COMMONWEALTH OF AUSTRALIA

JOINT PARLIAMENTARY COMMITTEE

on

PUBLIC WORKS

Reference: Development of buildings and services in support of the Department of Defence High Frequency Modernisation Project

URANA

Monday, 25 November 1996

OFFICIAL HANSARD REPORT

CANBERRA

WITNESSES

DOVERS, Commodore William Anthony George, CSC, RAN, Director General Force Development (Joint), Headquarters Australian Defence Force, Department of Defence, Russell offices, Canberra, Australian Capital Territory 3

NOBLE, Mr James McCallum, Assistant Secretary, Joint Project Management, Materiel Division, Department of Defence, Anzac Park West Offices, Canberra, Australian Capital Territory 3

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JOINT COMMITTEE ON PUBLIC WORKS

(Subcommittee)

Development of buildings and services in support of the Department of Defence High Frequency Modernisation Project

URANA

Monday, 25 November 1996

Present

Mr Andrews (Chair)

Senator FergusonMr Hollis

The subcommittee met at 1.30 p.m.

Mr Andrews took the chair.

CHAIR—Ladies and gentlemen, I declare open this public hearing into the proposed development of buildings and services in support of the Department of Defence high frequency modernisation project. The Public Works Committee is grateful to the shire and to the mayor of the shire of Urana for their hospitality and for the time that they have spent with us today in making us feel welcome in this locality.

This project was referred to the Public Works Committee for consideration and report to parliament by the House of Representatives on 10 October 1996 at an estimated cost of $75 million. In accordance with subsection 17(3) of the Public Works Committee Act 1969, 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.

This morning the transmitter and receiver sites in the Riverina on which it is proposed to construct a number of facilities for the project were inspected. On 24 October, the committee also inspected the site for the proposed receiver station at Speed Creek in the Townsville Field Training Area. Today the committee will hear evidence from the Department of Defence.

I should indicate in my opening remarks that the works proposed in the Riverina are in the federal electorate of Farrer, and we invited the member for Farrer, the Deputy Prime Minister and Minister for Trade, the Hon. Tim Fischer MP, to be with us today. Unfortunately, given the program Mr Fischer has as Minister for Trade and Deputy Prime Minister, this was not possible. Mr Fischer, as you are well aware, is currently in Korea and has sent his apologies. Invitations were also extended to the state member. Unfortunately, the New South Wales parliament is sitting today, making it difficult for him to attend. I am however pleased to welcome people into the gallery. I will now call representatives from the Department of Defence who will be sworn in by the assistant secretary.

DOVERS, Commodore William Anthony George, CSC, RAN, Director General Force Development (Joint), Headquarters Australian Defence Force, Department of Defence, Russell offices, Canberra, Australian Capital Territory

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CHAIR—The committee has received a submission from the Department of Defence dated October 1996. Do you wish to propose any amendments to that submission?

Mr Noble—No.

CHAIR—There being no amendments, 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—Would a representative of the Department of Defence now read the summary statement to the committee.

Mr Noble—The high frequency or HF modernisation project, or as we call it joint project 2043, is an approved defence project which has been established to modernise and rationalise defence's high communication network used to support communication to the Australian Defence Force's land, sea and air mobile elements. Communications is a key element in the day-to-day affairs of the ADF. Secure, reliable and survivable communications providing national coverage is essential to defence operations.

At present, voice communications are similar to the old manual telephone exchange where an operator is necessary to connect calls. Messages are sent in a similar way to the old telegram. The HF modernisation project will remove the operator from the telephone system and provide a similar service to electronic mail for message and data communications.

The new fixed network will provide a significant extension in range and reliability over all Australia and out to 2,000 nautical miles offshore, in fact, to anywhere within this vast area where an ADF ship or aircraft might be operating. The two existing defence long range HF radio systems, which are operated separately by the navy and the air force, are not capable of providing the speed or capacity of information exchange which modern defence forces demand and cannot be economically expanded to meet the future needs or to achieve the range required. Most existing defence radio receiver sites are under increasing urban encroachment which affects the quality of the service able to be provided.

This project will provide not only a major increase in capability but also a very significant reduction in operating costs through lower power requirements, lower maintenance and reduced personnel requirements. The proposed HF radio system will be under Australian sovereign control, on Australian territory and will be the primary survivable means of communication. Completion of this project will see a number of ADF existing HF communication stations significantly reduced. Most of these sites which will become redundant are in built-up areas and will be replaced by facilities situated well away from those urban areas.

The new fixed network will consist of four nodes interconnected with a network management facility in Canberra. Each node will consist of a transmitting station, a receiving station and a local management facility. The nodes will be established at Townsville in Queensland, here in the Riverina, at North West Cape in Western Australia and at Darwin in the Northern Territory.

