



COMMONWEALTH OF AUSTRALIA

Official Committee Hansard

JOINT COMMITTEE ON PUBLIC WORKS

Reference: CSIRO Energy Centre, Steel River, Newcastle, NSW

FRIDAY, 11 AUGUST 2000

NEWCASTLE

BY AUTHORITY OF THE PARLIAMENT

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>**

To search the parliamentary database, go to: **<http://search.aph.gov.au>**

JOINT COMMITTEE ON PUBLIC WORKS

Friday, 11 August 2000

Members: Mrs Moylan (*Chair*), Mrs Crosio (*Vice-Chair*), Senators Calvert, Ferguson and Murphy and Mr Forrest, Mr Hollis, Mr Lindsay and Mr Ripoll

Senators and members in attendance: Senator Murphy and Mrs Moylan and Mr Ripoll

Terms of reference for the inquiry:

CSIRO Energy Centre, Newcastle.

WITNESSES

DAVIES, Mr Jim, City Strategist, Newcastle City Council.....	96
DORMAND, Mr Peter Owen, Project Director, Australian Municipal Energy Improvement Facility Project, Newcastle City Council.....	96
GAUDRY, Mr Bryce James, MP, Member for Newcastle, New South Wales Legislative Assembly	2
HARLEY, Mr George Johnston, General Manager, Corporate Property, CSIRO.....	23
HOBBS, Dr Bruce Edward, Deputy Chief Executive, Minerals and Energy, CSIRO.....	23
MOODY, Mr Trevor Laurence, Assistant General Manager, Corporate Property, CSIRO	23
MORRIS, Mr Allan, MP	7
NORTON, Mr Alan, Manager, Property, Newcastle, BHP.....	12
SMITHAM, Dr James Bryer, R&D Operations Manager, Division of Energy Technology, CSIRO	23
WATT, Ms Jennifer Joan, Project Director, Cox Richardson Architects and Planners.....	23
WRIGHT, Dr John Kevin, Chief of Division, Division of Energy Technology, CSIRO.....	23

Committee met at 9.07 a.m.

CHAIR—I declare open this public hearing into the proposed establishment of the facilities for the Commonwealth Scientific and Industrial Research Organisation Energy Centre, Newcastle, New South Wales. This project was referred to the Joint Committee on Public Works, for consideration and report to the parliament, by the House of Representatives on 29 June 2000.

In accordance with subsection 17(3) of the Public Works Committee Act 1969:

- (3) In considering and reporting on a public work, the Committee shall have regard to—
- (a) the stated purpose of the work and its suitability for that purpose;
 - (b) the necessity for, or the advisability of, carrying out the work;
 - (c) the most effective use that can be made, in the carrying out of the work, of the moneys to be expended on the work;
 - (d) where the work purports to be of a revenue-producing character, the amount of revenue that it may reasonably be expected to produce; and
 - (e) the present and prospective public value of the work.

Yesterday, the committee received a briefing and inspected the site of the proposed work. Today, the committee will hear evidence from Mr Bryce Gaudry MP, state member for Newcastle; Mr Allan Morris MP, federal member for Newcastle; the CSIRO; the City of Newcastle and also BHP.

[9.09 a.m.]

GAUDRY, Mr Bryce James, MP, Member for Newcastle, New South Wales Legislative Assembly

CHAIR—Welcome. The committee has received a submission from you dated 9 August 2000. Do you wish to make any amendments?

Mr Gaudry—No, but I would like to make some additional comments and also, if it is within the brief of the committee, table for your information a debate held within the parliament of New South Wales yesterday on the issue of the CSIRO and then perhaps speak to that.

CHAIR—Yes, if you would like to table that, thank you. It is proposed that the submission dated 9 August be received, taken as read and incorporated in the transcript of evidence. Do members have any objections? There being no objection, it is so ordered.

The document read as follows—

CHAIR—Mr Gaudry, I now invite you to make a short statement in support of your submission.

Mr Gaudry—Firstly, I would like to thank the committee for the indulgence that they have given me to appear before the committee this morning. As I explained, I had some travel difficulties in terms of being in Newcastle. I also wish to express my thanks, and I am sure that of the city, for the committee taking this trip under its responsibilities and for giving us the opportunity to lay before you our absolute support for this project. It will have an impact on the improved research capacity of the CSIRO in its core business and in the expansion of those environmental science aspects that are going to be so important to the project. This project will also demonstrate the new building technologies that will be used and the environmental technologies that are so evident in this building.

As I have said in my submission, this is a pivotal investment for Newcastle. It is an investment that draws together the cooperation of the federal, state and local governments. It draws together all of the major industries in this area that are involved in energy services and energy production. Those are the major producing industries in New South Wales in terms of coal and the generation of power. Some 62 million tonnes of coal are exported from the port each year and 80 per cent of the power production of New South Wales from that black coal resource is produced here in the Hunter—in the Upper Hunter with Liddell and Bayswater or Eraring, Munmorah and Vales Point power stations. There is a collection in this area of energy producing and distribution networks and, of course, Energy Australia, the major energy distribution company in New South Wales, is located here in the Hunter.

There are many co-location benefits to come to this community in terms of jobs and, in particular, collaborative research that can flow from the project here. It has benefits economically for the region. I mentioned in my submission that, as the result of Newcastle being the location of that steelworks, in the last century we had developed in this area an enormous intellectual capacity in research surrounding the coal and steel industries. I mentioned in my submission the BHP Central Research Laboratory, Pacific Power International Advanced Technology Centre, the Cooperative Centre for Coal Research at the University of Newcastle and the sustainable industries cluster that has developed at the university itself. All of these are research based and involved in improving the efficiency in particular of our coal powered resources. These are also looking at the alternative energy resources that we are so keen to see developed. Both the federal and state governments are committed to the issue of greenhouse reduction and funding, financing and research into alternative technologies.

The CSIRO locating here on the Steel River site has enormous advantages in terms of being a pivot for the research and development that can occur in this area. It will be working with business and industry to make the Hunter Valley what I think will become an absolute centre for energy and alternative energy sources. Reading through the CSIRO's submission, it is quite evident that they have that range of research that covers all aspects of economic development that we are looking for and the environmental improvements that we are seeking in the use of black coal resource and in those alternative technologies.

I moved the following motion in the parliament yesterday:

That this House notes the importance of the establishment of the CSIRO Energy Centre at the Steel River Eco Industrial Park in Newcastle to the development of energy research and sustainable energy industries in the Hunter Region.

That debate started at 12.35 but it had to be adjourned at 1 o'clock due to the break. Unfortunately, we did not get back on to conclude the debate but I might say that speaking in the debate, apart from myself, were the Minister Assisting the Premier on Hunter Development, the Hon. Richard Face; the member for Myall Lakes, Mr John Turner, who is the Deputy Leader of the National Party and also the spokesperson for the opposition on the Hunter; and Mr Tony McGrane, the member for Dubbo, an Independent and formerly a member of the Newcastle Port Authority. That emphasised, because the debate was all positive and all in support of the location of the CSIRO here in Newcastle, its impact economically, socially and in research terms on our region and, of course, its importance for New South Wales and Australia as a modern 21st century facility. There were at least six other members wishing to contribute to that debate and I can assure the chair that the whole of that debate would have been in support of this project, recognising its importance to both, as I said, New South Wales and Australia.

The one other issue I would like to mention is the critical importance of all of the areas of interest in Newcastle and the Hunter working together and being keen to see the development of this centre. I mentioned the Newcastle City Council particularly in that and commend the council for its leading edge work, back as far as 1997, in sustainability and the development of energy conservation techniques. I remind the committee that it was the Newcastle City Council that hosted the international conference, Pathways to Sustainability, in 1997. That was the first post Rio conference and, of course, showed the commitment, following the Kyoto protocols, of both the federal and state governments to that whole issue of sustainability and greenhouse gas reduction.

The council is, as I said, a leader in that area and that has been emphasised recently with its energy town meeting. I am sure they will talk of that. The exciting aspect of that is the fact that we have got the council here driving change in energy conservation in the valley and certainly, through its AMEIF program, educating councils across Australia in that issue. We have both the state and federal governments very involved. Through the regional development organisation and its link with the BHP fund, we have seen the development of a whole range of cluster groups based on small and medium sized business in this area that have driven both information technology and also environmental sustainability as two of their clusters. I think we have got a wonderful opportunity here for the development of research technology and technology based industries clustering around this pivotal project. I thank you for the opportunity of addressing the committee.

CHAIR—Do the committee members have any questions for Mr Gaudry? There being none, I thank you very much for coming.

[9.20 a.m.]

MORRIS, Mr Allan, MP

CHAIR—On behalf of the committee I would like to welcome you to the hearing this morning. The committee has received a submission from you dated 21 July 2000. Do you wish to propose any amendments?

Mr Morris—No, but if I could make an opening remark I would be grateful.

CHAIR—It is proposed that the submission be received, taken as read and incorporated in the transcript of evidence. Do members have any objections? There being no objection, it is so ordered.

