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PARLIAMENTARY STANDING COMMITTEE ON PUBLIC
WORKS

**Reference: Australian Institute of Marine Science tropical marine research
facilities, Cape Ferguson and Townsville, Queensland**

THURSDAY, 5 NOVEMBER 2009

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PARLIAMENTARY STANDING
COMMITTEE ON PUBLIC WORKS

Thursday, 5 November 2009

Members: Senator McLucas (*Chair*), Senator Troeth (*Deputy Chair*), Senator Forshaw and Mr Champion, Mr Forrest, Ms Hall, Mr Lindsay, Mr Price and Mr Slipper

Members in attendance: Senator McLucas, Mr Lindsay

Terms of reference for the inquiry:

To inquire into and report on:

Australian Institute of Marine Science tropical marine research facilities, Cape Ferguson and Townsville, Queensland

WITNESSES

CALDWELL, Mr Alan, Infrastructure Development Manager, Australian Institute of Marine Science..... 1

CRUTE, Mr David, New Works Manager, Australian Institute of Marine Science..... 1

ENGLISH, Ms Susan, Manager Government Business, Australian Institute of Marine Science..... 1

LLEWELLYN, Dr Lyndon, Research Manager, Australian Institute of Marine Science..... 1

MEAD, Mr David, General Manager, Australian Institute of Marine Science..... 1

Committee met at 2.05 pm**CALDWELL, Mr Alan, Infrastructure Development Manager, Australian Institute of Marine Science****CRUTE, Mr David, New Works Manager, Australian Institute of Marine Science****ENGLISH, Ms Susan, Manager Government Business, Australian Institute of Marine Science****LLEWELLYN, Dr Lyndon, Research Manager, Australian Institute of Marine Science****MEAD, Mr David, General Manager, Australian Institute of Marine Science**

CHAIR (Senator McLucas)—I declare open this public hearing of the Parliamentary Standing Committee on Public Works inquiry into the proposed Australian Institute of Marine Science tropical marine research facilities project in Cape Ferguson and Townsville. Before we start formal proceedings, Mr Mead, I want to thank AIMS and your staff for the inspection you gave us this morning. It is very informative for our committee to have a look at proposed works so that we can get a mental picture of what we are inquiring into. Thank you for a very extensive and informative tour this morning.

Although the committee does not require you to give evidence under oath, I should advise you that these hearings are formal proceedings of the parliament. Consequently they warrant the same respect as proceedings of the parliament. I remind witnesses that giving false or misleading evidence is a serious matter and may be regarded as a contempt of parliament. I now call on the representatives of the Australian Institute of Marine Science. Mr Mead, would you like to open with introductory remarks, please.

Mr Mead—Thank you very much for giving us this opportunity to present what we consider to be critical and high-value works to enhance Australia's marine research facilities. I am the general manager of AIMS and I am representing Dr Ian Poiner, the AIMS CEO, who unfortunately could not be here this afternoon.

Australia is a marine nation. Its marine jurisdiction of 14 million square kilometres is the third largest on earth and nearly twice its landmass. Australia's 70,000 kilometres of coastline is nearly as long as that of Europe. Australia's marine industries generate nearly \$50 billion each year and are rapidly growing, with most of this growth occurring in tropical Australia. It contains some of the world's most iconic coral reef systems, including the Great Barrier Reef, which is the largest and best managed reef in the world.

We have responsibilities to manage our marine territories. We have a direct stake in the management and security of the Indian, Pacific and Southern oceans and the three seas to the north, the Timor, the Arafura and the Coral seas, where we share ocean boundaries with Papua New Guinea, East Timor and Indonesia. Our marine estate is therefore central to the big opportunities and risks facing Australia—those of climate variability and change, environmental sustainability, economic growth, energy and food security, and national security.

AIMS and its collaborators undertake research to support good policy and management decisions by government and industry. It is vital that decisions on protecting biodiversity, on managing our marine parks, on developing our natural resources, on increasing our marine tourism, on developing our coastal industries and on responding to climate change are based on good information that is evidence and factually based.

