtained money from the environment portfolio to plant mangroves. AIMS propagated seedlings and then subsequently planted them.

It was initially successful. However, with the unfortunate floods and storm surges that occurred up there, a lot of those small plants died. The seedlings that remained look pretty healthy but there are still gaps in it. The artificial prop roots that were put there by AIMS were to artificially create, if you like, some form of framework for the seedlings to be within because they do have aerial roots naturally. Unfortunately, because of circumstances beyond our control, I do not think it was necessarily the methods and the way the plants were put in.

**CHAIR**—Mr Cook, the species has also been called into question.

**Mr Cook**—We deferred to the relevant experts on that. I am not a mangrove ecologist so I cannot speak definitively on this. The rizophera is, if you like, the umbrella species and then there is the avicennia and so on underneath that. We were debating what was the most appropriate species to plant there on the basis of what ultimately would survive and given the developer's view that he wanted a hedge. It would be no good us planting species that would look nice and healthy but then get coppice and die. That would defeat the object of the exercise, so we were deferring to the experts at AIMS on this particular matter to advise us on what the appropriate species were. We did not have a view one way or the other; we just wanted to make sure what was being put in there was the right one. Again, I cannot enter into the debate about whether the right or the wrong species were there. I am not a mangrove ecologist.

**CHAIR**—Will removing the intermediate level of mangroves be successful in the long term?

**Mr Cook**—To recap, our initial view is that a more robust, wider hedge is better than a very narrow one. There has been an application made by the developer to reduce the width of the foreshore arrangement. We have recommended that that not be supported on the basis that it would appear to be ultimately more risky. The evidence suggests that, even when mangrove experts put in trees to the best of their ability, it did not necessarily work very well. To rely on a regime of the developer taking over that last 25-metre band and removing everything inside of it to us seemed a bit risky; hence, we advised the minister about that and he supported us in that line. That is still a matter that has to be addressed through the deed of agreement. There are proposed changes to the deed but that is not one of them now. It has been dropped. I think it would be my view that it would still simmer there.

It is subject to a four-year monitoring regime which is looking at the beach profile and looking at whether in fact there has been loss of sediment there. We undertook a survey there earlier, colloquially known as the Oliver report. Dr Oliver from our agency visited the site with a group of scientists and they observed that there was some sediment loss in the foreshore. That essentially drove us to say that it would be better to retain a hedge, at least while the construction was taking place, with a monitoring regime. At the end of that, we would then be able to definitively say yes, no or maybe as to whether there was some change to the foreshore and sediment. We basically tried to apply a precautionary approach, but there has been a gradual nibbling away at that through this process. At this stage, we are not in support of any reduction to that outer hedge.

**CHAIR**—Thank you. There are many more questions we would like to put to you. We may put some of those on notice and ask you to respond at some later stage. Thank you for appearing before us today.

[11.20 a.m.]

**POWER, Mr Richard Thomas, Chief Executive, Townsville Enterprise Ltd, P.O. Box 1043, Townsville, Queensland 4810**

**SCOTT, Emeritus Professor Edward, Chairman, Townsville Enterprise Ltd, P.O. Box 1043, Townsville, Queensland 4810**

**CHAIR**—Welcome. The committee has before it submission No. 78, which it has authorised to be published. Before we move to your opening statement, are there any alterations or additions you would care to make?

**Prof. Scott**—None, Madam Chair.

**CHAIR**—Do you wish to make a brief opening statement? If not, we will go straight to the questions.

**Prof. Scott**—Yes, I would like to, if I may. Firstly, thank you, Madam Chair, for the opportunity to speak with you briefly today. Our interest in this inquiry stems from the charter of the organisation we represent. Townsville Enterprise Ltd, with a membership of approximately 500, is the region's principal development and marketing organisation. Its charter is primarily to attract and foster environmentally compatible and sustainable industrial, commercial and tourism development to the region—which, in terms of tourism in particular, extends from Mission Beach in the north to Bowen in the south and to Charters Towers in the west. The submission we presented has the unanimous support of the board of Townsville Enterprise. The board, being apprised of all that has happened in relation to the project to date, has also declared its support for the Port Hinchinbrook development.

It is not our intention to focus on the Hinchinbrook project itself, but to highlight the inadequacies of the development process and the procedures that make a mockery of a system that is blatantly flawed and a deterrent to potential investment, with a consequent loss of job opportunities. Essentially, we address issues 1, 3, 4 and 5 of your charter. We do not believe we are competent to comment on issue 2, we leave that to the professional scientific community.

The Hinchinbrook project history is not unlike the problems that have been faced by many developments in our nation and, in particular, in Queensland. I want to refer to the impact of those circumstances on developments. Very briefly, I will mention the Skyrail project in Cairns. That project, from initiation to completion, took six years. At the end of the time, after spending multimillions of dollars, even its previous opponents have difficulty faulting the project from any perspective.

Near to us is the Nelly Bay Harbour project—formerly the Magnetic quay project—on Magnetic Island. For seven years that has languished as a blight on Magnetic Island. Study after study has been completed, with millions of taxpayer dollars spent, and still we have an unfinished project. Surely that is a signal to anybody wishing to invest in Australia that, even with appropriate approvals and compliance with all that is asked of you, you may still fail.

We turn now to Port Hinchinbrook and the circumstances in relation to that development. It was first cleared of vegetation and foreshore mangroves in 1974 and again in 1978. It was taken over by Cardwell Properties, with approvals in place, in 1993. In 1994 the Queensland government, through the Coordinator-General's Office, called for public comment on the development. With approvals in place, work on the \$100 million resort began in late 1994. In November 1994 the federal government halted the development, using external powers to override the Queensland government.

Early in 1996 the Queensland government reconfirmed its approval to proceed. A few months later in the same year, the federal government supported conditional approval for the development. Final approval was provided late in 1996 and, at the same time, a small self-interest group bid for a Federal Court injunction. A month later the Friends of Hinchinbrook lodged another challenge in the Federal Court. In early 1997 the Federal Court decided in the developer's favour. It is our understanding that there have been three court decisions in favour of the development and that the developer has met all the requirements for approval of the project, yet we still seem to have to go back and review. I would like, with your approval, my chief executive to take it up from there.

**Mr Power**—Thank you, Ted. It appears to us that expert advice is sought by interested parties and, if the advice does not suit the particular party's desired outcome, alternative advice is sought. Even when apparently conflicting reports have been evaluated, there remains a reluctance to abide by the umpire's decision. The current process results in confusion as to the validity of a project in the minds of many people in the general community, particularly with the emotional rhetoric used and the very selective manner in which certain elements of a project are reported.

It is our view that the processes and procedures that have been laid down to provide the best result for the whole community should be strictly adhered to, and that some independent body, after making a full and thorough assessment of a project, should provide guidelines for the developer in a clear and unambiguous manner, so that the project can proceed without unnecessary delay and without having to contend with tactics designed purely to undermine any sense of balance for the good of the community at large.

In this regard, we refer to a copy of the email tabled at yesterday's hearing in Cardwell. We too received a copy of that email. Suffice it to say that circumstances which allow such tactics appear to be set up for someone to win and someone to lose rather than to provide a balanced approach to project development. The email reference is obviously in an attempt—some would say an unethical attempt—to win their point rather than to ensure the best possible outcome for the people of North Queensland, Queensland and Australia. That it can work as a tactic is of little question, as on two successive days national and local media reports have commented that 90 per cent of submissions are against the project. What obvious conclusion does that provide for the general public?

Finally, Townsville Enterprise believes that the whole approval process requires a review and that, when due processes have been allowed and a decision made, that decision should stand; it should be acknowledged and accepted and it should be binding on all of the parties involved. We suggest that a single lead government authority be nominated to oversee the approval process, being responsible for coordinating the requirements and approvals of other

participating authorities, including specific time constraints for the procedures and their implementation. Thank you.

**Senator O'CHEE**—Can I follow on from that very point that Mr Power has made. In the process of doing this, you are going to have, say, a state or federal government that may have some environmental concerns about a particular region. Then you are going to have the local council itself, which is concerned about the impact of the development on the council area, on the adjoining residential or other bits of land that are being used. In the normal course of things, the local council gives the approval and nobody else interferes. You get some areas like this where, for political reasons, it is desired that state or federal government get involved in the process. When you say that a single agency should coordinate it, are you saying that you would take the whole planning thing out of the hands of the local council? If not, at what point does the local council get involved in the actual planning approval?

**Mr Power**—It is our view that in the early stage obviously the local community needs to have input. But very early in the piece, in Queensland, we have a Coordinator-General's department to take major projects and ensure that all of the planning procedures, from local right through to state level, are coordinated. We have actually had a situation where on one day we have had state departments trotting out their legal advice and the following day we have had a federal department saying they will trot out their legal advice and, in the meantime, a project languishes and sits waiting for these two state and federal agencies to fight a legal battle. To us, that just makes no logical sense. There needs to be some overriding body in these circumstances that will take some control and is agreed to by all of the parties: local government, state government, federal government, and the numerous agencies that feed into that.

**Senator O'CHEE**—Who should be coordinating it all—the Coordinator-General or somebody else?

**Mr Power**—In our view obviously it is in the state of Queensland and that should take some precedence. But I do not believe that is crucial—given discussions that we have had, it may be a federal agency—provided that there is someone who, it is agreed, will take some control over the project.

**Senator O'CHEE**—What is the threshold for a development to come under this process? If I happen to buy a block of land somewhere along the foreshore in Cardwell or anywhere else, you would not normally expect me to jump through three levels of government hoops to build my house on my block of land, so at what point should we be triggering this larger process?

**Mr Power**—I think that probably, when you are talking about a block of land and a house, you are not going to have to contend with world heritage conditions and you are not going to have to contend with a number of agencies; you are probably going to deal with your local government. Once you are starting to deal with a number of departments—that is, state and federal departments, particularly the Department of the Environment—and you get beyond, as you were talking about, a block of land and a house, there needs to be some trigger.

I am not sure, nor am I qualified to say, where that trigger should be but, as for the projects that the chairman mentioned to you a moment ago, all have had major trauma, major problems, and are still having them. It seems strange to us that we cannot get it right. There are three projects that we are aware of and there are probably many more—in fact, we know there are many more—that have the same kind of problems.

**Prof. Scott**—One could simply say that the threshold is where the basic responsibility or possible infringement happens to lie. If the matter is a local government matter and they have clear jurisdiction over that, there is no need to go further. If it happens to move into things like environmental issues that are state issues, it involves the local government and the state. If it infringes or has the potential to infringe on Commonwealth responsibilities and prerogatives, we have to go the full cycle and involve the Commonwealth as well.

**Senator O'CHEE**—In this process that you advocate should there be a maximum time frame in which decisions have to be made? If so, how do you enforce that?

**Prof. Scott**—Undoubtedly there should be but that should be determined by the committee or the lead authority which is set up. We know that delays occur because of time taken to carry out, in some instances, scientific inquiries and so on. But the lead agency prescribing what procedures have to be followed should be the body that determines that and the potential developer should know what that time frame is. You would be only too well aware that the holding costs in projects such as these are enormous for people who have the ability to contribute to our community.

**Senator O'CHEE**—What about the issue of legal challenges? In a very strict sense of the word, I suppose many of the legal challenges probably lack locus standi but the courts seem to be a bit soft-hearted and allow them to go through anyway on some vague public interest basis. Where do you draw the line? Either the developer or those opposed to the developer could take a very litigious route. How do you get a planning process that does not get bogged down in litigation and endless court cases from either side?

**Prof. Scott**—We recognise that is a problem but all members of our community have the right to use the court system to the ultimate of their concern. We believe it is for the Attorney-General and the legal people to determine when this must end. Will no-one ever reach a stage where they accept the referee's decision, whether it is for or against a project? That is the point that we make. We are held up on that particular problem.

**Mr Power**—Enabling legislation could, in some way, reduce that problem for a particular project. Indeed, earlier on people were talking about the cost involved in this particular project. If we take the cost across Queensland in just the projects that we have mentioned, we are talking about tens of millions of dollars, the embarrassment and the time that goes into this and the negative signals that we continually send to possible investors.

Surely, less than that could be spent up front to determine the impact assessment of the project proper and then have the environmental impact following that before the project begins. So that all the approvals are in place and the developer knows what the rules are. If there are going to be some legal challenges later on, they can probably be dealt with fairly quickly and effectively. But it seems to us that at the moment people who have a bent

against a project can use the legal system with delaying tactics simply to destroy the project, because they know full well that the delaying tactics will cause financial ruin.

**Senator O'CHEE**—And if they lose and they are an incorporated association, none of the members has to pay the costs anyway.

**Mr Power**—That is right.

**Senator TIERNEY**—Could you perhaps explain to us more fully what the effect of all of this—what Senator O'Chee has been referring to—is on development in northern Queensland? When people who are wanting to invest in this region see examples of what has happened to Mr Williams to date, is that having any perceived effect on development in northern Queensland?

**Prof. Scott**—Yes, it has a hindering effect. First of all, if we go to the nearby project at Nelly Bay Harbour, that has been a matter of contention for seven years and is sitting there, an eyesore to anyone. The money that has been spent, the job opportunities that have been lost and the lifestyle for the community that has been lost are quite enormous. Now, had it been determined at the outset that that was not a project that should go ahead because it was not acceptable environmentally, then it is over and done with and a community can move on to what they wish to do next.

The same kind of thing was suffered by the developer of Skyrail in Cairns. There was six years in which there could have been construction work under way, in which there could have been people employed and a much earlier program in which our export earnings could be enhanced because of visitors who were coming to see that ecotourism centre. They are the kinds of impacts.