The document read as follows—

CHAIR—Mr Morris, we now invite you to make a short statement in support of your submission.

Mr Morris—Thank you, Madam Chair. Firstly I would like to express on behalf of my community our appreciation to the members of the committee that have made themselves available for the two days. It is a great demand on your time and we do appreciate that. We also appreciate that now some other parliamentarians in the Federal Parliament will understand a little bit better the issues facing regional centres like Newcastle and the importance of projects like this to those centres.

I certainly appreciate and am grateful for being allowed to inspect with you yesterday the facilities at North Ryde and Lucas Heights. I learnt a great deal from that and I found that extremely beneficial, and I enjoyed the opportunity to be able to talk with the committee members within that context. In a sense, it is a reflection of the way the parliament and the political processes can work from time to time, if we allow them to, in a broader context. And, in that context, this is an opportunity for our community, not just Newcastle but the wider Hunter community and the state government, to come together at a time when there is clear unison and a clear direction, and help expedite or accelerate the potential.

The CSIRO, in locating their Energy Centre in Newcastle, can see an agenda for themselves and a process forward. Some of us see that that process may be able to be accelerated and made more effective if it is well enough understood. I think that opportunity is partly provided by your committee inspection. When you report to the parliament you are required to indicate whether or not you think the process should go ahead. But, to me, it is more than that; the committee is in a position to be able to make comments about the project itself, not simply whether or not the parliament should approve it. That wider brief and wider range of capacity is rarely more important than it is on this project because this does give an insight into the problems facing this country.

We are all very aware of the greenhouse issue and the difficulty that creates, both for industry and for governments. As parliamentarians, we are constantly being approached with suggestions that perhaps it is all too hard and we should give up on that. I think what is happening with this project is an indication that we may well be able to meet the greenhouse demands, our intellectual demands and our commercial demands in a compatible way. That exercise and that potential is going to be increasingly important. The CSIRO's positive approach to greenhouse reduction in alternative energy sources, in improving existing technologies and in thinking through yet again how we could approach these issues has been an excellent lesson for all of us. Obviously the committee is not one for science or technology, but it is one that has a capacity to perhaps move that public debate along.

Madam Chair, you have a very tight agenda. My presence today is to express my appreciation and my total support. Let me point out to you that this project has been publicised; my community is aware that it is happening. The fact that they have not opposed it should be taken as a very positive sign. If you look at the Steel River project we had very close community consultation on that. The objections that were brought up during the process were dealt with satisfactorily. I was at the public briefing for this project in the area near where it is going to be located, and the residents from that area who were at the meeting were in fact quite positive. Somebody made the remark, 'How did we make sure no-one complained?' The fact was that we

gave them a chance to complain and absorbed any concerns that were raised, which I think is the appropriate way.

Madam Chair, in conclusion, I would like to express my appreciation again to you, to the members and the secretariat and I look forward to members of the committee coming back at some point in the future and visiting what will be one of the most exciting centres in the country.

CHAIR—Thank you very much. Do members have any questions of Mr Morris? No questions? I would like to say that it is a pleasure for the committee to have a hearing in relation to a project where there has been a very high level of community consultation and where the problems have been dealt with at community level and not had to be dealt with by this committee. We congratulate you and the community on the way in which that community consultation has proceeded.

[9.27 a.m.]

NORTON, Mr Alan, Manager, Property, Newcastle, BHP

CHAIR—Mr Norton, on behalf of the committee may I take this opportunity to welcome you. In addition to being the manager of property for BHP at Newcastle, in what other capacity do you appear today?

Mr Norton—I am also the project manager for the Steel River project and have been involved in the project since its inception.

CHAIR—The committee has received a submission from BHP dated 27 July. Do you wish to propose any amendments?

Mr Norton—No, Madam Chair.

CHAIR—It is proposed that the submission be received, taken as read and incorporated in the transcript of evidence. Do members have any objections? There being no objection, it is so ordered.

The document read as follows—

CHAIR—I now invite you to make a short statement in support of your submission.

Mr Norton—Thank you, Madam Chair. What I would like to do is provide some background evidence to the committee on the objectives and progress of the Steel River project and the importance of Steel River and the CSIRO to Newcastle in the 21st century. To assist the committee I would like to tender two diagrams in evidence. One diagram is an aerial photograph of the site showing the location of Steel River, and the second one is a layout diagram of the site showing the locations of projects which are currently under consideration for the project. These will be supporting my comments to the committee.

The BHP site which became known as Steel River is that area outlined in white in that aerial photograph that you have got there. It was originally a channel, or part of the south arm of the Hunter River known as Platts Channel, and there was a small island there called Spit Island. In 1950, BHP acquired the site in an exchange of land with the state government and that land that BHP gave to the government became the Newcastle University.

The site was progressively filled during the 1950s with steelworks by-products, mostly coal wash reject and slag from out of the steel making processes. Once filled it became used for storage, the tipping of surplus iron out of the blast furnace processes, and in recent times became a Boral crushing plant, which was perhaps one of the earliest examples of recycling of waste products. The slag that was crushed by Boral has been used in road base materials and as an ingredient in concrete manufacturing.

In July 1995 BHP first announced that it would be restructuring its steel making operations in Newcastle. At that time it identified that there would be some social impacts on the community as a result of its restructuring and declared this area, which was then called west of Tourle Street and was subsequently to be called Steel River, surplus to its operating needs and set about the planning processes to establish an industrial estate which would be of a high quality and which would add to the future of the City of Newcastle.

Very early in that planning process the state government, through the Minister Assisting the Premier on Hunter Development, Mr Face, convened a committee called the Beyond 2000 Committee and that became a peak body of collaboration for three levels of government—state, federal and local—in the planning process for this estate. That collaboration continues even to this day as you have heard from other members here this morning.

In addition to that we established a technical steering committee with the local community and members of the community were free to nominate themselves on an interest basis. This community technical committee made up of community representatives, council representatives and some people from the Beyond 2000 Committee met regularly on a fortnightly basis for 18 months. It was a remarkable example of community spirit within this region where dedicated community representatives were prepared to put into a project to get an outcome which all parties were supportive of.

The overall objectives which were decided upon were that we set out to attract new emerging industries with an emphasis on energy efficiency, recycling and environmentally sustainable industries, particularly with a research and development orientation. We identified a concept called eco-industrial. It is a theoretical planning process which started evolving during the

1980s and gained more momentum during the 1990s. We embraced it. The concept here is that one industry's waste becomes the raw material for another industry. To provide for that in the planning process we provided easements throughout the estate so that there is connectivity between independent industries so that waste products can be piped between industries so that this eco-industrial concept can go forward.

The whole project was aimed at complementing Newcastle's visions for its future in terms of new industries with an environmental thrust. The estate was planned on the basis of accommodating 2,000 employees on site. In the planning process we also embraced many of the new urban concepts which again architects have been embracing and rediscovering during the 1980s and 1990s. The council planning officers in particular had spent a lot of time studying these concepts. They involve the planning of projects in such a way that they might be called 'people friendly' so that whilst it is an industrial estate it encourages people to move freely throughout the estate to gather in areas where they can socialise. This social interaction we believe will be a catalyst for the exchange of ideas and a generation of new products and new inventions. Of course, we needed to make sure that the overall project was economically viable so that it was not a drain on either a public purse or any other benefactor in the overall thing. That is, the thing did have a stand-alone viability.

The project has received broad recognition. We have made reference to the RAPI award in our submission. We have also been innovative in the way we have approached the remediation of the site in using coal wash reject as the capping material on the site. This again signifies the early thoughts given to recycling opportunities as to how we can effectively use our waste products from coal. Coal wash reject is a product of the beneficiation process to improve the heat efficiency of coal. That clay material is a very effective capping material on Steel River and makes the remediation process very cost-effective. The Steel River project also took a leading role in working with local members and the federal government to introduce the manufacturing-in-bond initiative. That has been a means of attracting a lot of interest overseas where foreign trades benefits are now available to international companies.

Other things that the project developed are enshrined in the LEP amendment 105 to Newcastle City Council Local Environment Plan, so they have the force of law. These are an environmental envelope which has a defined impact for the total estate in its final form. When we started this estate we set out to try and achieve an outcome which would have no significant impact on the adjoining residential areas. We defined the environmental impacts up front as an environmental envelope which then became attached to the land in the LEP.

Compliance with this environmental envelope will enable Newcastle City Council to grant an expedited approval process within 28 days because all of the work in terms of environmental impacts has been handled up front. This again is groundbreaking innovation. It resulted from the close collaboration between the community, BHP, Newcastle City Council and the state government. The land is under community title so ultimately these entitlements will reside with the tenants who take up residence within the Steel River project. To date, BHP has committed something like \$15 million in bringing this project to its current state. Whilst we are lagging probably by about six months behind where we would like to be in terms of the overall development of the project, in terms of the overall life of the project—which we expect to be 10 years or a little more—we expect that that is relatively insignificant.