The federal government, through its Super Science Initiative, has recognised that capacity building is required in the area of marine and climate if these challenges are to be met. The projects presented for review today are funded by the Super Science Marine and Climate Initiative and represent capacity building in areas of critical shortfall required to be filled so that we can respond in a timely manner to these challenges.

The works associated with the AIMS tropical marine research facilities project at Cape Ferguson and Townsville have a cost of \$49.5 million. These facilities, to be built at Cape Ferguson and Townsville, will provide: the establishment of Australia's tropical ocean simulator, as we have named the flagship project, which will integrate existing facilities to create significant seawater experimental infrastructure for cutting-edge research. It will enable researchers to create controlled environments to simulate different seawater scenarios, such as those projected as a result of climate change. This will assist in assessing the risks, the resilience of systems to respond and the impact of different management options; new infrastructure to enhance the utilisation of AIMS's internationally significant coral cores. It will provide new tools for the analysis and research of these critical records of tropical climate; improvements in energy supply systems that will provide improved energy efficiencies and reliability of critical electrical power and sea water cooling and heating systems. They will provide a further benefit of reducing the region's peak energy consumption and the need to install additional transmission and generation capacity; and the project will also provide a vessel-berthing operations facility within the new light commercial marine precinct at Townsville port, ensuring safe and appropriate access to AIMS research vessels.

AIMS is a specialist marine research agency recognised nationally and internationally for the quality and impact of its research. The new facilities developed by this project will build on AIMS's expertise and deliver a national capability that reinforces the region as a marine science hub. It will stimulate collaborative research efforts and create the critical mass to address the pressing issues facing tropical Australia. We are expecting an influx of scientists from all around the globe, drawn to the best marine science facilities on the doorstep of the world's biggest reef.

We are well positioned both geographically and professionally to deliver on this project and to derive the value expected of an investment of this scale. The combination of AIMS's expertise and our collaborative approach will ensure the facilities are utilised to their maximum potential. We have established an experienced project management team and are confident we can deliver the project on time and on budget. The project will create an economic stimulus during construction, with approximately 200 persons engaged during the peak of construction.

Thank you for the opportunity to present this project. We are happy to answer any questions you may have.

CHAIR—Thank you, Mr Mead. I commend AIMS for the quality of the submission you have put before us. It is very comprehensive and it means that there will probably be fewer questions than there otherwise would be, which is great.

Mr Mead—Thank you.

CHAIR—This hearing was motivated by the desire of AIMS to get the work started as quickly as you can. Can you give the committee a bit of an understanding of the time frame from now on, the rollout of work itself, and what you expect to happen from this point in time if the parliament approves the process?

Mr Mead—Over the last four to five months we have been going through a preliminary design process such that we are now in the position where we are ready to start tendering selected packages of work, including detailed design works. The actual project is split into a number of subprojects. Each of those follow different time lines, but broadly speaking the approach is to undertake design works over the current wet season such that we can commence at least the initial early civil works as soon as the 2010 wet season finishes and then roll construction right throughout 2010. The project has a three-year construction period.

CHAIR—In terms of facilitating that process, when do you desire to start letting tenders?

Mr Mead—As I said, we are ready to start now for selected tenders. Tendering for this project will run right throughout the next two years because the work has been broken up into a range of packages and we will be seeking endorsement to go to some early tender work.

CHAIR—You could ask us to do that here at this meeting. That would be in order and we could make a decision about that. If you want to put that on the record now, we can do that.

Mr Mead—Yes, I could put on the record that we will be seeking—

Mr LINDSAY—No, you seek the committee's approval.

CHAIR—Just ask.

Mr Mead—AIMS does seek the committee's approval to commence selected tendering prior to the final ruling by the Public Works Committee.

CHAIR—Mr Lindsay, I am sure you would like to move that that be approved.