**Senator TIERNEY**—Could you possibly provide the committee with a list of projects like Skyrail and the ones that you have mentioned that have been held up or put off totally; is that possible?

**Mr Power**—A list of projects?

**Senator TIERNEY**—Yes.

**Mr Power**—Yes, we could certainly do that. I do not have that in front of me at the moment. I think Senator Tierney would understand that our problems here with Port Hinchinbrook do not go unnoticed throughout Asia and as far away as the United States. Financiers obviously have an interest in what happens in this country. The kinds of problems experienced by all of the projects we have currently spoken about certainly send out very negative signals.

**Senator TIERNEY**—So you are saying that, in addition to projects that have been stopped, there is probably a whole range of projects that never got past the drawing board because people just said that North Queensland is too hard because of this?

**Mr Power**—Yes, exactly that.

**Senator TIERNEY**—You mention in your submission that there is ‘a willingness to cater for every minority group regardless of its view and its motivation’. Could you expand a little on what you meant by that?

**Mr Power**—It seems that, in all of these projects, any group can lodge a protest and can take it forward because they have an interest. That can, again, be a delaying tactic because it means that if one falls over then another one springs up. In our view, it seems to go on forever. We do not profess—and never have—to talk on behalf of the community; we speak on behalf of our 500 members. Indeed, sometimes we find other voices. We wonder who they are and who they represent.

**Senator O’CHEE**—Should people be obliged to post security for costs where they challenge these sorts of decisions?

**Mr Power**—In our view, yes.

**Senator TIERNEY**—Professor Scott, you might want to comment on this question as a former professor of education at James Cook University, I think, is that right?

**Prof. Scott**—That is right.

**Senator TIERNEY**—In your submission it stated ‘research information is presented in such a fashion to create a very positive or very negative impression’, which I would not have thought was necessarily the role of research. Would you like to comment on that further?

**Prof. Scott**—Yes. I think one has to recognise that professional people, particularly academic scientists, have their own theories, their own positions. This is why we get such differences of opinion with reports that come forward. You are well aware of three reports that were done on this project early in the piece that did not all agree with one another and that were done by different scientists. But the arbitrator or judge in the end said, ‘Look, it is fair enough there are differences. But this is what ought to happen.’

There is this concept of academic freedom that exists in the university. If a person is prepared to face his or her professional colleagues and stand up and say, ‘My view is correct and I will argue with you,’ then that is fair enough. But if there is any kind of attempt to put forward an emotional commitment—and I will call it that—rather than hard academic evidence, I do not think there is any place for that.

**Senator TIERNEY**—In some of these research papers and the conclusions drawn by the researcher, do you think it has actually been the case that it has been more emotive than objective?

**Prof. Scott**—It depends on who is producing it. I do not think we would have much trouble in producing science reports of different kinds—not necessarily on this project—that would reflect an emotional commitment as well as a theoretical commitment, and there is no place for that in scientific reports. In fact, some of those papers do not get into journals for publication because they are monitored by editorial committees to see that they do not. But,

unfortunately, when you stand up as the lecturer before an audience of students, you can say what you like.

**Senator TIERNEY**—So you are referring more to unpublished research—

**Prof. Scott**—No, to both, but you are not likely to find—you must remember that interpretation not only is in the written word but also is how the media might take it and highlight what the conclusions are. They are often very responsible for taking things out of perspective and for distorting it in the public image.

**Senator TIERNEY**—Or very irresponsible.

**Prof. Scott**—Yes.

**Senator TIERNEY**—Thank you very much.

**Senator HOGG**—I have no questions.

**CHAIR**—Professor Scott, you accept presumably that developments like Port Hinchinbrook will bring jobs to the area—I gather that is the central point of your submission. First of all, what sort of studies have you done to show that projects like this do bring work and money to the immediate region? What is the basis of your assumption?

**Prof. Scott**—We have a standing contract with economic consultants in this city, who work Australia-wide and who have worked for the government Australia-wide, to produce for us on a quarterly basis a review of what is actually happening. We then produce an annual report as well on what has happened in the region. When a major project like this comes forward, we commission them to advise us on the likely impacts of that particular study.

**CHAIR**—Is it possible to provide the committee with that work?

**Prof. Scott**—Yes, we certainly can.

**CHAIR**—Are you familiar with the work of Mr Ralph Buckley who has, I understand, done a report into analyses of coastal developments. Are you familiar with that report?

**Mr Power**—No, I am not.

**CHAIR**—Thanks. I gather that projects of this sort are described as integrated resorts and that they can be listed under the Integrated Resorts Act 1987 of Queensland. Are you aware that this project has not sought listing on that basis and does that concern you—

**Prof. Scott**—Did you say it is not listed as an integrated resort?

**CHAIR**—Yes, it is not listed.

**Mr Power**—I was aware of that, and that does not concern us.

**CHAIR**—We also heard yesterday from the council that it would be quite possible for this project to go ahead as a real estate proposal and have, for instance, a number of blocks sold for a caravan park and have no other aspects of that kind of integrated development.

**Prof. Scott**—Your classic example of an integrated resort in Australia is one by the same developer—to wit, Hamilton Island—where there is a large area for visitors, you hire on a nightly rate and enjoy all the amenities. Then there are condominiums which allow people to have a residence and live there, if they wish.

**CHAIR**—Yes, I understand that. My question to you is: would this still have your support in terms of a resort if it were simply real estate?

**Prof. Scott**—It would not be a resort if it were simply real estate. To be a resort it must be open to attract visitors to the region.

**CHAIR**—This is a hypothetical question of course, but we have before us a development which has been subdivided only at this stage. Would it be of concern to you as a representative organisation of such developers if this were touted as a resort but ends up simply being a real estate subdivision?

**Prof. Scott**—It would not. That comes from our charter, which is to foster development and increase the economic potential of an area, and undoubtedly that would do so in that particular area, but others have a different point of view.

**Mr Power**—I think it would be fair to say that at this stage we are looking at the project being a resort. We are looking at the project coming forward as it was originally planned, and obviously that is of importance to us because it will create employment and attract visitors to the region. That is certainly important to us.

**Prof. Scott**—There is a relationship between the Cardwell community and Townsville where we supply a great quantity of the goods that they use and some of the services. My understanding is that the development proposes, when it is fully functional, bringing international visitors in through Cairns and domestic visitors in through Townsville. You can well understand that does create employment opportunities.

**CHAIR**—Thank you very much for appearing before us today.

[11.51 a.m.]

**MARSH, Professor Helene Denise, TESAG, James Cook University, Townsville, Queensland 4811**

**VALENTINE, Mr Peter Sinclair, TESAG, James Cook University, Townsville, Queensland 4811**

**CHAIR**—The committee has before it submissions Nos 125 and 136, which it has authorised to be published. Are there any alterations or additions you would care to make?

**Prof. Marsh**—No.

**Mr Valentine**—No.

**CHAIR**—I invite you to make a brief opening statement, or we could go straight to questions.

**Prof. Marsh**—We would like to make an opening statement. I will start and then refer to Peter. I would like to concentrate my opening statement on term of reference No. 6: what lessons have been learned and what can be done to prevent problems like this occurring in the future. I maintain that the community dissension and polarisation that has occurred over this issue is not a one-off situation. I think it is likely to recur if policies and practices are not developed to operationalise Australia's responsibilities under the world heritage convention.

World heritage is a set of responsibilities, but there is no consensus as to what these responsibilities mean for very large world heritage areas such as the Great Barrier Reef which, to put it in perspective, is one-third of the combined area of all natural world heritage areas in the world. It is absolutely huge. I think it is much easier to get community consensus on how small world heritage sites should be run. They can be run like national parks, with access and activities very tightly controlled. This is obviously much more difficult for a huge site like the Great Barrier Reef. We cannot shut down the east coast of Queensland from Bundaberg to Cape York.

There are two alternatives, and I think both have been canvassed. The first is to reduce the size of the Great Barrier Reef world heritage area and lock those bits up. The second is to develop practical means of operationalising world heritage over large spatial scales. We would advise against the former in the case of the Great Barrier Reef. The study that we conducted under the leadership of Ben Lucas, who is an internationally recognised expert on world heritage, involved a total of 60 people with expertise covering 29 natural heritage attributes. This study indicated that several individual phenomena of the Great Barrier Reef are world class; for example, it is obviously the largest coral reef that has ever existed. But there were two factors that had primacy in the expert summaries. The first is the scale of the area, which is seen to be integral to its world heritage value. Second, the experts regarded that there was a real chance of effective conservation management in Australia which did not exist in many other tropical ecosystems.

I think the recent concerns about the economic situation in Asia indicate that for most tropical developing countries the challenge of looking after the natural environment is very great and very hard to achieve. So I would contend that Australia has a special responsibility.

Although those two factors that I mentioned do not in themselves justify the world heritage listing of the Great Barrier Reef, we regard them as pivotal in enabling the expression of those attributes that justify the inscription. The challenge—and this is where I think your inquiry could really make a difference—is to recommend the development of planning and management regimes to achieve a balance between protection of world heritage and continuing activity.

We suggest that the procedures adopted by some world heritage cities might be an applicable model. In a world heritage city, such as the centre of Paris or Bath, life has to go on. Cities such as Bath in the United Kingdom have incorporated world heritage explicitly into their planning regimes and as a key material consideration in planning and decision making. Peter Valentine, who is internationally recognised as an expert in world heritage, is going to outline some practical initiatives that might enable Australia to rise to the challenge of administering our responsibilities under the convention on a large spatial scale. We think this is a policy area where Australia can really make a difference and display international leadership, because Australia is responsible for five of the 15 world heritage properties of more than a million hectares. Peter will now elaborate on some of those.

**Mr Valentine**—The first point is that Australia is the leading nation in the world with regard to natural world heritage sites. Our total of 13 sites is the greatest number for any individual nation. We have also played a significant role in supporting the convention with our membership of the World Heritage Committee and our active advocacy of world heritage globally. So, nationally, we have put forward an international perspective by being a key player. It is entirely by Australian government choice that we have developed an atypical land tenure circumstance with many of Australia's world heritage areas.

The USA has the next largest number of natural sites—12. We could have done as the USA or Canada have done—restrict our world heritage nominations to existing national parks or other comparable protected areas. We chose not to do this. We decided to nominate sites which had within them the seeds of potential conflict. This is nowhere better seen than in the Great Barrier Reef, Willandra Lakes and Shark Bay.

Had we been less adventurous, there would probably have been few, if any, conflicts over world heritage in Australia. However, having chosen to be radical in our approach, we have since failed to maintain the necessary investment to convert this novel approach into a successful global example. We had an opportunity to do that, but we have not done it yet. The USA, for instance, has all its natural sites as national parks run by the US federal government and those sites are extremely well funded in comparison with the funding we provide for our sites in Australia. The national government has even used the World Heritage in Danger List to help defend properties from external threats. For example, Everglades National Park in the US was put on the World Heritage in Danger List at the request of the US federal government in response to threats to that property from the Florida state government's activities.

Likewise, Yellowstone National Park world heritage area was nominated for the World Heritage in Danger List by the US federal government in response to a mine site outside the boundary of the national park. Those actions were designed by the federal government to bolster support in Congress to protect those world heritage sites. They have used this opportunity to show some national leadership to the state governments and other government agencies involved at the federal level. That is an interesting example.

Our choice to go down the multiple tenure, multiple use pathway required a significant investment by the Commonwealth in ensuring protection despite the murky legal waters that this produced. In my view, the focus of this inquiry is looking at just one of the examples of a result of that—that we have not learned how to deal with these areas properly. As Helene said, we are very keen to see a better future for world heritage management, and we are looking at how this could be addressed.

I will just mention a couple of areas where we as a Commonwealth have failed. We have consistently failed to provide to the World Heritage Committee an indicative list of sites, which we are supposed to do under the convention. Many sites had no management plans at the time of nomination, and the Commonwealth has taken very limited action to ensure rapid development of management plans. A good example of that is the wet tropics where, 10 years after listing, we have just had a management plan approved—the first management plan for the wet tropics. So it seems to me that this is evidence that we have not done as much as we should to meet the obligations of the convention.

In the case of the Great Barrier Reef, the Commonwealth relied on the Great Barrier Reef Marine Park Authority to manage the Great Barrier Reef world heritage area but failed to give it powers to act in areas beyond the marine park boundaries, which include significant elements of the Great Barrier Reef world heritage area. When it was determined by the Commonwealth that the Hinchinbrook Channel was not covered by GBRMPA's zoning and management powers, the Commonwealth failed to act urgently to extend its protection over that channel.

We have also failed to properly inform the communities of Australia about the meaning and nature of world heritage which is, again, required by the convention, that state parties inform the communities about the nature of the world heritage properties that the country has and, indeed, give world heritage a function in the community.

So this has all led to some of the problems which we perceive, including misinformation, about world heritage. The communities that I have been involved with in another role as chairman of a consultative committee on the wet tropics have displayed very unfortunate misapprehension about the nature of world heritage, to the extent of believing, for instance, that world heritage is somehow mortgaged to the World Bank and that the UN will send in troops if we don't work properly—these are all expressions that have come at public consultation processes in the wet tropics in the last two years. So the community has a poor knowledge of world heritage, and we have not done enough to ensure that the real nature of world heritage is understood more widely in our community.