As a comparison, to put this into perspective, when we started the project in 1995 we were told that if we used conventional real estate processes only and existing legislation we would be looking at 25 years-plus for this land to be taken up. So through these innovations and the collaboration with the three tiers of government and the community we have probably taken 10 to 15 years out of the process of developing this site. The remediation is about 85 per cent complete and is expected to be completed in November or December. The stage one infrastructure is under way. Currently it is about 50 per cent complete. Again, that is expected to be completed by the end of November. We have six sets of contracts out and another six serious negotiations under way. All of these interests are completely compatible with the vision and the objectives of the site. On the hill area where the CSIRO will be located we are planning to create a type of plaza in front of the CSIRO which will be a meeting place for people to have lunch, socialise and interact with each other.

The proximity of CSIRO to this project means that it probably becomes the intellectual brains within this project and in many ways the site could be seen as a honey pot which we expect other industries to be attracted to and cluster around. All of this is consistent with the vision for Newcastle's future to be a sensitive, leading-edge industry community which is accessing sustainable new 21st century industries. We see the CSIRO as being integral to that vision. I can only say we commend this project to you. We are supportive of it, as you have seen from our submission, and we wholeheartedly recommend it to the subcommittee.

CHAIR—Thank you very much. I would like to know a little bit about the remediation, the compaction of soil and the ongoing responsibilities. In particular, I noted that you said it could have taken up to 25 years to have completed this site for development. I wonder if you can assure us that the fast-tracking of this has not compromised the clean-up. In other words, can you reassure the subcommittee that this remediation program has gone ahead, that it will be properly completed and that there will not be ongoing problems with the contamination of the site. Can you tell us exactly what the contamination was, the extent of it and what you have done to remediate it.

Mr Norton—As I said in my statement, the site has been filled with mostly coal wash reject and steelwork slag. There are some other things that have been dumped there as well, including railway sleepers and some tar products from the steelworks coke ovens. Overall, the fact that the site does not have the same products in it as the virgin site would have had means that it has been contaminated—it has introduced products into it which are not consistent with the original product. The slag and the coal wash are largely benign but they still constitute a contamination under the definition of contamination.

The concern that has been raised is the potential for leaching of PAHs, which are the result of the tar that has been deposited at the western end of the site, not where the CSIRO will be going. This has been evidenced in that there has been a low level of leachate from ground water going into the Hunter River. To stop that leachate from the ground water we need to stop water penetration into the ground water. The capping strategy also involves a contouring strategy so that there is the removal of ground water penetration going into the ground. It runs off into ponds, which you would have seen yesterday during your inspection. Any surface contamination from fertilisers or oils on roads and so forth are treated by microphytes on the edge of those ponds. Whilst the leachate that was going into the river was just above current

standards, the expectation is that, by capping the site, that leachate will be reduced by at least 80 per cent. That will bring any future leachate well within current standards.

CHAIR—Can you tell us how and when you are going to cap the site?

Mr Norton—The capping is the coal wash reject being used on site. It is 80 per cent complete and will be completed by the end of November or early December. That is the remediation strategy. The whole process was prepared with a lot of investigative work done by reputable consultants in collaboration with the EPA. The EPA were fully informed of all of the activities and all of the investigative work throughout the process.

A remediation action plan was prepared together with an EIS as the means to remediate the site. It was approved by the EPA and subsequently approved by council as a development approval for the remediation of the site. The remediation work is being carried out by Baulderstone Hornibrook, and it is being independently audited by Woodward Clyde. Woodward Clyde provides certificates to us on a regular basis certifying that, as each stage is completed, it has been remediated and compacted to the standards set in the remediation strategy. To give an example that this is being done in a proper way, there has been at least one occasion when Woodward Clyde has pointed out that the compaction has not met the standards and the contractor has recompacted that area of the site.

In terms of the sale of the land and future ongoing liability, BHP retains the contamination liability for the underlying contamination in perpetuity. However, we have protected ourselves by following a comprehensive remediation action plan and ensuring that the remediation is done in accordance with that plan. We are subsequently providing, in the contracts of sale of the land, guidelines to potential clients so that, providing they comply with those guidelines, the contamination underlying the cap remains the responsibility of BHP.

CHAIR—How far does the tar contamination go, and how is that going to be contained—the tar itself? Just give me a sketch of how you are actually going to contain the tar. The reason I ask is that we have just had a case which went on for 20 years in WA where tar from a steelworks leached into ground water and has polluted ground water. The case has gone on for 20 years, and it has now just been resolved.

Mr Norton—The tar contamination probably covers about five or six hectares at the western end of the site. It is, as I said, nowhere near the CSIRO land. The containment of that depends on containing the ground water flows through the site. The site was previously flat and there was ground water coming in from adjoining land-holdings which penetrated into the ground water and caused water pressure, forcing the flow through to the river. By removing that ground water penetration by capping the site—

CHAIR—You did just explain that. Is there any way that it can contaminate other than through leaching as a result of water flowing through there?

Mr Norton—Our advice from the consultants—and we have got very reputable consultants—is that that is not going to happen. We do have a fall-back position just in case that is proven to be incorrect: we have retained a slither of land adjoining the riverbank where, if it is shown that this remediation strategy does not work, we can institute a pump-out strategy

which will remove ground water and treat it. That is a fall-back strategy. The advice that we have received from reputable consultants is that it will not be necessary.

CHAIR—Do the compaction problems that you have suggested that you have had affect the site for the CSIRO building?

Mr Norton—No, I am not aware of any problems with the CSIRO building.

CHAIR—The compaction of that site is not a problem.

Mr Norton—I am not aware of any problems with that compaction.

Mr RIPOLL—You mentioned the upfront environmental impact agreement. Could you give me a bit more detail in terms of noise control—how that upfront environmental impact agreement will actually control the overall noise of the whole site, not just the CSIRO site.

Mr Norton—The noise is monitored at five stations external to the site. We are monitoring, as I said, the impact of the site on the neighbouring area. Noise standards have been established in collaboration with the EPA and the council as to the ultimate noise impact at those measuring points. That gives both certainty and flexibility to the estate, in the way in which it plans the estate. Generally we can tolerate 70 dBA at boundaries of sites on the site quite comfortably, which is consistent with normal industrial standards. But if we do have one that perhaps is a little bit more noisy, we can buffer it by building locations. So there are screening processes that we can go into as well. Again, it is all about being able to plan the site so that noise emissions are contained within the site either by good design of buildings or by buffering of buildings so that the overall impact on the adjoining areas is minimised.

In terms of the CSIRO, I have not seen the final details of their designs but we anticipate that the CSIRO project will be well within any environmental constraints of the site. It is fundamentally a building which houses people who are doing things. They are not making a lot of noise. It is very attractive to the overall environmental concepts for the site.

Mr RIPOLL—You give an overall guarantee of the whole project regarding the noise levels.

Mr Norton—Yes.

Mr RIPOLL—And you give guarantees in terms of each site—for example, the CSIRO site. How do they work together?

Mr Norton—The whole site has environment entitlements under the LEP. As we subdivide the land, we subdivide the entitlements. We have a computer model which tells us what the incremental impacts are and we calculate those in advance. If we know that there is a point source of noise at some distance—

Mr RIPOLL—What you are saying is that you give each site a specific quota, as it were, of environmental impact and each one has to meet that guideline—is that right?

Mr Norton—Correct.

Senator MURPHY—Can I ask you one question with regard to contamination. Who gives the final approval? Who gives the final all clear?

Mr Norton—To contamination?

Senator MURPHY—Yes.

Mr Norton—Under New South Wales law, as I understand it, the EPA will not give final sign-off but will be cognisant of all of the work that has been done. The final sign-off is done by groups called independent auditors. In our case, that will be Woodward Clyde, an internationally reputable consultancy. That sign-off will be backed up by their professional insurance.

Senator MURPHY—There will ultimately be a final clearance for the site?

Mr Norton—Yes.

Senator MURPHY—With regard to environmental matters of a general nature, can you tell me what studies were undertaken in respect of flora and fauna?

Mr Norton—We have had a comprehensive study on flora and fauna by local botanists. There was nothing of significance there because of the way in which the site had been developed over the years. In addition to flora and fauna, we also studied a whole range of other things, such as heritage of the site, and that was the major issue that we had to address in terms of archaeological evidence.

Senator MURPHY—There was no state requirement for you to have any particular study done?

Mr Norton—As part of the guidelines provided in terms of what became the ‘S’ strategic impact assessment study, which is effectively an EIS in advance, the Department of Urban Affairs and Planning—a state government body—provided guidance as to the types of studies that had to be provided.

Senator MURPHY—We received a letter from the New South Wales National Parks and Wildlife Service that would seem to imply that there are some matters of particular interest to them. They suggest that the environmental issues be addressed through a compliance study, which I understand is going to be undertaken by the CSIRO. It does not cover the rest of the site. I just wonder, at the end of the day, whether you are aware of that.