Mr LINDSAY—Yes. I move that the committee approve concurrent documentation with the hearing.

CHAIR—There being no objection, that is so ordered.

Mr Mead—Thank you.

CHAIR—We are very aware of your desire to get moving before what we hope will be a good wet—though some of the slides you showed us this morning made me think that we might not

get a good wet this year. We have dealt with that issue, then. AIMS, as we know, is a fair way out of town. Do you expect that during the construction phase there will be difficulty with traffic movements on the road out there and, if so, how will you manage them?

Mr Mead—No, we do not anticipate any particular difficulties with traffic movements. There are two reasons for that: it is a pretty good road, and the construction is phased over a reasonable period of time and given that we are doing work both out at the AIMS site and at Townsville port and then in Darwin at separate unrelated works to this submission.

CHAIR—Which brings me to the port, and I know that you want to talk about that too, Mr Lindsay. I will start and then let you jump in. When you gave us the presentation this morning you indicated that there was a size of land that you would require to be operational but that you were still in negotiations with what used to be called the port authority—I forget its name now. Would you talk us through that process please?

Mr Mead—The original development methodology was that the port had tendered the development of the marine precinct to find a commercial partner to undertake the development. The port did not receive any viable tenders, so it is developing the facility itself. As part of that we have been in negotiations regarding our needs. The port has incorporated those needs exactly as required into all of the designs to date. There is a separate process running to determine lease rates at the end of it. The commercial terms, I guess, are commercial-in-confidence. However, it is expected that we would negotiate a lease of at least 35 years. It is expected to be longer than that. Most of the other commercial parties that are going into the marine precinct are looking for leases that are greater than 50 years.

CHAIR—Can you give the committee any indication of the timing of the relocation of the vessel berthing facility in the port?

Mr Mead—Yes, I can. We are expecting to need to move our vessels any time now. We have a backup arrangement on a temporary basis in the Townsville creek. The EIS, on which submissions have just finished, is to be reviewed. The earliest possible decision date is March next year. The projected provision of a site is late next year, so October-ish next year. Under our implementation plan we have allowed a six-month buffer on that and we have a fallback position to a 12-month buffer such that we still complete works prior to the end of the project period.

Mr LINDSAY—I would like to examine the risks associated with this particular issue. Those of us who are local know and understand the concerns that have been publicly expressed by the upstream commercial enterprises, and I understand there is current litigation between one of those enterprises and the state government. In discussions I had yesterday in Brisbane it was clear that the state government has not yet decided how this is all going to be delivered, where the dollars are going to come from and so on. To me, that means there is a risk to your proposal. Is it correct that you do not yet know or have any definitive proposal about what the light marine precinct is going to look like? There is definitive proposal yet—is that right?

Mr Mead—That is correct. There is a near finished final draft of the reference plan that is to go forward.

Mr LINDSAY—Is it correct that AIMS are not yet able to say, ‘We will have that particular space in that precinct’?

Mr Mead—That is correct. I would add that all of the proposals that have been tabled have facilitated a location for AIMS that was suitable.

Mr LINDSAY—The upstream operators are indicating publicly that this precinct will not be finished within two years, that it cannot be finished in that time frame. What is the risk to your project, in how you have articulated the variables, if it does not get finished within two years?

Mr Mead—For us the risk is if it does not get finished within three years, because we have a three-year window within which to implement this project and, in fact, we have a four-year contract with the Department of Innovation, Industry, Science and Research for the funding for the completion of works. The one advantage that AIMS have is that the development requirement for our infrastructure that we will put onto the site is quite small and quite quickly done. The predominant issue that the incumbents have is that some of them require eight to 12 months transition from one location to another, so they need to have access to the site and then an eight- to 12-month window within which to construct what are far more extensive facilities on those sites before they can wind up their operations and allow the river to be closed. From an AIMS perspective we do not quite have the same issue because our boats will already be out of the river by that time.

Mr LINDSAY—If this goes to three years, for example, what is the financial risk to this project? Are there any implications?