The final matter to do with management is the scale at which these properties need to be managed. One of the problems with the Great Barrier Reef, for instance, to which Helene

has already referred, is its enormous size. But an equal problem is that the boundary of the world heritage area runs along the coastline and significant areas of influence in that world heritage area extend way beyond the coastline, right up into the catchment areas of run-off, and a range of other decisions that are made remote from the world heritage site have the power to affect, and indeed today are affecting, that world heritage property.

One way to tackle that is to have a different approach to planning—a broader regional approach rather than a site approach to planning. I believe that, if we could introduce that form of planning for the entire coastline, we would make considerable progress. I would certainly commend that approach as an overarching prospect.

In my submission I did make a couple of specific suggestions that might address some of the problems I have alluded to already, for instance, the world heritage local government environmental scientists program, for which I suggest the Commonwealth might fund specialised environment officers in each world heritage local government area of Australia. In other words, any local government area which includes, or abuts, an existing world heritage site is going to be a very important decision maker in the future of that site. If the Commonwealth could fund a program of having specialised world heritage environment officers in those local governments, meeting the cost of employing the officer and training officers, this would be a considerable contribution to raising awareness of world heritage in the community and to ensuring better practice in those important areas adjacent to the world heritage sites themselves, as well as within it. In some cases, of course, local government has got roles within world heritage.

The second arm of that is what I call the ‘world heritage regional planning program’—a program to fund the development of a regional plan to cover areas adjacent to all Australian world heritage sites—again, for the Commonwealth to accept its responsibilities here and to support local governments with developing regional plans that are approximate to world heritage areas.

**Senator HOGG**—My first question goes to one that I asked GBRMPA earlier about the boat management plan in Hinchinbrook. I know there is some reference to it in your submission. Did you hear my questioning of the Great Barrier Reef Marine Park Authority?

**Prof. Marsh**—No.

**Senator HOGG**—I am interested in the impact of restrictions on speed limits for boating in and around the seagrass area and also in Missionary Bay as a means of protecting the dugong population.

**Prof. Marsh**—As I said in my submission, we have evidence that dugongs are hit by boats. To date, it has not been one of the most significant causes of mortality. I will provide to the committee a paper analysing the impact of boat strikes on the Florida manatee. That will give you detailed information. In Florida, boat strikes are the major source of mortality to manatees. The situation in Florida is, of course, different from that in Queensland and dugongs are not manatees. I think there are basic biological defences—I mean, biologically, the animals are reasonably similar. Manatees go into fresh water which dugongs don’t but what we find is that in a channel environment where there is a large amount of boat traffic

there is a wall of noise and the animals have no idea where it is coming from and they rise under boats and get hit, and no-one wants that to happen.

The situation in Florida is different from Queensland in that 13 million people live in Florida and the coastline of Florida is the distance from about Hervey Bay to Lismore so we are talking about a much higher human population density. But we do know that areas of high boat traffic in channel environments are the areas where boat strike is the greatest problem for manatees in Florida. We also know that speed is the greatest problem. I think it would be very responsible to have a boat traffic management plan for Hinchinbrook, as has been proposed, with defined traffic lanes and speed restrictions.

**Senator HOGG**—In respect of the Florida experience, is there any distinct difference between the types of boats? The sort of thing I am thinking about is that there are tinnies, there are runabouts with fairly powerful outboards and there are those that have a properly housed engine inside, more a cruising liner.

**Prof. Marsh**—The biggest problem is the direct impact of the boat to the animal and the biggest controlling factor is speed.

**Senator HOGG**—Is it not related to size of boats?

**Prof. Marsh**—Obviously impact is related to size but it is a function of speed and mass.

**Senator HOGG**—Right.

**Prof. Marsh**—Both those factors are important. It is easier for animals to get out of the way of big, slow-going boats than it is for very small, fast boats. The analysis shows that speed is the most important factor. People have advocated the use of propeller guards to minimise direct injury and some of the injuries to manatees from boat propellers are horrific. Again, that does not solve the direct impact factor; it solves the cutting factor. I will give you a paper with an analysis which shows that speed is the most important thing.

**Senator HOGG**—We did travel the channel the other day and the thing that really stood out—I do not know whether it was an atypical day—was the distinct lack of traffic on the channel. It may well have been an atypical day.

**Prof. Marsh**—It is important to understand that we are also talking about the future.

**Senator HOGG**—I accept that, and I am going to come to that in a moment.

**Prof. Marsh**—It is important to set restrictions and patterns of use. My experience in natural resource management is that there is an incremental demand as numbers build up. It is important to set the rules and make the situation clear. My understanding is that the proposal is for marked channels and voluntary use of those channels in the first instance and speed restrictions. That seems to me a pretty good way to go.

**Senator HOGG**—Have you been consulted as part of that process?

**Prof. Marsh**—Yes, it has been discussed with me.

**Senator HOGG**—Do you have some input as to what the recommended speed should be and where the recommended channels should be, based on your knowledge of the movement of the dugong in those areas?

**Prof. Marsh**—Dr Tony Preen, a colleague of mine, is doing detailed work in satellite tracking dugongs in the Hinchinbrook region to provide detailed spatial information on their fine scale habitat use. This is being done through the reef CRC under contract to the federal government. His work is being used to advise the planners on the optimal placement of corridors and movement.

**Senator HOGG**—So if a proper strategy is put in place it should have two effects: firstly, it should minimise the chance of impact on the dugong; and, secondly, it should minimise the impact on the seagrass beds. Is that correct or am I misunderstanding you?

**Prof. Marsh**—Ideally, yes. As I said in my submission, there are three potential impacts. There is the direct impact on the seagrasses per se of the resort, which I think is of the least concern. There is this boat collision impact, which should be able to be managed through a boat traffic management plan. The third potential impact is the most difficult to predict as to how serious it will be. I am really guessing here because we only have anecdotal evidence for this. We have been told that dugongs use areas which have high boat traffic now but less than they did historically.

It is a correlative relationship. We cannot run experiments to prove that you have an overall deterioration of the acoustic environment that the animals do not like. That is certainly a concern but I really cannot give you scientific evidence as to what is likely to happen because it is a more insidious impact.

The thing that is important to understand, though, is that the strategy that the Great Barrier Reef Ministerial Council adopted for managing dugongs in the Great Barrier Reef region south of Cairns relied on establishing dugong protection areas. The rationale behind that was to give a high level of protection to what I call the five-star dugong areas, and Hinchinbrook is a very significant one of those. It is the second most significant. Shoalwater Bay is the most significant. The idea was to close the area to gill netting to reduce the proportion of animals in the whole region that would be exposed to gill netting impacts.

That strategy is only going to work if the habitat in the Hinchinbrook area remains attractive to dugongs—if it remains a five-star dugong area. It is very important, and I think basic to the whole strategy adopted by the federal government, that efforts be made to keep the general area of Hinchinbrook—the big picture—a five-star dugong area. I would see both management of habitat and management of boat speeds as central to that.

**Senator HOGG**—One of the things that I was leading to earlier was that it had been said to me that as a result of the dugong protection area being put in place around Hinchinbrook, there has been a withdrawal of the commercial fishermen and in their place are coming the recreational fishermen because of the attraction to the area. Whilst there is a proposed boat traffic management plan that is not yet in place, there seems to be a relevant

urgency about this with at least an anecdotally postulated increase at this stage in those recreational fishermen. Can you comment on that?

**Prof. Marsh**—I would agree with you. We have a situation where the government decided to take emergency measures to deal with one aspect of the dugong problem, but it is a multifaceted problem and, obviously, if it is not looked at completely and if there is not a proper management plan, solving one problem can create another. At the moment I think that perhaps too much effort was put on one aspect of the problem rather than looking at the whole picture.

**Senator HOGG**—When is it proposed that this boat traffic management plan come into operation?

**Prof. Marsh**—Later this year, but I understand that it is all tied up. There is an interim plan that is going to happen quite soon, but the whole thing is tied up with the regional planning process, which I understand is somewhat stalled. But the exact timing—Hugh Yorkston from the marine park authority would be able to advise you much more precisely than I can.

**CHAIR**—It is part of the coast management plan. Is that document within that?

**Prof. Marsh**—I have discussed with the planners this specific element of the plan but I have not been involved in the overall planning process, so my understanding is that there is going to be an interim plan, that the other plan is part of the overall plan. But how it all fits together, I am sorry, I really do not know. There are other people that know much better than I do.

**Senator HOGG**—Just one final question: on the monitoring of the health and wellbeing of the dugong population area, are you directly involved in that yourself?

**Prof. Marsh**—The long-term monitoring in aerial surveys of dugongs that has occurred in the Great Barrier Reef region has been my responsibility on successive contracts to the Great Barrier Reef Marine Park Authority since the mid-1980s.

I should point out to you that what we have done is relevant at a regional scale, not a local scale. Trying to monitor population numbers at a local scale requires a much greater investment in monitoring than has ever been made. Tony Preen, as part of his study of local habitat use of dugongs in the Hinchinbrook area, has used aerial survey techniques. But there is not a formal program to look at population change at a local scale. The appropriate scale would not just be Hinchinbrook because the animals move over a greater scale than that.

Actually developing a regime to do that would be quite a challenge because what we were doing was looking at a regional scale. I guess there has just never been funding. That has never been seen as a priority and funding has never been available to do it. The only place in the world where I know that that sort of monitoring has been done on a local scale for dugongs is in Moreton Bay near Brisbane.

**Senator HOGG**—It would seem to me from the evidence that we have heard that there is a positive side to a monitoring process on a regional basis. It has been put to us that one of the mistakes that has been made is that we are looking at incremental management on a very localised basis as opposed to a more regional basis, and the regional basis is the sort of model that we should embrace.

**Prof. Marsh**—I would agree with you that an appropriately scaled monitoring program for the Hinchinbrook region would be appropriate. We would have to think very carefully about what to monitor. Species like dugongs are rather hard to monitor. One of the reasons why we developed the program at a regional scale rather than a local scale was that for fairly low population numbers, which is what will occur in that region, it is extremely hard to pick up trends in the population. You can do the mathematics, and I have done it, but you have to do very frequent surveys over quite long time frames to pick up trends.

It may be possible and you might get more useful information by looking at how the animals are using the area, which would be a spin-off from that program, but I do think that before the government invests very considerable funds in this, it would be important to go through the power analysis and the mathematics so that everybody understands exactly what you would get out of it. Unfortunately, it is something that would be quite expensive, and we would have to be sure that on a cost-benefit analysis it was appropriate.

I have done it to a limited extent but I have not done it formally and costed it out because there has never been any hint that there would be any money to do it. It is the sort of thing that would really need to be appraised critically as part of a properly designed overall study. It would be very important to do the cost-benefit analysis for all elements of it.

**CHAIR**—Professor Marsh, you say that the Port Hinchinbrook development is not a one-off and that this situation will occur. You also said that there was no consensus on what ‘world heritage’ means. Does that indicate that until we get that lack of consensus we might have a succession of such developments along the coast? Does that remain a concern for you?

**Prof. Marsh**—There is the problem of a succession of developments. There is also the problem of a succession of very polarising situations. I do not think that anyone, no matter whether they thought the development was a good idea or not, can feel that the process, or the community alienation that has occurred as a result of this process, has been of benefit to Australia.

I have read the two volumes of submissions that were sent to me and I was very struck by the polarisation in the submissions, particularly the polarisation from ordinary Australians, on both sides of the debate. The Queensland Conservation Council has a database of potential resorts where people have permits, et cetera. I would really hate to see this very alienating situation repeated up and down the coast. We need to have good processes in place so that we can move forward and strike the right balance between development and conservation. At the moment I do not think we have the capacity to do that.

**CHAIR**—Where is the balance at present?

**Prof. Marsh**—Where you think the balance is at present depends on your values, which is an individual thing.

**CHAIR**—I am asking you.

**Prof. Marsh**—One of the things that world heritage should mean is best practice. I appreciate the concerns of Townsville Enterprise Ltd about what they perceive as unnecessarily bureaucratic procedures but I think we need to have clear rules so that everyone knows—the developer and everybody else—what has to be done, and clear procedures. Individual developments can then be considered on their merits. But at the moment we have a failure of process because it seems that there is not community consensus about what should happen, and no-one really knows where they stand.

**CHAIR**—Could I put it to you that the chances of reaching consensus are fairly remote. Mr Valentine, your model has the world heritage area taking into account all of those areas which impact on the world heritage area which, in this instance, would be the whole of the Herbert River catchment, and more. What is the chance of reaching consensus under those circumstances?

**Mr Valentine**—It is quite a challenge, and it is not helped by the level of acrimony that lingers on from past conflict. I think that has been a very big problem for Australia. We have so much conflict tied up with world heritage that you just need to mention the words to raise antipathy in some people.

I believe it is a challenge but, on the other hand, if we are going to go forward from these problems then this is where Commonwealth political direction is very significant. If the Commonwealth, as a government responsible for world heritage, was to give the lead in this to promote that kind of large scale regional planning, both politically and financially, then there would at least be a chance that it would work. I am disturbed by the current process because the very good intention of having a coastal zone management plan is foundering on the local interests and the intrusion of what might be seen as the conflict between parochial interests, regional interests and national interests. Because of a lack of strong political leadership in this arena, how is it going to come out in any way except chaos?

Frankly, I am not optimistic about the current process because of the chaotic current condition of that regional coastal plan and the lack of any serious political direction from the Commonwealth and the state government. The Commonwealth has responsibility for the world heritage attributes and the national estate attributes—they are all associated with that area—and the state government has other responsibilities. In that sense, local government is playing a stronger role than perhaps either of the other two governments.