Mr Norton—The National Parks and Wildlife Service has been involved in some heritage issues. We are not aware of any flora and fauna issues.

Senator MURPHY—It might be useful for BHP to have a look at the correspondence that the committee received. You may like to address yourself to the statements in the correspondence and give some view to the committee in writing.

Mr Norton—I would appreciate that. Thank you, Senator.

CHAIR—Thank you very much, Mr Norton.

[9.58 a.m.]

HARLEY, Mr George Johnston, General Manager, Corporate Property, CSIRO

HOBBS, Dr Bruce Edward, Deputy Chief Executive, Minerals and Energy, CSIRO

MOODY, Mr Trevor Laurence, Assistant General Manager, Corporate Property, CSIRO

SMITHAM, Dr James Bryer, R&D Operations Manager, Division of Energy Technology, CSIRO

WRIGHT, Dr John Kevin, Chief of Division, Division of Energy Technology, CSIRO

WATT, Ms Jennifer Joan, Project Director, Cox Richardson Architects and Planners

CHAIR—On behalf of the committee I welcome you to this hearing. The committee has received a submission from the CSIRO dated 27 June 2000. Do you wish to propose any amendments?

Dr Hobbs—Yes, I do. I have a page full of amendments to the statement of evidence. They are: page 21, paragraph 123, second sentence, replace ‘have been incorporated’ with ‘are planned for incorporation’. Page 26, paragraph 141, third sentence, add ‘planned’ before ‘integration’. Page 26, paragraph 143, second sentence, replace ‘incorporating’ with ‘to incorporate’. Page 26, paragraph 144, second sentence, replace ‘will’ with ‘is planned to’. Page 26, paragraph 145, first sentence, replace ‘incorporating’ with ‘to incorporate’. Page 26, paragraph 147, second sentence, replace ‘will also’ with ‘are planned to’. Page 29, paragraph 164, add dot point ‘carbon dioxide’. Page 31, paragraph 181, first sentence, delete ‘types’ after ‘240 volt’, add ‘generally’ after ‘technical bays’. Page 31, paragraph 181, delete second and third sentences, add ‘Higher degrees of protection will be provided as applicable in areas of dust, vapour or water exposure. Residual current device protection will be provided in accordance with Australian Standards that you find in other installations’. Page 37, paragraph 233, replace ‘to be incorporated’ with ‘planned for’. Page 38, paragraph 234, replace ‘proposed’ with ‘planned generation’. Page 38, paragraph 234, first dot point, replace ‘25k’ with ‘25 kW’. Page 38, paragraph 234, fifth dot point, relocate ‘to generate minimum of up to 500 kW of electricity and, based on simulation studies, approximately 1,500,000 kWh of power per year’ from the fifth dot point to commence on a new line.

CHAIR—Thank you. It is proposed that the submission dated 27 June 2000 be received, taken as read and incorporated in the transcript of evidence. Do members have any objection? There being no objection, it is so ordered.

The document read as follows—

Dr Hobbs—Thank you. I would like to read a summary statement of evidence for the proposed CSIRO Energy Centre at Newcastle, New South Wales. This proposal brought before the Parliamentary Standing Committee on Public Works is for the construction of a new research laboratory complex to be known as the CSIRO Energy Centre, the centre at Steel River Ecology Industrial Park at Newcastle, New South Wales. CSIRO requires appropriately designed and equipped research facilities that will provide safe, healthy and efficient working conditions for its skilled staff. This staff directs and undertakes a wide range of research to meet national priorities according to CSIRO objectives and to approved programs.

As the committee is aware, CSIRO is progressively upgrading many old, substandard and inefficient scientific research buildings as funds become available, and is constructing new facilities as required, in order to meet changing research directions and priorities. The committee has in recent years examined proposals by CSIRO at Black Mountain in the ACT, at Clayton in Victoria, at Pinjarra Hills and St Lucia in Queensland, and at Bentley in Western Australia, and has reported favourably on them. These developments are now proceeding, or have been completed following approval of the parliament.

The centre will provide a focal point for research excellence, particularly in the fields of cost competitive and environmentally acceptable fossil fuel research and development, sustainable energy, including storage and renewable energy, and environmental impacts of energy, particularly those associated with greenhouse gas emissions. A major objective of the CSIRO Energy Centre will be to demonstrate unique, leading edge, commercially practical examples of building energy demand reduction and environmentally conscious realistic energy supply options. It will also demonstrate the achievements and future goals of both CSIRO and relevant industries in the fields of sustainable energy conservation, generation and management.

The centre will also provide a venue for collaboration between CSIRO, universities, particularly the University of Newcastle, government agencies, resource companies, and associated technology supplies and providers in Australian energy industries. The proposal will increase the nation's technological capability and enhance its capacity to support sustained development in all of the foregoing fields.

The proposed development will provide new research and support facilities for CSIRO energy technology, capable of accommodating a total of 110 research and support staff. These will accommodate new appointees to expand research activities and also enable existing staff to be transferred from accommodation at North Ryde and Lucas Heights. The new centre will be located on a five-hectare site on the 104-hectare Steel River Ecology Industrial Park, some seven kilometres west of the Newcastle central business district.

The centre will comprise discrete wings accommodating computer oriented research office areas, bench scale laboratories for wet and dry chemistry, special instrument suites and support rooms, as well as offices for management and administration, seminar and meeting rooms, an auditorium, library, canteen and staff amenities. A further wing will house variable height open-plan industrial type process bays for large-scale experiments, plus preparation areas, workshop and stores. A circulation and services spine that incorporates the main plant areas will link these wings.

The buildings of the proposed complex comprise approximately 9,500 square metres gross floor area consisting of the following facilities. Firstly, laboratories and office buildings comprising approximately 6,200 square metres: research, bench scale and support laboratory offices; open work areas; management and administration areas; technical services—that is, library, information technology and communications; and amenities including an auditorium, canteen and recreation and foyer display area. Secondly, bay and support facilities comprising approximately 2,500 square metres: heavy process bays; light technical bays and workshop; and general and special stores. Thirdly, circulation spine and central plant building, comprising approximately 800 square metres: solar panel structure; link between all building elements; and central plant rooms.

A solar thermal facility compound, carparking, hard stands, roadworks, engineering and communication services, and landscape works will also be provided. A site master plan which conforms with the development strategies of Steel River establishes the general principles for layout of the complex, including the siting of all building elements, landscaping, roads and access.

The estimated cost of the proposed facilities is \$28 million at April 2000 prices. Construction is planned to commence in early 2001 and is programmed for completion by mid-2002. CSIRO has entered into an agreement with the New South Wales state government whereby the state will contribute \$10 million towards the cost of the project.

CSIRO anticipates that there will be a future second stage development which will ensure options may be pursued to accommodate growth in the energy sector, provide the opportunity to consolidate other CSIRO research activities in Newcastle and create facilities for additional research collaborators. CSIRO has secured sufficient land on the Steel River eco-industrial park to accommodate the anticipated requirements for such a second stage development.

The proposed development aims to provide all of the facilities necessary to conduct leading edge scientific research. The design of the complex reflects CSIRO's aspiration to provide both a public interface for clients and visitors and a comfortable and efficient working environment that is conducive to interaction of all staff, their research visitors and collaborators and which incorporates provisions for medium- and long-term flexibility and adaptability.

Passive energy conservation measures will be incorporated into the building and landscape design. The active elements required for the mechanical, electrical and hydraulic services will optimise renewable and greenhouse-friendly initiatives. The building energy generation system has been planned to incorporate available technologies to generate up to 500 kilowatts of electricity supplemented by the grid system.

In developing this proposal, CSIRO and its consultants have contacted all interested groups, including CSIRO staff and unions and those local authorities having statutory responsibility over the locality and services. General support for the proposal has been received from staff, government and industry organisations. The proposed design fully meets the CSIRO functional brief and conforms to the technical requirements of local authorities. It will be designed and constructed according to the building code of Australia, relevant Australian standards and appropriate laboratory codes.

CSIRO believes that the complex will provide an appropriate workplace that will stimulate and promote research and development activities and further enhance opportunities for conducting national and international research consistent with its long-term objectives. The centre will provide a powerful statement about CSIRO's commitment to expanding its overall level of research and development in the field of sustainable and renewable energy and provide a primary focus for the continuing interaction with related industries.

CSIRO is satisfied that the proposed development is a most appropriate, timely and cost-effective way to provide safe and efficient accommodation for the staff of CSIRO Energy Technology and to fulfil the division's research and development needs. It therefore submits the proposal to the committee for examination and seeks its endorsement.

CHAIR—Thank you very much. I might start with a question relating again to remediation and compaction of the site. When we were out there yesterday, I am not sure whether it was Mr Moody who said that there was further soil testing taking place. Can you tell us about that, whether you have satisfied yourselves that there is no further contamination of the site, whether it has been properly compacted and perhaps a little bit about any particular requirements for foundation work.

Dr Hobbs—I would like Mr Moody to address that.