Mr Mead—Three years is okay in terms of a financial risk. If it drags on beyond that? Our funding is based on six-monthly blocks and it is contingent on the achievement of milestones, so if we had not been progressing on the port development then some of the final milestones would not have been achieved and we would not be able to secure that funding.

Mr LINDSAY—So you are assuring the committee that this particular part of the project will be okay if it can be delivered in three years and that it is your clear expectation it will be delivered within three years?

Mr Mead—Yes.

Mr LINDSAY—In this in globo project that you are putting to us today, have you looked at what I would call the benefit-cost ratio—meaning: have you put a dollar value on the benefits that the community will get from the expenditure of this money, or is that not possible to do?

Mr Mead—For some of the engineering projects, yes, we have done a cost benefit on them—for example, the chiller plant project, where you can calculate a return on investment because it is about saving energy, and the same for the energy reduction measures. For the facilities that create increased research capacity, we measure them in a different manner. AIMS measures its output in a number of ways. A few years ago AIMS had Insight Economics come in and undertake an assessment of the value that had been derived by AIMS in the research it had undertaken. On a quadrennial basis we do a thing called a research quality review, where we

bring independent experts in to review each area of research that AIMS undertakes to ascertain the impact of that research. I might just pass to Lyndon to elaborate.

Mr LINDSAY—What I am looking for is something on the public record where you can clearly demonstrate the benefit of the Commonwealth of Australia spending this money. I understand that with chillers and so on you can look at all of that but, if we go over to Dr Llewellyn, it is my understanding that you are going to plan the research in ATOS—is that right?

Dr Llewellyn—Yes.

Mr LINDSAY—Can you perhaps explain what kind of research you are going to be looking at and how that will benefit the Commonwealth of Australia and the wider science community and the world.

Dr Llewellyn—ATOS, as an example, will provide capacity that does not exist in Australia and rarely exists in the world. Part of ensuring that is involving scientists, and not just our own scientists but also scientists from other organisations, to come and to help us in the design process to ensure that that is the case, and also to conduct some of their research in that facility that they could not be able to do in their own organisations. In that way we are planning a facility that will be unique in the world, internationally unique, and therefore will add value. We do not like doing research that does not add value.

Mr LINDSAY—Thank you. Mr Caldwell, a technical question: will the 11KV distribution system be all underground?

Mr Caldwell—Yes, the whole site is underground. From our substation 66,000 goes out to AIMS on the feeder. It is transformed down to 11,000 and we are underground totally on AIMS site and it will be—

Mr LINDSAY—That substation is down at the front gate—in that vicinity?

Mr Caldwell—That is right.

Mr LINDSAY—There is a modern practice now to cable large complexes ready for 33KV. Do you ever see yourself needing a distribution of 33KV rather than 11KV?

Mr Caldwell—Probably in the long term, with the 200 hectares out there, in a hundred years time, I suggest so. When we did our refurbishment five years ago, the one you were involved in with us, the capacity of that line that was put in in 1976 was well and truly capable. I am very confident that when David does the feasibility study this time it will well and truly cover this end. In years to come I am sure that the way AIMS will continue to grow, and from the growth that I have seen in the 22 years, I am sure that it will continue—

Mr LINDSAY—Do you know how many MVA that AIMS consumes?

Mr Caldwell—Yes. We report to the government and we are just finishing this year's report. We use 7.5 gigs. We are a little bit bigger than the Mater and miles smaller than the general hospital. We are a major user in Townsville and negotiate with Ergon—

Mr LINDSAY—Just for Hansard, explain what a gig is.

Mr Caldwell—A gigawatt hour—

Mr LINDSAY—So 7.5 gigawatt hours. Will additional transformers be required in this project?

Mr Caldwell—No, we are talking to Ergon at the moment and they have assured us already that the transmission out there will be well and truly capable. That transmission also supplies Cungulla and the general community and I am sure that when we do test it as part of the design that 66,000 volt will be capable.