Yes, I agree it is a challenge, but if we do not tackle that, it seems to me the alternative is to throw our hands up in the air and say that world heritage can only be in national parks, where there is no debate about the role of protection. I think that would be tragic for the future of the planet, because we as a country have shown something very interesting and very different in our approach but we have not worked out how to do it to world's best practice, and that is the challenge we face now.

**CHAIR**—The two suggestions you made are very useful and the committee will take those into account, I would imagine. But I did wonder when you talked about a specialist officer in each local government area to advocate for world heritage values and be involved in employment and training and so on. We heard from the Shire of Cardwell, for instance, who seemed to feel that decisions were being imposed on this area that were not in their best interests in terms of jobs and employment generally. I tried to imagine what one individual whose position was funded by the Commonwealth would actually be able to do under those circumstances, where world heritage in both the wet tropics and the Great Barrier Reef Marine Park heritage area is seen to be disadvantageous to the ability of that region to go ahead. I can see that you need to have the regional planning program in place. How realistic is that specifically in areas like Cardwell and Hinchinbrook?

**Mr Valentine**—I think this is one way to break the logjam. One of the problems that local governments almost always bring up is the lack of resources. They are being given more and more responsibility from the Commonwealth down. The review of Commonwealth environmental legislation is pushing responsibilities down the tier of government. The state is doing the same. The integrated planning act now places an enormous responsibility on individual local governments. Yet in most of our world heritage areas those local governments are rural communities and do not have either the cash resources of the wealthier city local government areas or a pool of expertise. If you are coming to the party with resources for those local governments and you are selling them to the governments as you are supporting their needs, they will be much more willing to accept that as a reasonable thing. When I have talked to local government the issue mostly has been not having enough resources to do this. Likewise, if the Commonwealth were prepared to fund the regional planning process in those local areas, that would be seen as a genuine contribution to the needs of local governments to be better resourced in areas where world heritage diminishes their rate base. Those sorts of financial attractions would help overcome the barrier.

I believe that the personal value ones are partly related to the historical controversy and misapprehension about world heritage, so we may have to wait a while for the full flow-on of benefits. But I believe it would be a very positive step for the Commonwealth to take and I would be optimistic that it would be very successful.

**Prof. Marsh**—The penalty for not doing it is that we are going to have other very polarised communities down the coast. You have pointed out that this role that Peter has suggested would probably be more of a challenge in Cardwell than anywhere else, but we really do have to break the logjam, because the sort of polarisation and alienation that really come through in those personal submissions to this inquiry are very symptomatic of other problems in regional Australia that are obviously the focus on media attention in this country. I agree with Peter that some positive things have to be done, otherwise we are going to have a legacy of alienation. It already comes through in some of the submissions, where members of the Cardwell community have obviously felt the impact of the wet tropics nomination and they are seeing the controversy over this as yet another problem for their community. For this to work, the benefits for the community have to be tangible.

**Mr Valentine**—Could I just mention another aspect related to that. I am chairman of the consultative committee for the wet tropics, and next week we are having our very first regional meeting of that body. It is going to be in Ravenshoe. You might recall that

Ravenshoe is the place where former Senator Richardson, the then Minister for the Environment, became internationally famous as a result of community backlash against the world heritage listing. I see it as a wonderful sign of progress that we are now able to go there. The community is part of that; the community runs the visitors centre for the Wet Tropics World Heritage Area. The mayor will be speaking at our function. The communities will be part of it.

It has taken a lot of effort and energy to change those community values around and to have a positive approach. The polling in the wet tropics is showing that the communities have gradually been increasing their support—I mean the rural communities, as it has never been a problem in the urban areas—and I think that is a reflection of some of the energy that has gone into those community outreach programs. That is what gives me confidence that we can turn things around. But as Helene says, it is much better to do it before there is a conflict and to have these things in place early in the process.

**CHAIR**—I hope that our visit to Cardwell was, in small measure at least, some sort of confidence building exercise in that respect as well. If we could go from the macro to the micro with you, Professor Marsh, it seems to me that the question of whether or not there are dugongs in the area keeps being raised. I think Mr Williams has said that there is not sufficient seagrass in the area and that there are no dugongs. Can you give us your view on that?

**Prof. Marsh**—Define what you mean by ‘the area’?

**CHAIR**—The area around the development and in the channel, presumably.

**Prof. Marsh**—Dr Preen’s satellite tracking information—and the satellite transmitters record the positions of animals correct to 150 metres—show that dugongs do use the area. There are also visual sightings—

**CHAIR**—Are the dugongs tagged?

**Prof. Marsh**—Yes. I should have brought you a photo. Basically, let’s imagine that this glass is a satellite transmitter. It has to be at the surface of the water for the signal to be available. It is actually connected to the dugong by a specially built nylon tether and there is a tail stop belt around the tail. This technique was developed for tracking manatees in the United States in the mid-1980s and we adopted it for dugongs. We have now tracked about 35 dugongs.

It is a benign technique. One of the animals caught in the Hinchinbrook area actually gave birth in the six months or so while she had the transmitter attached. The transmitter then beams signals to polar-orbiting weather satellites. You get an average of about three locations per animal per day. They can be tracked over a number of months. As part of the Commonwealth program, I think some nine animals have been tracked for many months in that Hinchinbrook area.

That provides very detailed information on the habitat use of individual animals. That has been backed up with aerial survey information which gives information about the habitat

use—these surveys are not designed to detect trends—of the animals in the area as a whole. The answers are the same: the most important area is Missionary Bay, but dugongs certainly do use the channel and the areas around Oyster Point.

**CHAIR**—I think you said earlier that the dugongs appear to be attracted to boats.

**Prof. Marsh**—No, I did not say that.

**CHAIR**—To boating areas?

**Prof. Marsh**—No. I am sorry, I must not have made myself clear. We do not have any evidence that dugongs are attracted to boats. We have some evidence that dugongs use areas of high boat traffic less than areas of lower boat traffic.

**CHAIR**—I thought you used the word ‘attracted’. I might be wrong.

**Prof. Marsh**—I am sorry if I did.

**CHAIR**—The fishing group that came yesterday recalled that a couple of decades ago when you went fishing the dugongs came up along side the boat. I wondered whether that was a common trait.

**Prof. Marsh**—No, I am sorry I gave you that impression. There is no evidence of dugongs being attracted to boats.

**CHAIR**—You say that you are confident about the new system for boat routes and speeds and the general management plan.

**Prof. Marsh**—I am saying that I think it is an important initiative.

**CHAIR**—You do not have confidence in it?

**Prof. Marsh**—I am uncertain whether, in the long term, the actions we are taking to protect dugongs in these regions will be appropriate. It will be very difficult to determine that. I certainly think that having speed limits and boat traffic lanes should significantly reduce boat impacts on dugongs. This is a very complex problem with many different impacts. Whether the final package that is stitched up is going to be enough, I do not know. We do not know enough about that. Just as closing important areas like Hinchinbrook to gill netting was a significant initiative, having a proper boat traffic management plan will be a significant initiative.

**CHAIR**—Should that plan go to the question of the actual number of vessels as well as the traffic routes and speed?

**Prof. Marsh**—It would be appropriate—and I understand that this is being done—to at least indicate where likely appropriate limits to vessel numbers lie. Probably it would be quite inappropriate to apply these at the moment, but it is probably reasonable that the community expect that, at some time in the future, we cannot have unlimited vessel numbers

in an area. Whether it is ever likely to be a significant problem, I do not know. As a scientist I would find it extremely difficult and probably impossible to actually give you a scientific basis for suggesting what appropriate numbers would be. That would be a very tough ask and we could not give you advice about that at the moment.

**CHAIR**—It suggests that the precautionary principle has not been adopted for this development, at least.

**Prof. Marsh**—My major concern about the development is about the development as a node for providing for the movement of boats and people into the area rather than the extremely localised impacts. It is very difficult to anticipate the impact of that node. From a scientific point of view it is really difficult to know what that will all mean. I would agree that the precautionary principle has not been applied, but to translate it into scientifically justifiable numbers would be hard. I would prefer to see the precautionary principle applied, but that reflects my values.

**CHAIR**—I am aware of the time constraint and that you have to leave soon. We have a number of other questions we would have liked to have put. Would you be prepared to accept those and perhaps make some comments on them?

**Prof. Marsh**—Yes, certainly. I have here several documents that I thought would be useful to the committee. There is an analysis of watercraft related mortality of manatees in Florida and a photocopy of a document which the reef CRC has just produced—it is at the printer—on the current state of research into dugongs and the situation in the Great Barrier Reef region. I also went through the publicly available submissions and there were a few points of confusion, which I have addressed here. These documents may pre-empt your questions. If not, you can contact me.

**CHAIR**—Thank you very much.

**Proceedings suspended from 12.46 p.m. to 1.37 p.m.**

**KATTER, Mr Bob, MP, Parliament House, Canberra, Australian Capital Territory**

**CHAIR**—I welcome the Hon. Bob Katter. Do you wish to make an opening statement or would you like us to move straight into questions?

**Mr Katter**—I would like to make an opening statement, if I could, please. I would also like to distribute a tiny piece of documentation here to you. There is other documentation here if you require it.

To put this issue in context in North Queensland, the conservation movement had an excellent reputation in North Queensland. I most certainly fought side by side with them on the issue of Ben Lomond where they must be given great kudos because they discovered that there was a very major leak there. The Water Quality Control Council gave us information which was totally incorrect—most people described it as flagrant lies—and the mining company there also gave us information which was totally incorrect. Again, it was referred to as flagrant lies at the time.

On the project at Downey Creek I think once again the conservation movement was very right. I certainly fought publicly on their side at Downey Creek which was an issue that we lost. Ben Lomond we won. Over the electricity lines around Cairns, again I agreed very strongly with the conservation movement and that was another battle that we won. However, over recent years, I do not know whether the standard of people involved has deteriorated dramatically or they are pursuing other goals which are not conservation goals at all. But on the solar energy project in the Torres Strait, which was started and abandoned by the incoming Goss government, they were notoriously silent. It was an issue very near and dear to the hearts of everyone that believed in the conservation movement and the environment in Australia and, of course, they were incredibly silent.

The world heritage declamation in North Queensland, according to the Prime Minister, who was responsible for us, would only cost us 800 jobs. The estimate put on by everybody else was 2,000 jobs. But in most towns you can go through in North Queensland—Millaa Millaa, Mareeba, Tully—in all the main streets there is a huge timber mill closed, carrying an average of 40 or 50 jobs. They are just the ones that you can see. They are actually on the highway itself.

In the prawn industry they have managed to close more prawn farms than we can open. I will return to that subject shortly. The sugar expansion in North Queensland, as Sunfish told you yesterday, has been held up.

And finally we come to Port Hinchinbrook. I am very familiar with this story because I was the northern development minister when the project started. The developers, as far as what we had on them, had done other developments on the Gold Coast. They were quite good developments. We saw no problems with them. It was not my responsibility but, all the same, we had a look at the project. There were no problems with them in the past on the developments they had done. They started work up here and were stopped dead in their tracks by the conservation movement which very effectively stopped the project.

As far as I am concerned, if you are going to do some projects on the Queensland coastline, there are some parts of the Queensland coastline which are sacred. There are other parts which are pretty common scrub country, typical of anything you can see from Townsville all the way up to Bamaga. This was a common piece of scrub country. Every bit of scrub country has its uniqueness but if we take every piece of scrub country and say it has unique properties, then we will develop absolutely nothing. I think that that is the stage that we have now reached and why this has become such an historic battleground.

Let me proceed. They dug a big very hole in the ground—a hole in the ground big enough to contain most of this room was dug by Tekin. They were stopped at that point. There was a bung wall which stopped the mud from going out into the ocean. Someone blew up the bung wall so boats could come into this big hole in the ground and get safe harbour—it was done illegally—and the thing became an absolutely disastrous mess.

One of the reasons that I have very passionate feelings about this is because I was the northern development minister. Here was a kilometre of coastline, stripped of all vegetation, a dirty great hole in the ground, leaking and eroding muck out into the ocean, and we could not get the federal government to pay a single cent—even though they stopped the project—for the repair of the site. The state government quite rightly said ‘It has got nothing to do with us. The feds stopped it. Let the feds put in the money for fixing up that site.’ So I, as the northern development minister, had to regularly drive past this great, absolutely monumental environmental disaster.

After six or seven years of fighting, or whatever it was, along comes a bloke and he says, ‘I am going to put organic matter on this site. I am going to cover up this dirty, filthy hole in the ground so it is not leaching more mud into the hole and then running out into the passageway. We are going to fix all this up so that all of this stops. Your acid sulfate soils, quite frankly, have oxidised at this stage. All of the exposure occurred during that period of time, that six or seven years of time.

So the people who are responsible for holding up that project look at what they achieved. They achieved baring a kilometre of coastline to the elements for—I do not know—seven, eight or 10 years, whatever the hell it was. No money was paid in compensation. There was no intention of anyone paying any money. Then when someone comes along to fix it all up, we have had nothing but tiger and fight. Where was the conservation movement? All of these people who are appearing here today—where were they for that best part of a decade when that place was an absolute environmental disaster?

To quote the outgoing Premier of Queensland, Wayne Goss, who said, ‘Faulkner’s mud hole. It is a dirty, filthy mud hole’. That is exactly what it was. Anyone who knew anything about the site knew that and they wanted it to stay as a mud hole. I did not see them going out there planting any trees on it or doing something to replace the bung wall. They did absolutely nothing. When someone came in to fix it up, now we have this problem.