Mr Moody—A certain amount of geotechnical investigation was carried out in 1997 before CSIRO secured access to the site. For the specific design of our buildings we have seen the need—as we always would on CSIRO facilities—to carry out additional geotechnical investigation, firstly, to confirm that previous investigation work had been carried out and, secondly, to carry out detailed investigation to ensure the building is founded appropriately so that it meets our particular structural requirements.

The site really has two profiles. The laboratory and office wings are located on the side of a hill. The hill itself has been relatively undisturbed over the years and comprises five metres of natural soil overlaying bedrock. Our investigations are now confirming that the bedrock is at five-metre depth and we will provide piered footings down to that for the laboratory and office wings. The process bay structure is located on the previously filled area of the site overlaying the Platts Channel and that obviously requires a different type of footing system. Because we are dealing with approximately 15 metres of fill, our intention is to provide a raft foundation comprising a concrete raft of approximately one to 1½ metres thick. Once again, the geotechnical information confirms that that is the appropriate design solution for the process bays.

CHAIR—Has that geotechnical advice been received yet or is it still in process?

Mr Moody—It was due for completion within the next week. At this stage, I understand it cannot be made available to the subcommittee but once it is complete we would be more than happy to provide it.

CHAIR—I think that it would be a very good idea, once it has been completed, if you could let us have a look at that.

Mr Moody—Certainly.

CHAIR—The other question I had was on the land titles. I notice in BHP's written submission that the titles are not yet available and are not expected to be available until October—that is in a general sense. I am wondering whether this applies particularly to this site—when CSIRO expects to have title and what impact, if any, this will have on delaying the commencement of construction.

Mr Harley—That is correct; the titles have not been released. CSIRO, however, is very comfortable with the arrangement between BHP and CSIRO. We have our legal people and we have a memorandum of understanding which we are very comfortable with. It will not delay the project in any sense. As soon as those titles are free, the land will transfer to our name.

CHAIR—So you will not be commencing construction until such time as the title is available.

Mr Harley—The timing of the project suggests that the construction will start next year and we are hopeful to have the titles prior to Christmas.

Senator MURPHY—What is the hold-up with regard to the titles?

Mr Harley—My information is that those titles do take some time to go through the titles office. There is a new zoning system with Steel River. It is with the council now, I understand, and there are a few small technical details that are being thrashed out. It is nothing significant; it is just one of those things that draws out over time.

Senator MURPHY—We will ask the council when we get to them. I would have some concern if you commence construction. The titles for any development—and it is something BHP might like to come back to us on, with regard to how they are proceeding to get titles in place for this whole development—are an important factor, and that needs to be ironed out fairly quickly. It certainly would be from my point of view. We would like some further information with regard to that. The council might like to address their minds to it prior to appearing before the committee at a later hour.

CHAIR—Senator Murphy is quite right; it would be of concern to the committee that the titles be made available prior to any works commencing. On another matter which goes back to the environmental measures, what, if any, are your concerns about future development and whether or not the requirements for this whole estate are such that the operation of CSIRO will not be affected in future by either noise or air pollution, or other pollution—ground pollution? What steps have you taken to satisfy yourselves that there are restrictions there restricting other enterprises from developing on the site that might create later operational problems for CSIRO?

Mr Moody—CSIRO, for its own site, has almost completed a compliance study to meet the requirements for the development. We also have developed an environmental management plan for our site which addresses issues such as noise, air quality, water quality, flora and fauna, and so on. We would anticipate that all development on the site would be subject to the same rigorous controls that we have applied to controlling those environmental factors for our development.

CHAIR—You may be anticipating it, but what statutory and legal requirements are there over BHP and indeed Newcastle city to ensure that those requirements are met in future?

Mr Moody—As we must, there are local statutory planning requirements that still need to be met. For this site, as was explained by the BHP representative, there are two local planning instruments that need to be complied with, one being the Newcastle Local Environmental Plan Amendment No. 105, which was mentioned, commonly known as the Steel River Local Environmental Plan, and the second one is the Steel River Strategic Impact Assessment Study. We have to comply with those, as does any other developer on the site. That has to be submitted to council.

CHAIR—And you are satisfied that that would be an ongoing requirement?

Mr Moody—Yes.

Senator MURPHY—In regard to the proposed move, in terms of the other energy centres that you operate, is it your intention to ultimately relocate all of them to Newcastle?

Dr Hobbs—At the moment, the intention is to move those people who are at North Ryde to this site and that pretty well occupies the present building, as you can see in front of you. The intention ultimately, though—which could be five to seven years away—is to relocate the Lucas Heights group to this site in stage 2.

Senator MURPHY—So far as the consultation you have had with the staff at both North Ryde and Lucas Heights is concerned, what arrangements have you put in place for them in terms of the option for them to move or not move? Obviously, if they do not want to move, that is a choice for them. What arrangements are in place for them?

Dr Hobbs—There has been a strong consultative process. I think I might hand that question to Dr Smitham.

Dr Smitham—We have consulted with staff at North Ryde who are affected and also with the research groups at Lucas Heights associated with the renewables program, both in small groups and also by way of individual interview and discussion. The conditions for the relocation are described in a document that is being put together called the 'Relocation Guide'. It outlines the fact that obviously the first preference is for people to move but, if they choose not to move, we will look at redeployment options within CSIRO that might suit them. As a final step, there is a termination and redundancy package as part of that relocation guide.

Senator MURPHY—Will those who choose to move be offered any assistance with regard to moving?

Dr Smitham—Yes, the relocation will basically include costs reimbursement for the sale and purchase of residence, plus all other reasonable costs that can be identified as being associated with the move.

Senator MURPHY—I assume that your document contains all of the information with regard to facilities such as schooling and other services that are available here in Newcastle.

Dr Smitham—We are approaching that by getting members of the local community here to provide some of that information and also by enabling staff to make their own visits in work time, to come up and talk to schools and other organisations here to familiarise themselves with what is available, as well as material that we would provide which is of a general nature for staff.

Senator MURPHY—You may have addressed this already: once you have ultimately vacated the sites at North Ryde and Lucas Heights, what is the intention for those sites?

Dr Hobbs—The North Ryde site will be readily occupied by two other divisions, namely that of Petroleum Resources and Exploration and Mining. I presume that the other buildings revert to ANSTO, but I am not sure.

Senator MURPHY—Do you currently have a lease arrangement at Lucas Heights?

Mr Moody—Yes, we do.

Senator MURPHY—I want to address some questions in terms of the costings.

CHAIR—While you have been addressing the staff issue, I might ask one question about staffing and then we will go back to Senator Murphy's questions on cost estimates. Energy research, I imagine, would take highly specialised, highly qualified scientists and technical support staff. What will the impact be on both the quality and the progress of science in this area if some of the staff are reluctant to move to Newcastle?

Dr Smitham—Certainly your statement is correct about the skill and expertise. What we have found is that people who have had a good grounding in basic science and engineering disciplines can adapt fairly quickly, particularly in the new energy research areas. Obviously we are targeting the experienced staff to try and stay with the division, with the relocation, and that includes a range of options with regard to telecommuting or even part-time work with the division. At the same time, we are doing a human resources plan to identify key research areas and key people. If they do not relocate, we will actually recruit people early to overlap with the existing experienced people so that there will be that transfer of knowledge and we will have that ability to maintain the research work in that fashion.

CHAIR—I think you were talking about 100 employees here in the initial phase—is that correct?

Dr Smitham—That is correct.

CHAIR—What percentage of that 100 have already agreed to relocate to Newcastle?

Dr Smitham—We have not asked people to formally indicate their intentions. We have conducted a one-on-one survey on the basis that this is an early indication. So far, only 30 per cent of staff have indicated that they would be very unlikely to relocate. Based on previous relocations, we would expect in the order of 50 or 60 per cent of staff to relocate.

CHAIR—But you have not completed that process yet?

Dr Smitham—The formal process requires a letter to be issued to staff to officially notify them within about 12 months of the relocation. Then they have a period of time before they must declare what their final intentions are. At the present time, we are working on these, shall we say, unofficial indications but we are using that as our planning input for staffing purposes.

CHAIR—Isn't this putting the cart before the horse a bit? What if you end up with a \$28 million building here and a small percentage of staff wishing to relocate—then would we have a white elephant on our hands?

Dr Smitham—The indications that we have from people are certainly more favourable with regard to their intention. As you would expect, when many of the people were first asked, 'Would you like to relocate?' they initially looked at the reasons why they would not and the changes that they would have to go through. But through the consultation process we have found, for instance, that a number of members of staff are coming up in their own time on weekends to have a look in the general area, are becoming more familiar and basically are acting as ambassadors to other members of staff. A number of the graduates in the division actually come from the Hunter Valley area and they are also looking forward to the opportunity to relocate. Again, that is building a considerable amount of goodwill among the existing staff.

The reason for not being able to ask people to formally state at this time whether they intend to move or not is part of the consultation process that CSIRO normally goes through with regard to an official letter of offer and an official acceptance, which can only be issued within roughly 12 months of when the relocation takes place. That is the reason why we do not have an official situation at the present time.