Mr Mead—Let me add two points to what Alan has said. With respect to the comment about going to 33KV, not within the lifetime of the assets that are being laid in the ground at the moment. They will have a lifetime of 25 to 50 years and we would need a substantial increase in demand to justify to a distribution system at 33KV orders of magnitude more than now.

Mr LINDSAY—We understand the new chiller and how that is going to work. What are the current chilling arrangements? What is being replaced? What is going to happen to those?

Mr Caldwell—They will be sold off. We will obviously get the new chillers up and running. We have got two-megawatt-hour chillers—a carrier system and a crane system out there.

Mr LINDSAY—I did not see those today. Where were they located?

Mr Caldwell—One is over near the canteen, the old Carrier unit that was put in back in 1976. The other unit is over near where we walked to look at where the new chiller will be. It is in an enclosure over there.

Mr LINDSAY—Will they be demolished?

Mr Caldwell—Sold, yes.

Mr LINDSAY—So removing them has been allowed for in the budget of this program?

Mr Caldwell—Yes. We do not expect a great return on them because of the age and that technology now—they are so costly to run. But certainly we will be putting them out to tender.

Mr LINDSAY—Thank you.

CHAIR—For the *Hansard* record, given we had that discussion out at AIMS this morning, what do you say are the notable environmental elements of the proposal?

Mr Caldwell—We have 200 hectares out at the AIMS site, which is medium-density scrubland. We estimate we would need to clear 10 acres for the new ponds and a lot of that is re-growth since the 1970s when there were huts and things out there. Our gardener is now a level III horticulturist and he is propagating the native plants which have come from here. We have planted 300 around the site in the last two years. He now has propagated another series to

plant—I have seen him since I have seen you this morning—and he is very keen to keep planting and to keep growing. If we removed 10 trees we could plan 50 tomorrow and we would have propagated them.

Another beauty of the environment out there is that we now recycle 100 per cent of our sewage. We have a storage adjacent to a creek where, every time it rains, it fills up our hole in the ground and we have a couple of megalitres of water which we put back on the lawn. Our water usage from Townsville city has dropped remarkably in the 10 years I have been involved. I would like to see us totally water neutral by putting another spear in a creek down a bit further, trickling that back into the dam and then becoming totally water sufficient except for drinking water.

CHAIR—What about the proposal in front of us—the energy efficiency elements? Are you collecting water off the buildings? It is the structural issues which I want on the record.

Mr Crute—On the energy efficiency initiatives within the project, currently we are using 7.5 gigawatt hours and we expect to drop down to just over four gigawatt hours prior to the installation of the new facilities. That is driven by energy efficiency initiatives associated with the existing buildings air conditioning and the new off-peak chiller system offers a definite advantage in that. LED lighting will be installed in a significant part of the facility. Separate to that, we will have an energy monitoring system which will enable continuous improvement of the energy management on site due to the data that we received back from this system.

Mr LINDSAY—The off-peak chiller system does not save any energy, does it?

Mr Crute—It does.

Mr LINDSAY—It just reduces the cost of energy.

Mr Crute—No, it does have definite energy advantages. It saves just over one million kilowatt hours associated with the existing air-cooled chillers and the water quick cooled chillers we are moving to a more efficient. They operate at different times of day, so they work at a high level of efficiency.

Mr LINDSAY—I understand.

Mr Crute—And separate to that we have general ESD principles in place.

CHAIR—In your submission, you say that where applicable the use of the green star and neighbours energy design rating tool has been adopted. Why do you say ‘where applicable’?

Mr Crute—The north wing is a mixed-use building and as a result the green star rating is not applicable. At the same time the ATOS facility is also mixed use. Therefore, you cannot use a green star rating system.

Mr Caldwell—Green star rating is designed for offices. We certainly will be taking all that on board and more of what the green star ratings do.

CHAIR—In principle, what would you aim to achieve? I recognise that, because of the multiuse buildings, the systems you would be required to comply with may not be applicable. In essence, what would you desire to be aiming for in terms of the construction of the new works?