If this bloke had been stopped, it would have just continued to leak out for another two or three years. The site now is coming under control. Organic matter is being put on it. The passageway is being fixed up. The baring of the soil to the acid sulfates is being stopped.

There are three other things I should mention quickly. Boat safety is a very serious problem in North Queensland. I do not know how many deaths we have a year, but we have very many deaths, unfortunately, in North Queensland because we have sudden squalls that come up, particularly during cyclonic conditions. There is no safe water, effectively, from Ingham all the way up to Mourilyan Harbour. So that is about 150 kilometres—arguably, a bit more—of coastline. At 15 kilometres an hour a boat generally will take 10 hours if it is in the middle of that place to get into safe harbour, and that is very dangerous indeed.

You can beach a boat. That is very expensive and very dangerous for your boat but it might save your life. People try and run for safe harbour and, invariably, their boat gets overturned. I will quote you just one case: the Boundy case. He took his boat out with two people on it. They hit a huge squall, the boat was turned over and they were left in the ocean. They could not get back to any safe port. It was a big expensive fishing boat and he wanted to get it into safe water. He did not manage to get it into safe water. It turned over before he could get it back into safe water. The three of them were then stalked by a shark. The shark attacked and took off half the body of one of the people on the boat. That person said, 'I will sacrifice myself,' and he slid into the water and gave his life to rescue the other two. The shark came back stalking again and took another one. The third person, Ray Boundy, managed to arrive back safely at harbour.

That is the sort of horror story that emanates because we do not have safe water. We have tried desperately to get safe water at Mission Beach and Clump Point and we have been stopped by the greenies. We have tried desperately at this place to get safe water and we have been stopped once again by people that I fought side by side with, and had respected and honoured for the great fights that they had put up and the great battles that they had won. They were very good for the North Queensland environment here. That is not the picture now, unfortunately.

As well as that, in the battle for Ben Lomond, the actions by the conservation groups were highlighted by extreme accuracy and the depth of scientific knowledge that the people had who were fighting those battles. Yesterday I sat there and heard one group come forward and say there was a lack of water. The last time that I priced those trees that you saw there, they were \$800 each when they have grown to that size. No bloke is going to put 1,000 \$800 trees in the ground if he does not have the ability to water them. The proposition they were putting forward was monumentally stupid. The trees were planted too deep and they had to be taken out and planted more shallowly because they were not growing at that depth and they got a disease or condition that comes upon them. It was total inaccuracy.

Another group came and said the cost of dredging and other costs will be borne by the local council and ratepayers. The council said, 'No, we have an agreement that there is no extra cost to us at all. It all falls upon the developer'—inaccuracy yet again. Another person was reported to me as saying there was two million tonnes of solid matter coming out of the Herbert and Seymour Rivers. The government did a study on this about seven or eight years ago and there was 500,000 tonnes of solid matter coming down. It was not very hard to get out the government report and find the accuracy. Why would you quote two million tonnes when, in fact, it was 500,000 tonnes?

Sunfish came along yesterday and said the acid soils would destroy the reef. The acid soils are being monitored every six minutes and there is no level of acid sulfate soils that we have been made aware of. I was at the hearing in Canberra by the coalition parliamentary committee and one of the very prominent representatives of the conservation movement came along and said the acid sulfate soils are excessive. One of the representatives of the government instrumentalities that is involved said it is being monitored every six minutes and what does the monitoring indicate? She said that she did not have any details of the monitoring, but she did admit that the monitoring indicated that there were no problems there. The thing is being monitored and there are no problems.

I am happy to answer any detailed questions. We did sulfuric acid mining before I went into parliament and the reason it was abandoned was that the copper sulfides oxidise very quickly. They oxidise so quickly you could not mine that way. What I am saying to you is that when you bare these soils there is certainly a release of acids that occurs when the soils have the water protection, if you like, removed from them. They cannot take the oxygen out of water, but copper sulfide and other sulfides can take the oxygen out of the atmosphere once the water is removed. There is a lot of oxygen trapped in fresh water that they can take as well. The other thing is that when you put a small amount of water out into the channel, sea water is a base and it neutralises an acid. Its pH is 8 so it will neutralise anything that is going out, so long as it is not put out in huge proportions or, alternatively, that it concentrates.

The technical scientific knowledge that was the hallmark of these groups 10 years ago is now most certainly the complete antithesis. I watched in horror yesterday and I could not believe it was the same sort of people that existed 10 years ago who, quite frankly, in North Queensland were heroes.

Finally, I cannot help but draw your attention to the paperwork. The graph is the one that I would like to draw to your attention. It is from a publication *Youth suicides in Australia*, put out by the health and family services department some years ago. I think the time period was during the Keating government or whoever was in government in 1996.

It is a graph of male suicide deaths and unemployment rate ratios of 20 to 24 year olds in Australia between 1966 and 1994. You can see that the graphs are almost identical. At the present moment there are 2,000 jobs that we lost as a result of the world heritage listing which closed down the timber industry in North Queensland. There are 600 jobs in all the tourist developments: the Clump Point development; the Port Hinchinbrook development, which is running at about half the pace it should be running at; the Kirrima development and the others. Over the next week I can give you a full list of those if the committee requires them. The Tully Millstream development—I would prefer the irrigation dam up there, of course—has 1,000 jobs tied up.

Finally, with regard to the prawn and fish farming industry, Thailand, with a coastline about one-hundredth the size of North Queensland's coastline, is producing \$2.9 thousand million worth of prawn farming a year. We hoped to be up around \$500 million in North Queensland now but we are under \$70 million, on the last figures that I saw. The green movement is succeeding in closing more prawn farms than we can open. At the airport there were three Indonesians. They had a map and they asked us to point out what areas are not

being used for agriculture or prawn farming. With deep embarrassment I sat there speaking to people representing a country where nearly half of its population are going to bed hungry of a night when we have 3,000 kilometres of coastline eminently suitable for prawn and fish production and we are doing absolutely nothing with it—and I do not want to go into the reasons why. Quite frankly, Madam Chairman, I could not look them in the eye. I looked down at the ground because I was so ashamed of myself.

They wanted a tiny bit of coastline to produce some food for their people. That is what they wanted and we are here sitting on 3,000 kilometres of coastline, all of which is being held down. We cannot even develop the developed part of the coastline. The developed part of the coastline between here and Cairns cannot even be developed and I can sit here and say to you there are 1,000 jobs at Tully Millstream, 2,000 as a result of the world heritage listing and 600 with Kirrima and Cardwell and the prawn farms and fish farms.

I will leave you to put a figure on what we are talking about commercially, but let me be very specific. We should be producing well over \$3,000 million a year in prawn production from North Queensland; we have the most eminently suitable coastline—and I am quoting Dr Joe Baker as a great friend of the green movement and head of Landcare Australia when I cite that figure. It should be over \$3,000 million a year out of this coastline. It is not being produced because we cannot get any land to do it on.

Every time we make a move we are stopped. I can give you case after case. As for the shell borne silicon sand which would enable us to go into solar energy in a big way and dominate the world market in solar energy—which should be Australia's bailiwick—we cannot mine a single ounce of that sand and yet the dune is blowing into the ocean. Within a hundred years there will not be one grain of sand left. That project is worth \$3,000 million a year to the Australian economy—the two projects would be \$6,000 million.

The water projects just with Bradfield alone—just with one scheme alone—are worth \$4,000 million a year. That is \$10,000 million in three projects. We cannot do any of them because of the same problem that we have got at Port Hinchinbrook, which is a flashing light to the rest of the world, 'Do not come; do not invest in this country because you will not be able to do anything. Worse still, when you start up they will stop you halfway through and break you financially.'

The final point is outlined on the other two sheets of paper. It will indicate to you that people are not right when they say, 'We cannot develop Australia. We haven't got the resources.' The Murray-Darling river system produces—and I would agree with the environment movement in saying that it is overdeveloped—some forty per cent, nearly half, of Australia's agricultural production. It has 20 million megalitres of water in the Gulf Country. I am not talking about the super wet belt, I am not talking about here where it rains all the time; I am talking about west of the coastal ranges, the Gulf Country, which has 149 million megalitres a year. I will repeat that. The Murray-Darling, producing nearly half of Australia's agricultural production, has 22 million megalitres a year. The Gulf streams have 149 million megalitres a year. I am including the Burdekin there. The figure you have there is 126 million. I am including the western part of the Burdekin but whether it is 126 million or 149 million including the rivers that exit into the coast is not particularly relevant.

So the resources are there; also, most of Australia's vertisol soils, the vast bulk of them. It is farmland from Longreach all the way up to Normanton, which is 1,000 kilometres, and that rolling, blacksoil plain is 600 kilometres wide. There are three farms on it. It is an area almost the size of France and there are three farms on it. It is flat, rolling, blacksoil plain—the most fertile soils in Australia, the vertisol soils. In fact, three-quarters of Australia's vertisol soils are in the Northern Territory and the Gulf Country of North Queensland and there are three farms on it. So try and look the Indonesians, or any other people that are starving to death, in the eye when you look at those figures. I will shut up. Thank you very much for your time, Madam Chairman.

**CHAIR**—Thank you, Mr Katter.

**Senator TIERNEY**—Mr Katter, you mentioned a number of projects that did not go ahead and you were just quoting examples. Could you provide a comprehensive list of projects that you know of that have not gone ahead in northern Queensland and, if possible, the dollar value of those projects and the likely employment from those projects?

**Mr KATTER**—Yes. We should have them on file. Our files are not good but, in any event, most of them are carried in my head. I can reel them off to you.

**Senator TIERNEY**—Okay. Thank you.

**CHAIR**—There are no further questions. Thank you for appearing today.

**Mr KATTER**—Thank you very much for taking the time of the committee to come up and listen to us.

[1.57 p.m.]

**HAIGH, Mr David John, President, Friends of Hinchinbrook Society, 13 Roberts Drive, Hermit Park, Queensland 4812**

**MOORHOUSE, Ms Margaret Jeanne, Member, Executive Committee, North Queensland Conservation Council, 340 Flinders Mall, Townsville, Queensland 4810**

**TAGER, Mr Jeremy, Member, Executive Committee, North Queensland Conservation Council, 340 Flinders Mall, Townsville, Queensland 4810**

**CHAIR**—Welcome. In what capacity are you appearing before the committee?

**Mr Haigh**—I am the President of the Friends of Hinchinbrook Society and President of the North Queensland Conservation Council. I am a senior lecturer with James Cook University. I appear here in a private capacity.

**CHAIR**—The committee has before it submissions Nos 112 and 57, which it has authorised to be published. Before we move to opening statements, are there any alterations or additions that you would care to make?

**Mr Haigh**—In my submission, there are a number of errors, spelling and so forth, which I am embarrassed by, which were the result of the rush to get it done before I had to do other things. I will provide you with a list of the changes, which will cause minimal change to the content.

**CHAIR**—Do you wish to make a brief opening statement? If not, we can proceed straight to questions.

**Mr Haigh**—Yes, there is a brief opening statement. I would like to submit a letter from the Environmental Defender's Office in Sydney which answers the allegations wrongly put by Senator Ian Macdonald concerning the costs of Friends of Hinchinbrook. Basically it says:

- . Friends of Hinchinbrook have not received any 'invoice' related to costs;
- . Friends of Hinchinbrook are presently awaiting further advice from the Commonwealth government regarding costs;
- . further court process is involved at the end of which the amount of costs to be paid by FOH will be determined by the court.

I would like to hand that up, if I could.

Our submissions will be threefold. I will deal with the issue of the manipulation of the legal system by the government and the developer. Margaret Moorhouse will deal with the scale and context of the development. Jeremy Tager will deal with the relationship of the development and the government and the context, and that is just a generalised approach.

Basically what my submission says and what it deals with is that, in a hope to get this development up and running, governments failed to apply the full legal system and, if not failed, at least did not completely implement it in an area which was world heritage and demanded the highest standard of legal and administrative system. Then I will have a look at the world heritage convention and the court case *Friends of Hinchinbrook*, which are dealt with.

In my submission, I have listed the various acts which were not complied with fully. As you have heard, the fundamental issue in this matter has always been and remains to this day the question of an impact assessment improperly done or never properly done. If that had been done properly, we would, I agree, not be sitting here today. The legislation should have provided for it and the legislation did not clearly do so.

On to the issue of world heritage, a consistent theme through the necessity for management of the Hinchinbrook Channel and region is world heritage. That is a very strident responsibility of this nation to the rest of the world. Implementation of the convention, giving the environment—given it is a natural listing—the benefit of the doubt, has not taken place in this area. Indeed, as you have heard—and I agree with Dr Valentine—that has not taken place in this country. The failure of the government to recognise the World Heritage Properties Conservation Act has that background and the failure of the courts to recognise that have not helped, in fact, have emasculated the world heritage regime.

Moving on to the court case, the court case was not brought as a delaying tactic. The conservation movement have not moved on any legal issue without full legal advice, in that case by three senior QCs from the Sydney bar. It is misleading and mischievous to attempt to say otherwise. Also, the conservation movement did that with considerable responsibility and, as I set out in my submission, the attempt was to ensure that the world heritage was properly implemented, which it was not, because the actions of Senator Hill were, in his reasons, as I have set out in my submission, manipulative.

The best example I can give is that the issue of aesthetics, which was determined by a major government agency—the Australian Heritage Commission—was ignored and put in place Senator Hill's own view. This was because it was a legal review which the system of law allowed to take place requiring a light touch before the minister could comply with it. If it was a merits review, that could not have happened. The evidence on which he based much of his decisions in those reasons would have been, in my submission, overturned by an administrative tribunal looking at the facts.