CHAIR—It seems a little odd to me that we would commit \$28 million to building a state-of-the-art research facility without knowing whether or not we are going to have the qualified scientists and highly qualified technical support staff to actually do the work.

Dr Smitham—This is an issue that CSIRO has faced in the past with relocations and there are enough guidelines from those past relocations to indicate that, for the current stage of the project, in total we are quite on track to get a large number of people to relocate. I do not know, Bruce, whether you have been involved in other relocations or have any comment to make.

Dr Hobbs—I would like to comment on that. I have been involved with two major relocations of this type—one from Melbourne to the Q CAT facility in Brisbane and the other one from various parts of Australia to Bentley in Western Australia. The targets imposed on us by the Queensland government were that we should have the Q CAT building filled by five years after completion. It was actually filled almost on day one—in fact, after one year we needed extra space. In that case, something like 70 per cent of people moved from Melbourne. The point is that—and we believe this will happen with this building—the sense of enthusiasm and opportunity that arises because the project is actually there generates enough extra momentum in the community for new projects to come on stream, and new staff have to be hired anyway. That results in a massive growth of that particular research activity in the new centre. In Bentley we are six or eight months away from completion—or something of that order—and we know that that building is now full. Again, we observed that once these projects

start to get under way and bricks and mortar start to appear, that generates its own momentum, its own new projects and the ability to hire new staff even if other people have not moved from interstate.

Dr Wright—I have also been approached by other staff members from other divisions of CSIRO asking whether there would be a role for them at this new centre. I really believe that with that excitement, and once they see this full concept laid out, we will get the required staff with the required skills to be placed into this new facility.

Senator MURPHY—I want to follow on from that issue. Obviously you are looking at a two-year timeframe, but it is possible that some people who may want to move might experience some financial difficulty if they have a house or other accommodation in one location which they have to dispose of to make alternative arrangements. Will you be offering such people any assistance?

Mr Harley—Yes, CSIRO has a relocation policy where we do assist people in moving from one area to the other. We do not envisage that there will be that much assistance in this instance because they are leaving Sydney, which is a high value area, and coming to a low value area. But we would still offer them—

Senator MURPHY—The price might drop after the Olympics.

Mr Harley—It could do.

Mr RIPOLL—No, it's not.

Senator MURPHY—There is a seller in the marketplace.

Mr Harley—Whatever the case, we will be offering them assistance with selling and purchasing. As I said, we do not envisage too much difficulty in this instance as we do when they are coming from remote areas into, say, Sydney but we still have a policy of assistance.

Senator MURPHY—With regard to the transfer of your energy technology sections from North Ryde and Lucas Heights, do you intend to move them all? Will there be anything remaining at either of those sites? I am just curious about the big dish we looked at.

Dr Hobbs—No, the intent is to certainly move that, and that is on the model here.

Senator MURPHY—So that is it, is it?

Dr Hobbs—Yes.

Senator MURPHY—It is not a new one?

Dr Hobbs—Hopefully, by then, there will be an upgraded version of that.

Dr Wright—Preferably, if the project goes according to our plans, this technology will become viable and we will find sufficient interest in the industry to set up another dish here in Newcastle and retain the one at Lucas Heights for further research work.

Senator MURPHY—What about Pinjarra Hills and Clayton? What about your technology?

Dr Hobbs—We believe the Clayton group should stay where it is and, again, the same thing with Q CAT. If anything, the Q CAT group may grow a little.

Dr Wright—I believe that over the next five years the Q CAT group will grow because of the importance of their coal preparation and coal utilisation work to Queensland. They have an ideal situation and an extremely good facility in the new Pinjarra Hills Q CAT laboratories. So we will maintain them close to their customer base.

Proceedings suspended from 10.33 a.m. to 10.50 a.m.

CHAIR—We will continue with some questions to CSIRO.

Senator MURPHY—With regard to the agreement between CSIRO and the New South Wales government, has that \$10 million been given to you as a total grant?

Mr Harley—Yes, it has.

Senator MURPHY—You have already got it?

Mr Harley—It is a grant payable over four years.

Senator MURPHY—You get the full amount of \$10 million?

Mr Harley—Yes, the only condition is that we build a laboratory and occupy it.

Senator MURPHY—Certainly plans are afoot to at least go that far. I would just like to ask you a couple of questions with regard to the cost but, firstly, how do you intend to proceed in the tendering process?

Mr Moody—The process we will go through for tendering the project will be in two stages. Our intention is to seek expressions of interest from the industry against certain tender criteria that we would expect tenderers in that expression of interest to address in their submissions. We will evaluate those submissions and then short-list the five or six firms we think are suitable for the construction of the facility. Our intention would be then, when tender documentation is complete, to seek tenders from those five or six firms that we had short-listed.

Senator MURPHY—What type of contract will you use?

Mr Moody—We would be using a traditional lump sum contract based on AS2124, General Conditions of Contract.

Senator MURPHY—In respect of the site and the buildings that we see in the model and the plans that we have been presented with in evidence, can we safely expect to see exactly that built?

Mr Moody—The project is really, as the committee would be aware, at a preliminary design stage. We cannot, until we get formal parliamentary approval for the project, proceed to design development and documentation. In the course of design development and documentation, there will be modifications but our intention is that we will replicate the model and the design drawings that are being submitted to this committee.

Senator MURPHY—The reason I asked you that question is that we have had some experience with another major project, the National Museum, where we started out with a model. In fact, they had a competition to get a plan, but we ended up with something slightly different after the project was agreed to—or we are going to end up with something different. In fact, it is significantly different to what the committee was initially presented with in terms of evidence by way of a plan and a model and, indeed, a lot of the specifications that went to the types of areas that were needed. What I would like is some assurances that what you have stipulated in terms of the scientific work that you need to do and all of the requirements of CSIRO in that respect will be met.

Mr Moody—In developing this project to the stage that it is we went through a considerable process of user consultation to get an understanding of the research activities carried out by the potential users of the facility and to ensure that the facilities matched their particular requirements. That, of course, is something that has occurred over a lengthy period of time—probably 12 to 18 months—before we were satisfied that we had at least a basis on which we could develop a design for this project.

I would have to say that research and development is something that does change over time. That is why, in the design of our facilities, we insist they be designed to be flexible and adaptable to meet changing needs. You may find internal to the building there will be some changes but our intention is the building that you see, which is the external appearance of the building, and the features of the building are what we intend to construct.

CHAIR—Just further to Senator Murphy's questions, you talk in your submission about benefits to your customers. Can you tell us who your customers are and are they happy about this move?

Dr Hobbs—Certainly, but I will let John Wright amplify that.

Dr Wright—We have a very broad spectrum of customers. I think you will see from the submissions that you have received from a number of industries that they are very pleased that we are taking this move. For example, I have in front of me some income from customers in the 1999-2000 financial year. They include three cooperative research centres that we deal with very closely, principally the CRC for Black Coal Utilisation, which has its headquarters at Newcastle University and creates one of the very great synergies that we deal with; the Australian Coal Association comprising six companies represented here in the Hunter Valley which we work very closely with; and all the power generation companies we have worked with, or are working with right at the moment, in the Hunter Valley.

There are a whole range of other customers we are working with. Another company called Energy Storage Systems is a major client of ours. That is where we developed our super capacity work. They are currently based in Sydney. My aim is to try and encourage them to put a manufacturing plant in Newcastle, but I cannot promise that, obviously.

We also do a lot of work with international companies, including Freeport in Indonesia and ILZRO, the International Lead Zinc Research Organisation, mainly through our battery work which comes out of Melbourne. Pacific Power is another major supporter represented in the valley here. We also work with Pasminco, mainly on lead systems for batteries. We have newer customers such as Suncore Energy for electric transportation applications. We really cover a very broad spectrum and a very large proportion of our customers, although not the majority, are right here in this area.

Senator MURPHY—I would like to ask a few questions with regard to the cost estimate. At point 2, as it relates to site works, can I assume that the entry forecourt and solar compound costs relate to soil?

Mr Moody—Site works involve the preparation work leading up to the completed surface. In the case of a car park, it is the excavation subgrade preparation work, the construction of the pavement and the finished surface, for example. It is the total work associated with the process of providing that surface treatment. By site works, we are talking about excavation and the cut and fill activities that would occur on the site for the construction of the building.

Senator MURPHY—But the third point in the cost is site preparation, roads and car parks. So the entry forecourt and the solar compound could relate to excavation activities for those areas and preparation of those areas alone?

Mr Moody—Yes, but the site preparation is more than just for the roads and car parks. It is the site preparation component for all works associated with the site. Added to that is landscaping over and above that site preparation component.

Senator MURPHY—But you have landscaping down below?

Mr Moody—Yes.

Senator MURPHY—I would like to know about the figure of \$300,000 in terms of the entry forecourt.

Mr Moody—It is correct.