The total project involves establishing a new fixed network and upgrading HF radio mobile equipment for land, sea and air forces. Included in the scope of the project is provision for transition from the old HF systems to the new network, as well as support for the new network until the year 2005. The committee might note that the term 'fixed

network' includes not only the buildings and services component but also the communications which it will house, associated antenna systems, specially developed control and signal management software needed to run it and the communications between all of these sites.

The total project was approved in the August 1996 budget at $500 million, of which some 15 per cent or about $75 million will be spent on buildings and services for the fixed network at 14 sites around Australia. The current schedule is to establish a core network in the year 2000. The core network will have the capability of the present network, and that will be extended to the final network in 2002.

Widespread consultation has taken place within Defence with Commonwealth, state and local government organisations and with community groups and individuals. The longest process has been within the Riverina region of New South Wales. A community relations program has been running here since 1990. Market research conducted in 1992 indicated that the project had a satisfactory public profile and was widely accepted.

Consultation outside the Riverina has been less extensive, partly due to the shorter period which has elapsed since other fixed network sites have been identified and because the other sites are all located on existing defence owned communications installations. Apart from one, there will be no change in the land use of these establishments. Considerable discussion has been held, and both state and local authorities support the need for buffer zones to protect receiving sites from electromagnetic interference and the establishment of appropriate planning controls.

The fixed network sites are located on defence owned land with only the Riverina transmitting site and receiving site and the Townsville receiving site not located on existing communications facility. The two Riverina sites were subject to external review in accordance with the Commonwealth Environment Protection Agency guidelines between 1990 and 1992, and were subsequently approved for development. The Townsville site has also been thoroughly assessed.

Environmental certificates of compliance and draft environmental management plans have been prepared for each fixed network site in accordance with legislation. These are planned to be finalised before development takes place. There are no known heritage issues that should affect the project's implementation.

All sites are located in areas designated for defence use. The Riverina greenfield sites were recently rezoned to defence use by agreement with local governments and the New South Wales government.

In summary, the new network will provide a vastly improved ADF communications system using today's technology. The network will provide assured levels of HF communication across Australia and to 2,000 nautical miles offshore. Nine existing

HF sites located in built-up areas of Sydney, Canberra, Perth and Darwin will be released. Staff level reductions of approximately 300—from the more than 400 that we have now to about 100—will result from increased levels of automation and the rationalisation of the sites. The project will achieve significant cost reduction in the operation of the ADF's HF communications system. Thank you, Mr Chairman.

CHAIR—Thank you, Mr Noble. I will now open the hearing to questions. By any measure, this is a major defence project costing some $500 million. My understanding is that much of the project will benefit navy rather than the other two arms of defence. I would appreciate if you would elaborate on the proportion of advantage to each of the defence forces and to defence in total. Could you then comment on how air force and army feel about bearing this share of a $500 million expenditure which will largely advantage the navy.

Mr Noble—Can I invite Commodore Dovers to respond.

Cdre Dovers—I think it is fair to say that the navy will be the predominant user and beneficiary of this particular service. On the other hand, we are moving, as I am sure the members of the committee are aware, to more centralised command and control at the operational level. It is envisaged that this network will be managed and directed from the new operational level of command at Commander Australian Theatre. As far as I am aware from discussions with my contemporaries in the other services, both the army and the air force do support this project. While they might not quite have the utilisation that navy will have, it is critical to both, especially to army in that, when they are deployed in the field, they rely upon narrow band HF communications for much of their tactical communications. So I think it is fair to say that all three services support this project implicitly.

CHAIR—Thank you, Commodore Dovers. I regret that I am not a radio buff, so you have to forgive me for the layman's questions. But I am presuming that if you change the form of communication then you must also change the receiving units in each of the ships, vehicles or offices, as the case may be. Can you elaborate on the changes necessary and on the relative cost of individual units as part of the total project cost?

Cdre Dovers—We are approaching this in two phases. In this first phase of the project, enough of the mobile units both in the air, maritime and land environments were included to ensure that we could thoroughly test the network. Under the second phase, which is subject to a study that is about to commence, the remainder of the units will be considered as to whether they should be upgraded. This will be a combination of operational requirement as against the age of some of the units. For instance, navy's three DDG destroyers will go out of service between the years 1999 and 2001, as this system is in fact commissioned. So clearly it will not be worth converting those ships to use the modernised system.

On the other hand, the second phase study will also examine a balance between the cost effectiveness of the additional cost of outfitting all of the units as distinct from the extra savings we might make in the fixed network by having a higher level of automation and lower power levels. The more units that we do not convert, there will be a requirement within the system for a greater degree of what we have termed 'backward compatibility'—in other words, for the new network to be able to communicate with the older unmodified units. The outcome of that second phase of the project, which will be in addition to the currently approved one, will not be known until around about March next year.