I point out that that can happen under the Great Barrier Reef Marine Park Act but cannot happen in this development because it is under the World Heritage Properties Conservation Act in an area of Queensland not in the Great Barrier Reef Marine Park. So that is an example. I just want to draw your attention to that: there has been, I submit, manipulation.

The precautionary principle is a major part of any legal system, particularly one that involves a world heritage area. I suggest that the court failed to properly recognise the role of the precautionary principle and, indeed, so did the minister. That is unfortunate for world heritage. From a legal point of view, we have a lot of work to do on the world heritage convention and its implementation. You have heard, and I agree with, the issues of manage-

ment this morning. Senators, that is enough from me. I will now pass over to Margaret Moorhouse, who will also give submissions.

**Ms Moorhouse**—I have two submissions to table here: one is a copy of the photographs, which I am going to show you very quickly; the other is a further addition to the chronology that we have already put in. This copy is also for the committee to keep. You can table that one.

*Photographs were then shown—*

**Ms Moorhouse**—The first photograph is an aerial view from Lucinda—the plane is roughly over Lucinda—up the Hinchinbrook Passage, where you went, right up to Cardwell and Oyster Point. It is a few years old, but that is basically what it still looks like. You can see in these the scale of the development at Oyster Point compared with the city of Cardwell. The shots are taken from both north and south, so you can see that we are not trying to distort it by taking it from one direction or the other. This one shows you the view on the water.

The township of Cardwell and the development sites of Cardwell Properties go off on both ends of the photograph. That is not the complete story, but they go roughly equal distance in each direction. They were the only shots that we had.

**CHAIR**—What is the date of that photograph?

**Ms Moorhouse**—If it was not this year, it was late last year. I can find out the date. This gives you an overview that is closer to where you walked when you went on the site. I do not know how far you went down the southern part of the site, but you will find that in the submission and you will be able to fit that in with where you walked.

This is part of the ongoing history of the site. As you can see—from 1994 to I think 1997 might be the last photo in that one—the material was excavated at Oyster Point and then dumped onto the foreshore; dumped in some cases straight into the waters of the Hinchinbrook Passage. And you can see the close-up shots of exactly what the sea does to this material. Naturally, it washes it away, and you can see the cliffing that results from it. The other shows the plumes that have resulted from this activity. We are not talking about dredging here, we are just talking about the dumping of material on the foreshore and pushing it out into the water.

Before the beach that you would have seen yesterday was formed, there was a very tall mangrove forest. You would have seen some remnants of that, and the erosion that Mr Cook referred to in the lower photo. That lower photo was taken very close to, if not on, the very day that the inspection was made that he referred to.

**CHAIR**—Ms Moorhouse, can you locate both of those photographs on this aerial photograph for the committee? Can you show us on that photograph where these were taken.

**Ms Moorhouse**—At the northern end of the foreshore you can see where there is a gap. This is where the Cardwell Properties clearing starts. The illegal Tekin clearing was further

north. That tall forest was here. You can see a corner post that was at that time the corner post of the special lease on the northern site.

**CHAIR**—Is there now a sandy beach in that location which was not present at the time of this photograph?

**Ms Moorhouse**—Yes, that is right. This is one of the many aspects of why this development here is not suitable to the area. These are the natural attributes of the area for which it was listed world heritage, quite apart from the immense protection of the coast that the mangroves provide, and only the mangroves can provide that protection.

**CHAIR**—But the sand has come into those two regions since that time?

**Ms Moorhouse**—It has been put there by the developer. When you say sand, it is actually material that has been excavated on site for the most part, as the photos show, and the sea carries away the silt and the fines and leaves the sand grains behind.

The photos on the right show what the marina basin looked like after Tekin departed. As you can see, it is not exactly what you would call a stinking mud hole. There are local boats in there and you can see the revegetation which will occur steadily if the ground is left alone.

**CHAIR**—You are referring to the photographs on the right?

**Ms Moorhouse**—On my right. On your left is the photo of the marina basin and on your right is the one of Stoney Creek. On the far right is a photograph taken in 1970 of the dense mangrove stand at Oyster Point. We are able to identify the position of it because of the Chrisohos fish traps, of which there were still remnants last year. I do not know whether the remnants are still there, but we had that spot identified quite accurately. The lower photograph shows Stoney Creek in the process of being totally demolished. It has been filled. You can see the little bit of it that sticks up between two of the other waterways that have been excavated. That part has been filled as well since the photograph was taken.

You asked about the beach. There was a dispute over this between the Commonwealth and the developer, and I am not actually sure where it has got to. In the deed of variation, there is a clause which says that the developer is to carry out certain activities. We read this as a direction for him to carry out activities that would create a beach, even though he had withdrawn his application for consent because we know that crown law said he could not have a beach. This was how it was done and he has used that to the full. He put sand on the beach. GBRMPA ordered him to remove it. Then a cyclone came along and the sand was washed away, or I think Ian McPhail believes it was washed up higher somewhere and the groynes, I believe, are still there. I do not know whether you saw that, but that is what that is all about.

**CHAIR**—Can I just clarify something. Mr Williams says that he was required to put that sand there, as you have pointed out. Your interpretation of the deed is somewhat different from sand. Does the deed indicate that stabilising measures should be taken and does it

stipulate whether they are to be by planting mangroves or putting sand, bricks or whatever in?

**Ms Moorhouse**—That is right. When something is not one hundred per cent clear and alternatives are offered, clearly the developer is going to take the option that most suits him. In fact, there is a condition in that sentence in the deed of variation which I would say was not fulfilled at the time. It is in dispute.

**CHAIR**—Have you got it?

**Ms Moorhouse**—I have not got it in front of me, but I can certainly check that later. The dispute was between GBRMPA and the developer over the interpretation of that sentence in the deed. In the wash up, the groynes are still there so we do not know where it is at.

**CHAIR**—I have a question before we finish with this photograph and the previous ones. The photograph you showed of 1970 shows quite a considerable rise back from the foreshore which is densely vegetated.

**Ms Moorhouse**—They are mangroves.

**CHAIR**—I am just trying to get an understanding of how much soil was removed. Was that an incline or is it just that the mangroves give that impression?

**Ms Moorhouse**—Mangroves are very tall. I am not a mangrove expert or a sedimentologist, but I have seen the drawings of how the profile of the beach has changed. I believe Dr Norm Duke did some studies in this respect and his reports would be available. He had diagrams of how that was changed, because the profile of a foreshore with mangroves on it is quite different to the sort of beach profile that has been created there now. The mangroves vary from the seaward edge both in species and in height as you go up to the shore according to the location and the conditions they are in.

This next photo is on the southern site. I have just put this photo in to show you the wall, which you would have seen presumably.

**CHAIR**—What is the date for this?

**Ms Moorhouse**—It was January or February. It was within weeks of when that spill happened. They had just filled the wall where the breach was, which would be on your right-hand side. On the left-hand side you can see another grey glob coming over the wall, which is where the sludge has actually overtopped. It clearly indicates that that pond was actually overfilled. There was an accusation—

**CHAIR**—In the foreground is the material which came across from there, is it?

**Ms Moorhouse**—That is right. That is the material that just rushed out like a flood into the USL. You can see the dead leaves that have dropped from the stressed trees.

**CHAIR**—How long after the spill was this photograph taken?

**Ms Moorhouse**—I would have to check that for you. It was a few weeks, I think—it was not very long because the material was just starting to dry out on the top, but it was still liquid underneath.

**CHAIR**—It is still liquid underneath, I have to tell you—I stood in it.

**Ms Moorhouse**—I am glad you got that close to it. You may have seen this as well. This is the new deep perimeter drain along that wall, between the wall and the USL. Our concern about that is that that drain may be deep enough to actually be in the acid sulfate layer. We would like to see something sorted out about that.

These are just illustrative of the wider impacts that we are concerned about. That is of boat strike—a dugong. There are thousands of photos of manatees like that which Professor Marsh can provide if required, and there are quite a number in Australia of dugongs as well.

**CHAIR**—We did not get a chance to ask this of Professor Marsh, but are the dugongs also affected by acid sulfate in the water? Do they get red spot or an equivalent?

**Ms Moorhouse**—There is very little research into that side of dugongs. I would have no idea. I have not read of anything. You would need to ask dugong experts about that. One of the things that does affect them is that one of the impacts of acid sulfate discharge is that it carries with it metals which then precipitate in seawater, and they can settle on seagrass. It is known in other places in Australia where it can be quite thick—in some places up to a metre thick—with iron floc settling on seagrass, but even if it is a small amount it stresses the seagrass and it becomes more at risk from virus and less productive and so on, so in an indirect way it affects the dugongs but, as far as any direct effects are concerned, I cannot say.

This photo was not taken in the Hinchinbrook area. It was a lucky shot taken a bit further south down the coast. It shows a trawler at work. The muddy plume is because all these waters are very shallow and the plume is from the mud it is dragging up as it is trawling. This is happening in the Hinchinbrook area as well, although not legally inside the Hinchinbrook passage—although trawlers have been seen working in there, particularly at the southern end. That is another concern. It is not just that it makes a muddy mess. Every pass that disturbs the bottom like that is destroying the benthic communities, which are the bottom of the food chain—they are the basis of all the life that comes on top of them. When you destroy the bottom structures, you are also impoverishing the habitat for organisms. I think that is it.

**Mr Tager**—I would like to look at the relationship between the developer and the government and the broader implications of that relationship, and certain things that are happening both in the Hinchinbrook region and at a national level. Some of this has already been covered in our submission, so I will be very brief, although there is some new information that I would like to include.

To begin on site, we are already on our fourth environmental site supervisor. One of the questions that should perhaps be asked of the Department of Environment is what happened to the other three. We know that the first one, Hamish Malcolm, was considered to be too green by the developer. He was replaced by Martin Gledhill, who remained until he issued a stop-work order for mangrove clearing. The third one, Justin Parsonage, was also considered too green. We are not sure when he was replaced or why, but we are now on our fourth environmental site supervisor. It is our belief that virtually every one of those has been replaced at the request of the developer.

There have been a number of changes in plans and studies. Some, such as the change in the turbidity control plan, have been well documented as a result of direct written requests from the developer on the draft documents. There has been the ignoring of numerous scientific reports. If you look at our submission, you will see that we list a number of scientific reports going back to the early 1990s, all of which either had serious concerns with the development in toto or with specific aspects of the development that have never been adequately addressed, and that includes the need for an EIS.

On threats to scientists, we have in fact received a report in the last few days that a QASSIT scientist, after issuing information about the quality of the acid sulfate management on site, was marched into the then Minister for Natural Resources, whom I believe was Lawrence Springborg, and told in no uncertain terms that if he continued to speak out he would no longer have a job. I would suggest that now—

**CHAIR**—Mr Tager, who is this person?

**Mr Tager**—It was Bernie Powell, one of the QASSIT scientists who, according to the soil scientists of Australia, is one of the two qualified acid sulfate soil scientists who work for the QASSIT team, and I know Clive Cook spoke this morning about QASSIT's involvement on site. I think that the failure to ensure that QASSIT has been on site on a regular basis has been a really notable element of this whole development. In fact, pre wet season, they issued a report suggesting that certain measures be taken to prepare for the wet season. They have not been back on site yet to see how well those recommendations were adhered to.

Equally concerning is the government's decision not to refer matters to scientists who were previously involved in assessing the acid sulfate soil management plan, and I think it is well documented that both Greg Bowman of the CSIRO and Dr Ian White of the ANU were asked for their comments on the very early draft of the acid sulfate soil plan. They made comments that were very critical of it and said that it was very poor. They were not referred to again and they were not sent further drafts of that particular document.

Over the top of all of this rests the deed. Very serious concerns about the deed relate to not only the extent to which the deed has been ignored or breached—the number of breaches that have occurred on site—but the extent to which the deed itself is becoming a model, or a potential model, under the new Commonwealth legislation. The proposal in that legislation both for bilateral agreements and conservation agreements in fact are capable of including this kind of deed of agreement within their ambit. The implications are that you can produce a deed that has specific controls and measures that are negotiated privately between the

developer and the government with no public input at all, no oversight at all and no accountability at all. It has become a separate statutory scheme from which the public is excluded.

The waiver of the EIS has major implications up and down the coast. In fact, I think everybody, if we agree on anything, would agree that the EIS process has been completely defective, and already we are seeing that it is not changing at all. We are hearing, for instance, that Keswick Island, which received state government approvals years ago for a massive development on a previously uninhabited island off the coast of Mackay, has not yet received Commonwealth approval, yet mangrove clearing is already taking place pursuant to the Department of Primary Industries' permits with no approval from the Commonwealth government to either put an airport into the marine park or to build two marinas, which require Commonwealth approval. The process is completely defective, and until it is coordinated and consolidated and the Commonwealth is willing to take responsibility from the beginning of the process this kind of conflict will continue to occur.

There is no doubt that the problems of the region extend far beyond the Hinchinbrook development. I think you have had a number of people speak to the problems of aquaculture, and I would like to respond to Mr Katter's comments regarding aquaculture by noting that the Indian Supreme Court recently closed 200 aquaculture farms in India because they were unable to meet the water quality problems that had been caused by the level of aquaculture that had existed there. I do not think that we have solved the problems of water quality and water discharge any better than the Indians.