Mr Crute—The building we are looking at needs to be set a bar higher than anything you would consider in commercial construction. We are looking at adopting as many initiatives that are economically feasible and are available within the project funding, so that we get the best outcome in the general life cycle of the building.

Mr LINDSAY—Your submission mentioned the enhanced Darwin research facilities, which are not part of this request. Would you explain why you have not incorporated that in this request?

Mr Mead—The Darwin aspect of this overarching project was split off for two reasons: firstly, the geographic separation between the works and how they are being implemented and, secondly, the functional separation between the work that will be going on up in Darwin and that which is occurring here.

Mr LINDSAY—In the interests of management efficiency, it was better to separate the projects?

Mr Mead—In terms of implementation, no, because some of the project management is occurring as a combined project. However, that is seen as a different matter as to whether or not the work is related. From an implementation perspective, the projects are being treated as one overarching project, noting that, for example, part of our implementation strategy is to utilise a managing contractor methodology. However, that would not be applied to the works in Darwin because of the geographic separation.

Mr LINDSAY—In your submission, you say in regard to the ocean simulator:

The work scope will consist of the following:

(a) A large building (or two smaller buildings) ...

Can you reassure the committee that appropriate and suitable facilities will in fact be provided? Can you assure us that you actually know what you are going to deliver? Convince us.

Mr Mead—The design incorporates two sides to the building, with a total floor area of between 800 and 900 square metres of controlled environment space. The decision as to whether or not, in effect, the two sides are immediately adjacent to each other, versus the alternative design, which is an L-shape with a join in the middle, is more about the final soil testing and aspects like that which are done as part of the detailed tender for construction process. Functionally they achieve the same thing.

Mr LINDSAY—What happens then to the cost to the Commonwealth, depending on which design you select?

Mr Mead—Interestingly enough, we have costed both options and the costs are effectively the same. The reason for that is that with one large building you have a very large span from one side of the building to the other, noting, if you remember, that part of our desire was to have a flexible space within—that increases your steelwork costs. With the two buildings, you have a lower steelworks cost but you have an extra wall that you need to build.

Mr LINDSAY—In relation to services to Cape Ferguson: we have looked at the electricity supply and we have looked at the internal water arrangements. Externally, you are currently supplied water from Townsville city. What is the status of that pipeline, the life of the pipeline and can it provide the water that you need to service these additional facilities?

Mr Caldwell—Part of it is the city council's move to Alligator Creek. They replaced the line to and we pick up our water now at mains pressure at Tindall Court on this side of Alligator Creek. So we no longer need to maintain our pipeline all the way back to town. They removed that pipeline as part of their construct, so we have now got about 20 kilometres of pipeline from Tindall Court in Alligator Creek to AIMS. It is not mains pressured, running into our 2½ megalitres of water on the hill. We have got so much water out there for fire protection as well as domestic use that we very rarely need to turn the valves on at any capacity to need water. We just allow it to trickle, with the valve just cracked open to allow water to trickle into our tank on the hill. With the capacity in the tank that was put there in the seventies, mainly for fire protection, we do not foresee a shortfall of water in the long term, let alone in the short term. Certainly in the life of this project there is plenty of fresh, good quality water at AIMS.

Mr LINDSAY—Has there been any demand from the local community lately to take water out of that pipeline?

Mr Caldwell—We have had requests back from the crematorium to people along the road. Unfortunately, it is not pressurised. When it gets to AIMS, it is not pressurised at our end. If you tapped into it you would not have any water normally, so there is nothing we can do for those people. The council are talking about feeding to Cunggulla eventually because they feel the supply to Cunggulla is quite inadequate. And if they ever did the second stage of Cunggulla, they would then bring the water to our front door and we would be very interested in that.

Mr LINDSAY—So that is not a risk to you, this water supply project?

Mr Caldwell—No, I do not believe so.