CHAIR—Presumably each of the arms of the defence force are able to communicate with each other currently with something other than a mobile phone. Can you elaborate on the existing service and what you see as its inadequacies that justify this sort of expenditure?

Cdre Dovers—The main strategic means of communications is still high frequency radio. The real limitation at the moment upon that is its slow data rate. Currently we operate at what is referred to as 75 boards or 75 words per minute, which is exceedingly slow. It is a narrow band and low capacity system. The current trend in modern command and control is to require the passage of much higher data rates and to use more complex message forms.

We also use satellite communications to the limit that we are able to at the moment. That is a combination of a domestic service that operates off the Optus satellite system, which is referred as to the defence mobile communications network. That is restricted largely to the mainland of Australia, although it does cover some of the coastal regions.

In addition, we make use of allied satellite systems and some commercial satellite systems. The commercial ones suffer from some limitations on their use in times of hostility. For instance, INMARSAT, which is the system the navy uses, may only be used in times of hostility when you are operating under the auspices of the United Nations.

With the allied systems that we have access to, unfortunately, we suffer from the limitation that, when those systems are required by the host nation for higher priorities, we may be pre-empted and find that our access is temporarily denied. Hence the statement, which will prevail for some time, that HF is our primary survivable means of communication. It is the one that we have entire control over on sovereign Australian territory run by ourselves and for our core command and control of ADF forces. It is the one means that, given the limitations of the physics of HF, we can absolutely rely on.

CHAIR—The feasibility of launching our own satellite for the sake of defence communications is simply out of this cost range, is it?

Cdre Dovers—No. In fact, as a separate project, joint project 2008 military satellite, we are undertaking a study which we hope to start next month in December. We will examine the full range of options for Australia to acquire a military satellite capability, ranging from the current sort of arrangements where we would just lease capacity from a commercial operator to the other end of the spectrum where we might own a fully militarised satellite in our own right. Clearly, in terms of capital equipment cost, this ranges from a low-cost option to a relatively high-cost option. It is probably one of the most important communications studies that the ADF will undertake to make sure that we get the right option for that.

At this stage, until you get into the high end range that the Americans have embarked upon, which are very expensive, satellites are still relatively vulnerable to electronic interference. We do not believe that, in the foreseeable future, we will be able to have a constellation of satellites so that we could have the redundancy in those satellites to be able to do away with HF. The two systems are not in competition. We see them as being complementary. The key part of the HF system is the fact that it will probably be the only system that we will have total sovereign control over.

CHAIR—Nonetheless, is there not a real risk that, in common with all things electronic, the quite large expenditure we are looking at today could quickly be superseded by a cheaper technique of developing a satellite that would meet our needs?

Cdre Dovers—Rather than being superseded, I would see the two systems as being complementary. While we would desire to have as much satellite capacity as we can—because satellites inherent in their design offer greater bandwidth and the ability to pass imagery and other things that HF is limited for—we would see that the two systems run hand in glove. In the Australian scenario, which is quite different from those pertaining to some of our allies, we are faced with huge geographic expanses of areas of operation, with low infrastructure development and very low force to space ratios. In other words, where our forces will be spread over larger areas, implicit in it is that we need access to both those systems.

If we were to put all our eggs in one basket—for instance, the satellite basket—I believe we would be extremely vulnerable. If we were to lose the one or two satellites that we could afford to have up there, we would lose the key means to control the ADF and command it from the operational and strategic level. By having a system such as HF, which will remain within our total control, and with this system which has a level of redundancy between the four nodes, we feel fairly confident that we will at least be assured of being able to direct the basic operations of the ADF.

CHAIR—I realise there are some security provisions in all of this, but could you just elaborate, Commodore Dovers, on what you see as the built-in safety factor in these four nodes. Three of the nodes are located across the north of Australia. If two of those were eliminated, do we then lose the capacity for the defence forces to communicate in a

time of crisis?

Cdre Dovers—I might ask the project director to elaborate on this because I am not fully aware of the results of the studies that were conducted. My understanding is that, even if we were to reduce to one node, we would have a level of coverage. Although, given the physics of HF propagation, the reason the four sites were chosen is that this was a way of giving assured coverage over the whole area that has been outlined.

CHAIR—Thank you. Mr Wilson, what I would seek as a member of the committee is some assurance that what Commodore Dovers has described as 'a level of coverage' would at least equate to that which we have accepted as inadequate today. I would not want to think we were approving something that could easily be reduced to something that was not as good as the existing facility, given the outlay the committee is anticipating.

Mr Wilson—The loss of two sites is a fairly major event, I would think. You may recall that I put up some diagrams showing the coverage we have now compared with the coverage we expect from the new system. Basically, what we are doing by going to four sites is improving that coverage. In effect, the diagram that shows you the coverage from two systems is representative of the coverage you would get in the circumstances you are outlining. There would still be a level of coverage, but it would not be at the high levels we are requiring in our specifications.