The final aspect I would like to address is the question of the regional consultative committee and the Hinchinbrook regional plan. It was a plan that was driven by the developer's deadline. It was a plan that was created and given a deadline based on the developer's needs. It has fallen off the rails, as you have heard, a number of times, and has fallen off the rails in a number of ways. At the moment it is not capable of addressing either the marine problems or the terrestrial problems that you have heard articulated by a number of people. These include the rapid expansion of sugarcane, including expansion of sugarcane into marginal areas, and the development of aquaculture. We have just received notification of another application for aquaculture at the southern end of Hinchinbrook Channel, in Neams Inlet on the Seymour River.

Until the plan is in place, it is under the jurisdiction of the Department of Environment or the Commonwealth government, which have both the authority and expertise to bring into place regional conservation planning. Local government will take control of such issues under the Integrated Planning Act and we will continue to see ad hoc decisions based on short-term economic considerations. These are some of the legacies that I think are being left by the Hinchinbrook development. They are certainly legacies that need to be addressed by this inquiry, we believe.

**Senator O'CHEE**—Mr Haigh, I refer to the document you have handed up. It includes a copy of the letter from the Environmental Defender's Office in Sydney. That letter indicates that they have received two letters in relation to proceedings brought by the Friends of Hinchinbrook Society Inc. and that these letters constitute an offer of settlement of the issue

of costs. Do you accept the fact that the court has made an order in relation to costs and that order is against the Friends of Hinchinbrook Society Inc.?

**Mr Haigh**—Senator, I think the lead of your question is the amount and certainly, following up from Senator Macdonald, it was the amount that was the issue. The letter deals with the amount; the court has yet to determine it.

**Senator O'CHEE**—Has an order been made for costs and has the order been made against your society?

**Mr Haigh**—There has been an order made for costs but there has not been an amount. There is no question about that.

**Senator O'CHEE**—So you accept the fact that you owe an amount in relation to costs. You may dispute the amount and it may not have gone to a taxing officer, but an order for costs has been made against you. Yes or no?

**Mr Haigh**—Absolutely. There is no question of an order for costs being made. No-one has argued that.

**Senator O'CHEE**—The question is now the amount of the costs. What was the amount that the Commonwealth was happy to agree as an offer of settlement? In other words, how much were they suggesting they would accept from you in payment of that money?

**Mr Haigh**—I think the letter says that we have not received that amount as yet.

**Senator O'CHEE**—No, that is not what the letter says. In fact, it says, 'This constitutes the first offer of settlement.' What was the amount of the offer?

**Mr Haigh**—They have forwarded a letter but we have not received that as yet, I have to advise you. We got this letter, as you will see by the date, on 30 July. We have not yet received that. It appears the Senator Macdonald has information that we do not have.

**Senator O'CHEE**—You must have had some discussion with the Environmental Defender's Office. Please don't say that you don't know what the offer of settlement is. Is that what you are telling us on oath?

**Mr Haigh**—I might say that I did not have that discussion. You will have to take it from me that I do not know the amount.

**Senator O'CHEE**—Somebody in your organisation has had a discussion. Is anybody here going to tell us what the offer of settlement is?

**Mr Haigh**—Do either of you know the offer of settlement?

**Senator O'CHEE**—Will you take that on notice?

**Mr Haigh**—That we will advise you of the offer?

**Senator O'CHEE**—Yes.

**Mr Haigh**—I am sure you can find out from the Commonwealth, Senator, but we certainly will take that on notice.

**Senator O'CHEE**—You brought this before the committee, Mr Haigh, not me. I am just asking you about it.

**Mr Haigh**—Senator Macdonald brought the issue up, Senator O'Chee.

**Senator O'CHEE**—You have tabled this letter; he didn't.

**Mr Haigh**—I was putting it in response to Senator Macdonald, I remind you, and he has stated an amount—

**Senator O'CHEE**—I am asking—

**Mr Haigh**—Which the Commonwealth had put up. He is Secretary to the Minister for the Environment and I am sure he knows what is going on.

**Senator O'CHEE**—Please don't yell at me, Mr Haigh. I am asking you a simple question: will you take it on notice?

**Mr Haigh**—Of course we will.

**Senator O'CHEE**—Thank you. How much money does your society have to pay any order of costs that might be made against it?

**Mr Haigh**—It is not a matter which I think is of any concern to this inquiry.

**Senator O'CHEE**—Unfortunately, it is, because we have got to deal with how you manage these processes in the future. A lot of people have said you get vexatious litigation designed to hold up a process. How much money is available to your society to pay any costs order made against it?

**Mr Haigh**—Madam Chair, I take exception to that question.

**CHAIR**—I think it is out of order, Senator O'Chee.

**Mr Haigh**—It seems to lead to a question of fraudulent behaviour, which I think Senator O'Chee seems to be implying.

**Senator O'CHEE**—No, I am asking how much money—

**Mr Haigh**—I am talking, if you don't mind, to the chairperson. The chairperson will need to rule on this. I think the question is irrelevant to this inquiry. If you wish to deal with that, we can deal with it in a private way with a letter from your office, if you wish it.

**CHAIR**—The question is out of order.

**Senator O'CHEE**—Madam Chairman, I dispute the fact that that question is out of order.

**CHAIR**—I am sorry—

**Senator O'CHEE**—In which case I move a dissent in your ruling.

**CHAIR**—I do not think that is necessary, Senator O'Chee. I think you should take up the invitation that has been offered to you.

**Senator O'CHEE**—I am asking a simple question. I would suggest that it is perfectly in order, given that Mr Haigh has done this for me, to ask how much money they have available to meet a costs order. One of the issues that has been raised—

**CHAIR**—I have decided that this issue is not within the terms of reference for this committee to consider and so we should press on.

**Senator O'CHEE**—I am sorry, it relates to the term of reference of how you handle these matters in the future.

**CHAIR**—I disagree with that. This matter is current and not in the future. I have already ruled it out of order, so I would be obliged if you press on.

**Senator O'CHEE**—The term of reference is what lessons have been learnt.

**CHAIR**—Do you have any further questions, Senator O'Chee?

**Senator O'CHEE**—I am moving a motion of dissent in the chair. I am moving a motion of dissent.

**CHAIR**—The committee will go into a private meeting, if you will excuse us.

**Proceedings suspended from 2.35 p.m. to 2.47 p.m.**

**CHAIR**—I apologise for the delay. I have agreed to allow the question which was put to be put in writing, Mr Haigh.

**Mr Haigh**—I might just point out that in the letter in the second paragraph on the second line our legal advisers confirm that it would not be proper for FOH to disclose the contents of the letters concerning the amounts which came from the Commonwealth.

**CHAIR**—Thank you.

**Senator O'CHEE**—Ms Moorhouse, what is the length of the coastline between Lucinda and Mission Beach?

**Ms Moorhouse**—I could not tell you off the top of my head. I would have to refer to a map for that. The channel is roughly 40 kilometres I think, depending on where you start. No, I would not like to hazardous a guess at how far up Mission Beach is.

**Senator O'CHEE**—Probably another 80 to 100 kilometres.

**Ms Moorhouse**—No, I would not hazard a guess at it. We could easily find that out from a map.

**Senator O'CHEE**—What percentage of the coastline between Lucinda and Mission Beach is fronted by mangroves?

**Ms Moorhouse**—I have no idea.

**Senator O'CHEE**—Could you take that on notice too?

**Ms Moorhouse**—Yes, but you could find that out from the map.

**Senator O'CHEE**—You have made a submission about mangroves. I am just interested to know how much mangrove there is in the area.

**Ms Moorhouse**—We can certainly find that out for you, yes. What was the question again?

**Senator O'CHEE**—What is the distance of coastline and what percentage of the coastline is fronted by mangrove?

**Ms Moorhouse**—Could you explain what the significance of Mission Beach is?

**Senator O'CHEE**—We are talking about a general area.

**Ms Moorhouse**—I thought we were talking about the Hinchinbrook region.

**Senator O'CHEE**—There has been evidence about—

**Ms Moorhouse**—So you want the distance between Lucinda and Mission Beach. What was your question about mangroves?

**Senator O'CHEE**—What percentage of that coastline is fronted with mangroves.

**Ms Moorhouse**—Linear distance?

**Senator O'CHEE**—Yes.

**Senator TIERNEY**—Ms Moorhouse, you held up several photos showing damage caused to dugong which you said was caused by boats. Are you aware of this publication about dugongs and the Great Barrier Reef and the current state of research by the CRC?

**Ms Moorhouse**—I am aware of it, but I have not read it.

**Senator TIERNEY**—It has not got page numbers, but it has got a picture of a dugong with scars remarkably like the scars shown in your photograph.

**Ms Moorhouse**—The photograph that I showed did not show scars; it actually showed deep slashes.

**Senator TIERNEY**—Fine, deep slashes. This shows deep slashes. You probably cannot see it from there. It says:

Parallel scars are seen on many adult dugongs and are believed to result from amorous advances of male dugongs in mating herds.

**Ms Moorhouse**—On the way here today I showed that photograph to Helene Marsh and she had no doubt—

**Senator TIERNEY**—Didn't you say earlier that you had not read it?

**Ms Moorhouse**—I said the photograph that I showed you today—

**Senator TIERNEY**—Oh, the one you showed today.

**Ms Moorhouse**—Yes. I have already shown that to Helene Marsh. She concurred that they would be propeller slashes.

**Senator TIERNEY**—It just looks remarkably like the slashes in this particular one here.

**Ms Moorhouse**—Perhaps it looks different to experts.

**Senator TIERNEY**—Perhaps it does. What is the population of Cardwell?

**Ms Moorhouse**—The population of ratepayers the last time I checked was about 1,300.

**Senator TIERNEY**—You had an objection to the prawn farm because you said the effluent was equivalent to a population of about 300.

**Ms Moorhouse**—It is about 300 to 500 per one hectare pond. Those figures came from a department source several years ago. Since that time, Seafarm has doubled. There is further aquaculture development going ahead which will be discharging into the Hinchinbrook passage. One of the big problems is—the work has been done by Eric Wolanski at AIMS—that there is a very long resident time of waters in the Hinchinbrook passage. I think he quotes something like 50 days which means that you have heavier local impact than you do outside the passage. One should not be relying on dilution anyway in the Great Barrier Reef Lagoon because of the impacts on corals which need very clean water, but it is particularly bad in the passage that this should be happening. It is being treated as a sewer.

**Senator TIERNEY**—But surely the corals of Queensland would suffer from the natural outflow of rivers, given the very high rainfall and the amount of material that comes down that. The Great Barrier Reef along the entire Queensland coast would suffer from problems.

**Ms Moorhouse**—That is true. All these impacts will have effects on the corals. The effects of nutrients from aquaculture includes the increase in algal growth which competes with corals as distinct from sediment which has other impacts.

**Senator TIERNEY**—So what are you saying about development along the Queensland coast? Are you saying that we should stop further development on the Queensland coast because of the effects on the environment? Where do you draw the line on this sort of thing?

**Ms Moorhouse**—The line should be drawn where you are actually requiring development to follow the principles that are enshrined in various agreements and acts of parliament about the impacts—not about whether you have the development or not, but how you do it.

**Senator TIERNEY**—There was a comment earlier today from Townsville Enterprise Ltd. Were you here at that point when Richard Power was giving evidence?

**Ms Moorhouse**—I think I was, yes.

**Senator TIERNEY**—They made the comment in their submission that minority groups who oppose development use delaying tactics to create financial instability for projects they target. Would you like to comment on that statement?

**Ms Moorhouse**—That is not the case in my experience. I can assure you that conservation groups do not rush into legal cases, if that is what you are talking about.

**Senator TIERNEY**—No. I am just talking about delaying tactics, regardless of what the tactic is.

**Ms Moorhouse**—What do you call a delaying tactic?

**Senator TIERNEY**—I would say what Mr Williams has experienced at Port Hinchinbrook was a whole series of delaying tactics that have basically been pushed by the environmental movements over the last six years.

**Ms Moorhouse**—Are you suggesting that if the department of the environment does its job that is a delaying tactic?

**Senator TIERNEY**—I am not suggesting that at all. They are suggesting, and these are people from the local areas, that minority groups who oppose developments use delaying tactics to create financial instability for the project. I am just asking you to comment on that. You might like to comment perhaps wider than Hinchinbrook—in terms of projects in northern Queensland.

**Ms Moorhouse**—When you talk about minority groups, I have to assume that you are referring to environmental groups.

**Senator TIERNEY**—I am not saying that. I am quoting this person. I assume he also includes environmental groups in that.

**Ms Moorhouse**—Environmental groups are not minority groups. For the most part they are public interest groups and they represent the community. They represent the long-term views of the community and the long-term interests of the community rather than short-term, quick profit interests. That is the difference.

**Senator TIERNEY**—So you have polled to establish that more than 50 per cent of the population support that, have you?

**Ms Moorhouse**—I beg your pardon?

**Senator TIERNEY**—You have carried out polls that suggest that more than 50 per cent—

**Ms Moorhouse**—There have been polls. The environmental concerns of the Australian population are very high—I think some polls have been as high as 70 or 80 per cent. There has also been a poll done specifically for this project. We could get you those figures, but it was quite high.

**Senator TIERNEY**—Across what population are you talking about?

**Ms Moorhouse**—It was carried out by one of the proper polling companies using a proper process. I am pretty sure it was an Australia-wide one, but I can certainly get you that.