Senator MURPHY—Am I to assume that it relates to excavation work or is it soil? Site preparation is included in a further amount if you look at the last point in site works.

Mr Moody—What we set out to do was isolate the entry forecourt as a significant feature and separate that out specifically in the cost estimate, as we did with the solar compound, which will be prepared for the solar facility, similar to what you saw yesterday. The balance of the work site preparation, roads, car parking and so on, is included in that third lump sum figure rather than isolating out individual components any further in the breakdown.

Senator MURPHY—Could you tell me what the microwave link is for?

Dr Hobbs—It is for the communications with the centre, being mainly email or Internet type connections and so on. This will be linked into the so-called AARNET system around Australia that enables scientists mainly to communicate on the Internet.

Senator MURPHY—So it is not a service cost? I was wondering why it was not included in that.

Mr Moody—It is a specialised component for the project to provide the microwave link. That is why we have isolated that out from, say, engineering site services and services for the building.

Senator MURPHY—You have got there, in your building works, plant rooms and circulation link. So that is why you have separated it out?

Mr Moody—It is a separate component. But I would have to say that the communication cabling within the building is included in the building services estimate. It is providing the microwave link from the AARNet system to the site, including whatever connections are required.

Senator MURPHY—Your contingency and escalation allowances, at around eight per cent, may be a bit higher.

Mr Moody—That is right.

Senator MURPHY—Is that sufficient?

Mr Moody—We believe it is adequate for this type of project. The design contingency, one would expect, would be what I alluded to earlier. In the ongoing design development there will be things that we think need to be further incorporated into the building, and we make an allowance for that. By the time we have finished tender documents it reverts to zero. The balance of contingency is for construction. That is for the unforeseens that we can never predict. Hopefully, they will be minimal, but for this type of project we would not dare let a contract unless we had some contingency in there.

Senator MURPHY—That is a very interesting statement, Mr Moody. We often get told that in this committee, and we also have people tell us that 12 or 15 per cent is more the accepted norm in terms of contingency and escalation allowances. I find it very interesting that CSIRO has managed it at less than 10 per cent.

Mr Moody—It depends on the type of facility. If we were looking at a refurbishment project, for example, where the unforeseens with services and so on can be quite enormous, we would have a greater allowance for contingency. A number of our projects would be basically refurbishment of buildings and on those jobs we would allow a greater contingency for the unforeseens. Our judgment on this project is that the allowance that we have submitted to the committee is satisfactory.

Senator MURPHY—So we will not expect you to come back and ask the committee for more money.

Dr Hobbs—Are we allowed to ask the committee that?

Senator MURPHY—Some people think they are.

CHAIR—That concludes our questioning. Thank you very much.

[11.04 a.m.]

DAVIES, Mr Jim, City Strategist, Newcastle City Council

DORMAND, Mr Peter Owen, Project Director, Australian Municipal Energy Improvement Facility Project, Newcastle City Council

CHAIR—Welcome. The committee has received a submission from the City of Newcastle dated 27 July 2000. Do you wish to propose any amendments to your original submission?

Mr Dormand—No, I do not.

CHAIR—It is proposed that the submission be received, taken as read and incorporated in the transcript of evidence. Do members have any objections? There being no objection, it is so ordered.

The document read as follows—

CHAIR—We would now like to invite you to make a short statement in support of your submission.

Mr Davies—Thank you. Committee members, ladies and gentlemen, council would like to thank the government for the opportunity to provide evidence today. In support of the proposal and to complement our written submission I would like to make a few points about how this fits in with council's strategic vision, alignment with regional and local economic development strategies, a few short statements on urban design aspects of the plan, and point out how the proposal complies largely with the environmental management requirements.

We think that the proposal, with its showcasing of renewable energy generation and housing activity that is likely to stimulate employment in the Hunter's energy sector, is no doubt a very welcome addition to the regional economic infrastructure. In terms of council's vision, employment generation is very much a cornerstone and we understand, with the multiplier effects that have been proposed in the CSIRO's evidence, that that will be quite substantial.

The proposed research facility to be situated at the Steel River eco-industrial park is very much in accordance with council's economic development strategy of June this year. We welcome the proposal as it will expand the economic base of the city, develop and deepen the sustainable industry sector of our regional economy, expand the supply of employment, land and infrastructure, and ensure that future development does not limit opportunities for future generations. It will contribute to the city's vision and the Hunter's vision of being clean and green and more ecologically sustainable.

Concerning environmental management, we accept and agree that the CSIRO has gone to a great deal of detail and research in its efforts to comply with the strategic impact assessment study and the Newcastle Steel River amendment to its local environmental plan. This was something that I understand BHP's earlier evidence went into in terms of the community, council, government and BHP partnership, which very much has contributed to where we are today. Therefore, I will not elaborate on that.

In terms of having reviewed the CSIRO statement of evidence, council notes that unspecified facilities are to be relocated from Lucas Heights. We also note that a compliance study will be done to address in detail the requirements of the site strategic impact assessment study for the Steel River site as a whole, and we would welcome the compliance study addressing the details of what that relocation entails.

As part of council's and the region's economic development strategies, organisations such as the Hunter Regional Development Organisation, which is supported by federal programs, are developing a business cluster strategy, and in the implementation of the Steel River project the CSIRO's energy facility will contribute to that energy cluster quite substantially. It is another link in the chain in terms of better utilising our fossil fuel resources which are used for generating electricity, primarily, and also for export overseas. Peter can go into that in more detail.

In terms of urban design and site development, when the CSIRO prepare their statement or compliance study in relation to the next stage of the development and go into their detailed design, they may wish to look at how the buildings that are proposed on the site can better

integrate with the pedestrian plaza, which is adjacent to the south-eastern edge of the buildings. We did a community based urban design exercise, particularly for the south-east hill, which was at some point in the strategic planning phase an issue with the community. The south-east hill part of the site is a particularly important icon of local history—indeed, it is reflective of Australia's development. There has been the likelihood of archaeological evidence that indicates Aboriginal occupation of the Steel River site pre colonial settlement. It was also part of one of the very first land grants to an emancipist—from memory, John Laurie O'Platt. That fellow was also known to both grow wine and mine coal and later grow wheat and mill flour on the site. It has very much had a part in the evolution of the region's history. It is all there in the evidence under the pedestrian plaza.

The plaza is seen as something which can be developed over time to celebrate that heritage as well as create a space which can be a meeting place. It is very much a key objective of the strategic impact assessment study and council's LEP to ensure that that space creates interaction between the activities and people who are working day to day on the Steel River site and the community. Given that it will possibly be of great interest to members of the public—as the Steel River site has been in the past—and with the proposed types of innovative development—ones that BHP and council have been involved with—it is very important to acknowledge the role of that meeting place. Given that some laboratories are overlooking the future pedestrian plaza, giving casual surveillance to that space is to be welcomed.

When we did the concept design for the hill area which the facility site is part of, we envisaged that there would be openings or public entrances to the buildings onto that plaza, or some sort of fairly easy pedestrian access to that plaza and surrounding development. We note at this stage, though, that the concept plans for the CSIRO facility rely on a quite hilly, circuitous and indirect path to its entry. There are service bays which back onto that pedestrian plaza. Perhaps with some design review the objectives of CSIRO, council and the local community could be better reflected by the design of the proposal. Having said that, I do not wish to detract at all from the concepts and the economic benefit that this will be undeniably bring to the region. Thank you.

Mr Dormand—I would like to reinforce the opportunities of the CSIRO and Newcastle and the Hunter working together in the future. I have provided a short overview of council's background of how we have got to where we are and the opportunities that lie in front of us in terms of working with the CSIRO, not waiting for the project to come to fruition but works which I think could be undertaken immediately. Our council found that our electricity bill had grown significantly and we were asked to look at where we were using this energy and why it was that we were using so much. So back in 1990 the question was asked whether we really needed to use this amount of energy at our Turton Road works depot. We quickly realised that our bill out there had reached \$90,000 and today we have that bill down to less than \$40,000. We realised then that there was no rocket science involved, that it was more a matter of the fact that we were not conscious of how much we were using. I think this applies across the whole country right now. We are the second or third biggest users of electricity in the world and I think that has come because we have been fortunate enough to have large coal reserves and been able to build our power stations directly on top of them.

We took that knowledge and brought it to this building. At that time, the bill was \$120,000 and that is now down to \$60,000. We then went to the next building, our city art gallery. We got

there a bit later, as you can see. That bill has now been reduced to \$40,000 from \$80,000. We took that knowledge again and went across to the City Administration Centre and you might note that 1993 was when everyone started to use computers and fax machines. We did not have time to boil the kettle any more and needed automatic boiling units which run 24 hours a day, seven days a week when office time is only 30 per cent of that time. So 70 per cent of the time a lot of these appliances are running totally unnecessarily.