Mr Mead—The effective increase in fresh water from this project is very marginal. The real increase is in the seawater utilisation, and we are pumping that from the ocean.

Mr LINDSAY—With what you are building, have you any plans in mind about future expansion when you grow larger? What is the next step? Have you thought that through, and does what you are putting to us today allow for any possible future expansion?

Mr Mead—Yes, it certainly does. I will give you some examples. As we discussed earlier, the 11KV reticulation system is designed to have future capability. The chiller system that is being installed is being constructed in a manner that, while it does not have significant additional capacity from day 1, can be expanded at low cost. The way you do that is, as part of the building.

You construct it large enough that you can put additional chilling trains in there as AIMS grows. However, the tank design is such that you can effectively broaden the temperature range within which you utilise it so that that creates an ability to expand the system by at least 25 per cent additional cooling into the future. The third primary area is that of the ATOS—the ocean simulator facility—in that part of the siting decision is about feasibility for future expansions. That is a core part of our master planning approach.

Mr LINDSAY—Which site would you choose if you had future expansion in mind?

Mr Mead—The site on the hill because we can expand towards the ponds. The lower side is difficult because it is so low and it is very expensive to expand into that zone. The design as it stands already has expansion built into it in that, as you will see in our submission, it incorporated about 800 to 900 square metres of enclosed and climate controlled space. There is a further 1,200 metres I think of covered area and then a further amount of hard stand area. It is designed so that at low cost we can enclose the covered area and expand the size of the facility that is controlled environment. Beyond that, our siting location is such that there is a high degree of spare space around it such that you can expand the buildings. I mentioned that with the two-building option in an L-shape, the location has been sited such that you would be able to expand directly off the end of the buildings, which of course is the low-cost expansion direction.

Mr LINDSAY—So if the committee were to recommend that AIMS be mindful of future expansion in siting its buildings, you would have no difficulty with that?

Mr Mead—Absolutely not.

Mr LINDSAY—Your business is conducted in the Great Barrier Reef Marine Park Authority area controlling the scientific research zone in the waters around Cape Ferguson. Have you consulted with them about what you want to do?

Mr Mead—Yes, we have been consulting with a large number of stakeholders.

Mr LINDSAY—With GBRMPA?

Mr Mead—With GBRMPA, yes.

Mr LINDSAY—You hesitated.

Mr Mead—No, I am just thinking there are many different ways in which we have consulted. We have consulted on the fact that we are doing this expansion, but also more directly. For example, with the ocean simulator facility, people from GBRMPA are involved in planning workshops looking at how it will be utilised.

CHAIR—You probably ring each other four or five times a day, I would imagine.

Dr Llewellyn—It is on a regular basis.

Mr LINDSAY—Do you foresee any disruption to your current research program because of the changes that you are going to be doing and the additions you are going to be making to the facility?

Mr Mead—Only minor disruptions. We have identified strategies to ensure the continuity of seawater supply to our existing experimental facilities throughout the project, and the other primary impact of course is simply restricted access to aspects of the site, for safety reasons, during construction.

Mr LINDSAY—Going back to the marine precinct in the port: is that designed to berth only one vessel at a time?

Mr Mead—No, it is designed to allow effectively 100 metres of quay line. If you were berthing the vessels parallel to the quay line then there could be any number of vessels up to 100 metres, which for AIMS means that we can berth both our research vessels at the same time plus another, smaller vessel. The water lease that we will negotiate should extend far enough that, if you desired, you could actually berth them stern first and increase the number.

Mr LINDSAY—Will your ancillary facilities, like the canteen, handle the expected increased numbers of researchers and PhD students?

Mr Mead—Yes is the simple answer.

Mr LINDSAY—It is a very safe answer. My only remaining questions are for the confidential hearing.

CHAIR—I have no further questions at this point. Do you have any further information you would like to provide in open session?

Mr Mead—No, not at this time.

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

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

Evidence was then taken in camera—

Committee adjourned at 3.01 pm