**Senator TIERNEY**—Yes, if you could, because it often depends on the nature of the questions asked. If you ask a question like, ‘Do you support the protection of the environment?’ or you ask people, ‘Do you think this development should not go ahead?’ and they do not know very much about the development, you might get a high level of agreement. I would be interested in having a look at that if you could provide it.

In this broad area of Hinchinbrook and the way this project has developed to date, and given—from what we have seen and what the photographs show—that the project is quite a fair way down the track at this stage, what are you suggesting should happen from this point on?

**Ms Moorhouse**—One option is for the governments to buy the site back. The developer has offered many times to get out of it at cost—of course, the costs go up the longer this is delayed. The land will respond easily to revegetation, as happened between the Tekin clearing and the beginning of Cardwell Properties clearing. A lot of good could be done there for the mahogany glider and the Torres Strait pigeons, which are running out of food trees as land is cleared elsewhere, and a habitat could be restored for the beach stone curlew. I do not know if you saw them when you were there the other day, but there is a pair that were nesting there and have come back and attempted to nest every year on that cleared foreshore. That is a breeding pair that has virtually been taken out of circulation because they are not going to have a breeding site.

There could be an interpretive centre, which would bring some employment and visitor interest to Cardwell—which we have canvassed before. There could be a research facility there for the rehabilitation of the foreshore and a mangrove nursery. There are a lot of things that could be done with the site that would be much more appropriate than what is happening there now.

**Senator TIERNEY**—You mentioned the buy back suggestion. What dollar value was put on that?

**Ms Moorhouse**—I am not an economist and I am not a valuer, so I cannot answer that question. Mr Williams himself has put a figure on it from time to time, and that is all in the records.

**Senator TIERNEY**—What figure is that? Do you know?

**Ms Moorhouse**—It has varied. I think it was \$1½ million at some point and it is no doubt much higher than that now. He has offered many times to bail out for his costs.

**Senator TIERNEY**—Are you reasonably confident that restoration of areas of the site that you refer to, like the settling ponds, could be restored?

**Ms Moorhouse**—You would need to get expert advice on the best way to treat that. As you have probably learned, the work that has gone on there—and is going on now—is causing further acid sulfate problems. They need to be addressed urgently, whether the project goes ahead or whether the government buys it out. It is a problem that has to be addressed, regardless of what happens in terms of the project.

**Senator TIERNEY**—What Mr Williams is trying to build is obviously a tourism base, and having an attractive environment for people to visit would surely be part of that. Given that you say the area could be restored, why couldn't we have an outcome where the development goes ahead and those restoration works that you say are needed could be done?

**Ms Moorhouse**—I am not quite sure what you mean by restoration.

**Senator TIERNEY**—I gave an example of the settling ponds, which are part of a disturbance that results from the north.

**Ms Moorhouse**—Sure, but next to the settlement ponds you have 60 hectares of ecosystem of concern, as listed with the Queensland government. It is critical habitat for the mahogany glider. Cardwell Properties has already cleared potential habitat for the mahogany glider. We believe Mr Williams still has an application current—it has not been rejected—for a special lease or a term lease over that 60 hectares at the northern end of the USL. We understand that he wants it for recreational purposes. I guess that could mean a golf course; who knows. That certainly is not consistent with the status of that area as it is now. The spoil ponds have been constructed over fresh water catchment on which, to some extent, that USL depends in the long term. These are issues that have to be dealt with, regardless of what happens to the project.

**Senator TIERNEY**—In some of the aerial shots and photographs that we saw earlier, one of the things that struck me about them was that, when you looked at the Port Hinchinbrook development compared with that whole stretch of coastline a fair way to the north and the south, as a proportion of the coastline—

**Ms Moorhouse**—Of course it is a proportion of it.

**Senator TIERNEY**—Can I finish the point. You must have misheard what I am saying. I said: as a proportion of the coastline—I had not finished the sentence—it is a very small portion.

**Ms Moorhouse**—Of which coastline?

**Senator TIERNEY**—Of the coastline to the north and south.

**Ms Moorhouse**—We hear this argument a lot. It is a kind of minimalist argument: that if you can make something look small enough the impacts do not matter and then you add on another bit—this is the incremental approach—and it does not matter because you are now adding on a bit more and it still looks like you have just added on a small bit. But that whole area was supposed to be protected.

There is a range of issues here. The mangrove coast has been interrupted, and it is going to unravel in both directions as well as back towards the land. You cannot do that to mangroves because they are the coast—and I emphasise ‘are’ the coast. Even in the Philippines they have learned that you cannot do that and in Indonesia they are restoring their mangrove coasts because, without them, the land behind them does not have any protection from the cyclone winds and seas that you get in that area.

The aesthetics of the area are disrupted by a kilometre of this artificial beach with imported palms, and it is going to have a row of houses right on the waterfront. It is totally out of keeping with the protection of the area as a world heritage area and even as a wilderness area. That is the way it has been protected traditionally under the state’s Department of Environment and Heritage, which has, to a large extent, looked after that area in terms of visitation and has protected its ecological amenity—and its visitation amenity, for that matter—as a beautiful area. It is known around the world.

At the moment the area that will be visible stretches over a whole kilometre for a considerable distance up and down the channel and from anywhere on the island up that end. Then you have another two kilometres down the channel, south of Stoney Creek. This incremental approach has been going on for years. We started with 26 hectares of special lease and some freehold blocks amounting to 40-something hectares on the northern site. That was supposed to be what the project was—an integrated resort. Now, instead of an esplanade along the high watermark, the esplanade has gone. Instead of 50-something houses—they were not even a row of houses; they were actually groups of cottages mixed up with resort buildings—we now have wall-to-wall houses for a kilometre right on the edge of the high watermark without an esplanade.

We are not even sure where that boundary is now. We have raised all this in our submissions. We strongly urge the Senate committee to get to the bottom of this. You can get the information that we cannot get. We believe that that boundary has moved out into the marine park and is sitting on fill. You have got that in an area that is supposed to be protected. There are septic tanks going in there.

**Senator TIERNEY**—Your argument would possibly have some validity if we were talking about Florida or some other places in America, but surely, given the population of this country and the extent of the Queensland coastline that is totally undeveloped at the moment, there is no huge danger from the increment that you are talking about. As a percentage of your total coastline it is absolutely tiny.

**Mr Tager**—The Hinchinbrook region is the subject of the Hinchinbrook regional planning process that is now occurring. It is important to understand that that act understands the coastal zone not to be that very narrow strip right at the water's edge—the coastal zone in fact extends to the back of the catchment because of all the effects that occur there. In the Hinchinbrook region, you begin at the southern end at places like Dungeness, where there is a resort proposal and potential for future resort development there. There is now massive sugarcane expansion east of the Bruce Highway into areas below three metres AHD into intertidal areas and areas that are really marginal land.

You heard some figures this morning. I would dispute those figures. Our figure is that 70 per cent of the coastal inland forests have disappeared in the region, not 50 to 60 per cent. If you ask wetland experts about the number of wetlands that have disappeared from the area, it is over 70 per cent. We are not talking simply about development in terms of a resort development but primary industry, aquaculture and other developments that are cumulatively having massive impacts on the area and changing it drastically. We cannot recover it easily. It is far easier to take a precautionary approach, to have a regional planning process in place. But at the moment we are allowing not only expansion of development but also expansion of the sugar industry to the tune of something like 16,000 hectares under a Commonwealth SIIP package. We are allowing the expansion of aquaculture—there are four leases in the Hinchinbrook Channel. There is a lot of development that has not occurred yet but which has already been approved and which is going to have long-term effects on that area well beyond that little strip of coast right on the sea.

**CHAIR**—Senator Tierney, could you put any further questions in writing and we will get the council to respond.

**Senator TIERNEY**—I think we will just finish this question. How do you weigh your tremendous concern for any damage to the environment against the fact that if you totally succeed in what you are trying to achieve we get a lot less development in this country, whether it be in sugarcane or resorts or whatever? With that goes jobs, and one of our huge problems in this country at the moment is regional and youth unemployment. How much does that weigh into your consideration, or does it have no weighting at all?

**Ms Moorhouse**—It does, but we do not take the short-term view that it is acceptable to take all the resources in this generation so that there is nothing left for what follows.

**Senator TIERNEY**—Is anyone suggesting that?

**Ms Moorhouse**—A lot of people do, unfortunately.

**CHAIR**—I am sorry but we will have to stop there. If there is anything further that you would like to add to your submission—I recognise that it has been interrupted today; I have not had a chance to ask you any questions—please put it to the committee. We have another two questions from Senator Hogg, which I hope you will respond to in writing.

**Senator HOGG**—Is there a compromise position between the conservation movement and the developers, in a general sense? People see that there are two opposite ends of the spectrum. Is there a compromise position that can be reached between the conservation movement and the developers? Secondly, is there a process which could be explored, or which this committee could recommend be explored, to try to resolve the diversity of opinion that exists between the two poles?

**Mr Tager**—Just to clarify, you ask for the relationship between conservationists and developers. Are you speaking of developers in the abstract, or particular kinds of developments?

**Senator HOGG**—I am thinking of the likes of Oyster Point, Dungeness and other developments taking place along the coast that you are addressing. Is there a compromise there? Even if there is not a compromise, is there a process that could be explored? Could you suggest what structure or form that process could take?

**Mr Tager**—We would be glad to do it.

**CHAIR**—Thank you.

[3.11 p.m.]

**SILVA, Mr Rowan, Environmental Defender's Office of Northern Queensland Inc., 451 Draper Street, Cairns, Queensland 4870**

**CHAIR**—Welcome. The committee has before it submission No. 90, which it has accepted as confidential. Do you wish to make a brief opening statement?

**Mr Silva**—Yes, I will keep it brief.

**CHAIR**—We have a deadline of 3.30 p.m. and we cannot allow it to go over. I apologise.

**Mr Silva**—We requested that our submission remain confidential to the members of the staff of the inquiry, the Hinchinbrook Shire Council and the legal representatives of the council because we are acting on behalf of the North Queensland Conservation Council in an appeal to the Planning and Environment Court of Queensland and there are sub judice considerations. I am not asking that the evidence I give now remain confidential. I just ask you to appreciate that I might be guarded in what I say because of the sub judice aspect and the necessity to ensure that nothing I say be published and prejudice the hearing of the appeal.

**Senator HOGG**—So we should be careful how we refer to the confidential submission?

**Mr Silva**—Yes. In my brief opening statement I will give an indication of what is within those limits. In the submission we focus solely on the Dungeness development. We outline some of the environmental considerations which are raised in the appeal in connection with that development, but we do not speak about those because they are matters of evidence and I am not qualified to express concluded opinions about those environmental issues. The issue that we do focus on is the conflict which exists in the roles performed by the Hinchinbrook Shire Council in connection with the Dungeness development. I will simply leave it at that.

The submission we have made highlights those different roles and reflects aspects of the conflict of interest which we feel are involved in a local government authority acting in the position of a referral agency under the Local Government Planning and Environment Act in relation to terms of reference for an environmental impact statement as the actual proponent of the development itself, and in its capacity as the arm of government which is charged with the primary responsibility for determining whether consent should be given to that development project. We ask the question: why has it allowed that situation to develop when on its own admission it is proposing to sell the site to the preferred developer once the development consents are provided? That really is the nub of the matter, that under Queensland planning law that situation has been allowed to arise.

**CHAIR**—Is the answer to simply not allow that to happen? Do you see some other mechanism for putting in place safeguards and accountability?

**Mr Silva**—It is a bit of both. There will certainly be some situations where local authorities can legitimately apply to themselves for different types of planning consent because of their public role within the community and their position as a legitimate owner of land requiring development. But I think that should be contrasted with this situation, where it is not a public form of development; it is at all times intended to be a privately operated, private enterprise, form of tourist recreational development. It seems to me that it is not a form of development that a local authority needs to engage in. There is no real reason for the council to feel constrained to adopt this procedure of applying for development consent and then selling the land to the developer if consent is obtained, rather than simply selling the land to the developer in the first place and then allowing them to make an application for themselves in the ordinary manner.

I think it would be possible to enact guidelines which would help ensure that a local authority in the position of applying to itself for development consent is obliged to ensure that it does so in a very transparent way which avoids any apparent or actual conflict of interest between the different roles that it is performing in that development application assessment and approval process. I think we are all aware of Chinese walls and how they are employed in different agencies. There should be some obligation to erect strong and effective Chinese walls where we have a situation of an agency applying to itself.

There may well be an alternative whereby the assessment approval process is altered in a situation where a local authority needs to apply for development consent where it would normally perform the role of giving development assessment approval. I have left it open in our submission for the Department of Local Government and Planning to consult with the community about an effective alternative model.

**CHAIR**—Are you suggesting that this planning law is peculiar to Queensland?

**Mr Silva**—No, I am aware of cases in New South Wales where the same situation arises. I have not examined the other jurisdictions. As I said, in some situations it will be innocuous. In other cases—such as this one—it is quite difficult to understand how the local authority can avoid an apparent or actual conflict.

**CHAIR**—By this one, you mean the Dungeness?

**Mr Silva**—That is right.

**CHAIR**—Are there other similar examples in Queensland?

**Mr Silva**—I am not familiar with any other example of this type, where you have, as I described it, basically, a private enterprise resort development proposal in respect of which a council applies to itself for development consent. Councils routinely apply for development consent for public infrastructure works that they are proposing to carry out

**CHAIR**—Thank you very much.

**Mr Silva**—That was very quick.

**CHAIR**—Yes. I thank you again for your patience and for your attendance today. It has been very successful. Thank you.

**Committee adjourned at 3.20 p.m.**