We have been able to take council's overall million dollar 1995 account down to just over \$600,000. There is \$130,000 of that attributed to the savings in the deregulated market, but you will notice that we have invested \$400,000 to make a cumulative saving of \$600,000. The interesting part there is that the savings are racing ahead at the rate at which we can invest the money. We believe that this can occur across the entire country, but we think, if we start working with the community, we can demonstrate that we can take what we have learnt right across an entire community. It would be very exciting for us to be doing this in collaboration with the CSIRO.

We began to bring renewables into the urban environment so that people could become familiar with these technologies. It took us 3½ years to get development approval to install a small research development wind turbine at the University of New South Wales up at Fort Scratchley. It is interesting to note that there are now 30,000 of these units being manufactured in China as a direct result of the collaborative work we have done. We have solar PV generators out at our Wallsend rotunda—it is the University of New South Wales technology. We have installed solar heating in our pools. The large wind turbine on Kooragang Island took six weeks for approval, which is quite a surprise given that it is 72 metres tall. What we believe has happened is that during the process of the introduction of these projects the community has had the opportunity to debate and communicate on the environment to work out the limitations. I believe that the introduction of these types of activities and generation facilities have been welcomed into Newcastle because of people's previous experience in actually seeing and hearing that these things are not noisy and are in fact quite attractive.

At our solar shade structure at the foreshore we have a solar generator in collaboration with our local supply authority. We are now working with the community. We introduced an energy smart homes development control plan where it is now mandatory to reach a 3½ star rating on any new home or major extension. It is also interesting that there was a lot of resistance to this, but since it has been introduced local builders are yearning for more knowledge and are looking at finding ways to build a five star home so that they can have a competitive edge against their competitors.

We held an energy town meeting in Newcastle on 3 July, in which Dr John Wright took part. We also brought the world leader in energy and resource efficiency, Amory Lovins, from the Rocky Mountain Institute, and during those proceedings were signatories to a collaborative memorandum of understanding with the Rocky Mountains Institute and the University of Newcastle. It is interesting to note that the Rocky Mountains Institute does not have a memorandum of understanding with anyone else in the world, other than our group here in Newcastle.

The energy town meeting introduced by Amory Lovins was a very interesting process. We had no idea how many people would be interested in attending. To our surprise, 900 people

turned up to find out how we can take Newcastle forward to embrace energy technologies and, most importantly, to create local jobs in an area where the focus is changing from heavy industry towards, we believe, these new sustainable opportunities. The panel of experts received quite a number of questions, and it was interesting to note the level of commitment made not only from our own council, but from local energy suppliers. AGL, for example, have come to the fore, suggesting that they are prepared to invest in helping people retrofit their homes.

In response to the number of councils that were coming to us from across the country wanting to learn how we have been able to achieve these savings, we created AMEIF, the Australian Municipal Energy Improvement Facility, in 1998. In the last 12 months, on behalf of the Australian Greenhouse Office, we have trained 60 councils across Australia; 170 staff have been here to learn how Newcastle is doing this. We do what we call a 'magical energy tour', where we take people on a bus around the city. We visit the Steel River site and explain to everyone that this is what is coming to Newcastle. It excites them greatly to think that in a few years we are going to have such a fantastic international facility.

So far, this program has covered 42 per cent of the population of local governments throughout Australia. We have an energy improvement facility, a direct link with the community, where we provide information about how people can make their own businesses and homes more energy efficient and where they can go to get those products and services. We provide an energy and lighting retrofit program for councils throughout Australia to help them undertake their first projects. We also provide an energy advisory service by phone to 27 councils in Queensland and New South Wales, again on behalf of the Australian federal government.

We have introduced a financial loss control policy. We were helped to understand that people, when you explain to them that you can help them save something, tend to put that on the pile of things that they could do in the future. But if you explain to people that they are currently losing something, they tend to drop everything and turn their focus directly to that. So we have set up a policy called financial loss control, which means that we now take account—through our quarterly budget review process of council—of exactly how many kilowatt hours of electricity we have consumed, how many dollars we have spent, and how many tonnes of greenhouse gas emissions we have emitted. So we have become totally accountable for our electricity and gas consumption, and the resultant greenhouse gas emissions. These simple graphs are generated by software that has been developed in-house, and we think that this can be developed and rolled out across the entire country, not just for local government, but for all business sectors that are currently using electricity.

In evidence to the Senate inquiry in March into Australia's response to global warming, we indicated the following scenario for Newcastle: we had a \$1 million electricity bill in 1995; we aimed at a 20 per cent reduction to bring that bill down to \$800,000; we needed to invest \$400,000 to achieve that—effectively, a two-year payback; \$200,000 of that money went to materials, the other \$200,000 went to labour. With an electrician representing \$50,000 per year, a simple calculation shows that we have created the equivalent of four jobs for one year, or one job for four years. We suggested to the inquiry that, if you took that scenario across the entire country—where we are spending \$12 billion annually at the moment on electricity—it would run out at 48,000 jobs for one year, or 4,800 jobs for 10 years. This could be done simply by

redirecting the money that we are currently wasting to those products and services that provide those savings. I think it is a very easy thing to do because we are, in fact, so complacent.

Our view for the future of the Hunter is that we think we can work towards a vision similar to San Jose, where they went from picking flowers and growing chestnuts to growing silicon chip technology, which has led to their new Silicon Valley reputation. We believe that here in the Hunter, while we will be producing coal fired power electricity for a long time, there would not be any coalminers or anyone else in that coal industry arguing that we should continue to be inefficient in the way that we use electricity. These are all of the issues on which we think, now that we are beginning to work with the community, that the CSIRO facility here in the Hunter will greatly enhance the rate at which we can become the solar valley of Australia and, in time, the world. Thank you.

CHAIR—Thank you for a very impressive presentation, and congratulations on achieving such great outcomes. Senator Murphy, do you have any questions?

Senator MURPHY—I will just ask a question with regard to the site and the ownership issues. Does council have any concerns with regard to those?

Mr Davies—We are satisfied that the management framework that is established by the strategic impact assessment study for the Steel River site is adequate. We are also confident that BHP's efforts to establish an estate management or corporation who will manage the community subdivision of the site will write into its articles of management the ownership details which will guarantee that satisfactory performance is provided in the future. While those details, I understand, are yet to come before council, council does have the opportunity to review them, via the planning approvals process under New South Wales legislation, to ensure that all requirements are adhered to.

Senator MURPHY—With regard to National Parks and Wildlife of New South Wales and the strategic impact assessment study, does the local council liaise with the state government authority with regard to what work is being done? It seems to me, from their letter that was sent to this committee, that either they are not aware or they have not checked what work has been done.

Mr Davies—Yes, council did consult with state government agencies. I recall that, when we prepared the planning instruments for the Steel River site, there was flora and fauna work done specifically to go into the strategic study and the consultant who was retained by BHP to do that work did consult with the National Parks and Wildlife Service. I am unaware of anything that they may have brought up since, however, in relation to this proposal.

Senator MURPHY—It might be useful for the council to also respond to the letter that the committee received. I am curious as to why the department of parks and wildlife have written and raised a number of issues, because I know that, in a response to the committee, CSIRO has pointed out that through the strategic impact assessment study and the LEP these matters have been addressed. If they have not got a copy it might pay to send them one.

Mr Davies—We can certainly pass that on. I would appreciate being forwarded a copy of that letter so I can follow that up.

Senator MURPHY—I am sure we can get you a copy of it.

CHAIR—Given the level of seismic activity in the past, what are council's requirements in that respect, in relation to building? I am referring to seismic activity, earthquakes. What has the council done in relation to the building code there?

Mr Davies—Do we have any specific code on that, Peter? I am not clear on that.

Mr Dormand—In my personal experience—I did some extensions after the earthquake—the size of footings and the like had to be a lot bigger.

CHAIR—That is what I mean: have there been some changes to the building code?

Mr Dormand—I believe there have been, but it would be best for us to check that and come back.

CHAIR—I guess the ultimate question is: has this been taken into account in the plans that have been submitted for this building?

Mr Dormand—If those alterations have been made, I am sure they have been.

CHAIR—I am seeing a nod of head at the back there, so I presume this has been done. That concludes the questioning. Thank you very much for your presentation. We would now like to recall the representative from BHP and Mr Harley. We will do this in camera, as I understand the questions Senator Murphy has are perhaps considered to be commercial-in-confidence.

Evidence was then taken in camera, but later resumed in public—

CHAIR—As there are no further questions, it is proposed that the documents listed on the sheet that has been circulated to members of the committee be received, taken as read and incorporated in the transcript of evidence. Do members have any objections? There being no objection, it is so ordered.

The documents read as follows—

CHAIR—Before closing, I thank all of those who have appeared as witnesses today and those who have assisted our inspection yesterday, with a special note of thanks to Councillor John Tate, the Lord Mayor of Newcastle, and councillors for making the hearing facilities available to us.

Resolved (on motion by **Senator Murphy**):

That, pursuant to the power conferred by subsection 2(2) of the Parliamentary Papers Act 1908, this sectional committee authorises the publication of the evidence given before it and submissions presented at the public hearing this day.

Committee adjourned at 11.48 a.m.