Mr Noble—If I can add that the present air force system has four sites operating out of Sydney, Perth, Darwin and Townsville. The present navy system operates out of two sites, Canberra and Darwin. So the four site model is comparable to the network that air force has been operating with for a number of years.

CHAIR—Given, however, that we are talking about a major project, we need to keep this in context. What you are seeking approval of in Urana this afternoon is half of a new Parliament House. If we were to do this twice, we would have built another Parliament House, as it were. I am sure that that project did not proceed with as little controversy as this superficially appears to be proceeding. Can you then assure the committee that, so far as you are able to tell, there is not a great risk of cost overrun and that the outlay approved in the budget will meet most of what you expect in order to implement this proposal.

Mr Noble—We have at the moment got two tenders which we are evaluating back in Canberra. One is from Rockwell and the other is from Telstra Applied Technologies. The tenders closed on 24 September, and we are evaluating those tenders. We hope to have some source selection decision made early next year. The pricing information that we have included in the evidence today of about $75 million is an indicative price. Where we can, we will be refining those prices. Once we have selected a contractor and progressed the development of the design, we will be making sure that we are not being elaborate in

the use of money for these facilities.

We have 14 sites spread around the country. Some of those are in remote localities where building costs are essentially high. Most of the buildings are for technical equipment, so they have extra power demands than you might expect for an ordinary domestic building and the cost per square metre tends to be a bit higher. But I can assure the committee that we will be working very hard to keep costs down and to maintain those costs within the budget that we have been allocated.

Cdre Dovers—May I add something in relation to replacing the current system. The system that is being proposed is vastly superior to the system that is being replaced in terms of its coverage, the grade of service that will be offered within that coverage and the nature of the communications. Our current system dates back to around the Second World War in terms of the signal protocols that are used, which means that all we can send is text based messages and even those have some limitations.

The system we are seeking to be put in place will be able to send some of the functionality that you are probably used to with e-mail in an office where you can send attached spreadsheets, diagrams and so forth. These things will be able to be sent in this system. While that might sound exotic in the context of an office, in moving to more modern command and control methods where we might be able to send campaign plans and maps in a diagrammatic form backed up by some limited transmission of imagery, it is taking us a considerable step beyond what the current system can do. It really does offer a capability that is several orders of magnitude greater than the current system.

Mr HOLLIS—I have taken note of what you have said, Commodore Dovers and Mr Noble. Nevertheless this project is a turnkey project, is it not? It seems to me that the problems that the committee sometimes runs into are on turnkey projects. I was one of those who approved the Jindalee over-the-horizon radar project. One does not want to be too emotional about it and say it is a disaster; nevertheless, there is another committee of the parliament at this very moment conducting an inquiry into it. Although you are not Jindalee, there are similarities. What have we learned from the Jindalee project, and are we going to get into the same scenario that we got into with Jindalee?

Mr Noble—I think there is a significant difference between this project and the Jindalee project. Essentially, the technology that we are using to provide this network is technology that exists today. Therefore, we are not in the business of developing a new system at the leading edge of technology, involving lots and lots of signal processing that was involved in JORN. That is probably the essential difference. JORN was a developmental project; whereas in this project we are just taking existing technology and hooking it together in a way that is well known. So I do not see the same sort of risks that are involved in the implementation of this project as against JORN.

Mr HOLLIS—But what lessons did we learn from that? I accept the point you are

making that that was new technology that was being introduced and that this project is using existing technology that, if you like, has been improved. But you have been in the field and you are obviously aware of the JORN project and the problems that they have run into with it. You must have discussed the project and made sure that you are not going to run into the same situation, otherwise you would not have been so confident in the answer you have just given to me. Did we learn any lessons from that at all?

Mr Noble—Yes, we did. The contractual arrangements that we propose incorporate the recommendations that were felt to be weak in the JORN contract. For example, we will be applying a cost schedule control system so that we do not get the payments ahead of the actual achievements. We also have a maintenance contract backing on to this contract so that we will have a very good idea of the actual life cycle costs. We will be signing two contracts at the same time, one is an implementation contract and the other is a support contract. We will know what we are up for in terms of ongoing support costs. We have certainly learned from the JORN contract and will be incorporating those lessons in this contract. I believe we should have a better run than with JORN.

Senator FERGUSON—I am always interested when you are talking about using a large amount of government expenditure and I notice that there is some chance of getting some money back when you are talking about future sites to be vacated. A large number of the buffer areas will no longer be required. What is their future; are they worth a reasonable amount of money; is there any problem with getting rid of them, in terms of contamination or things like that; can you tell us something about those areas that will no longer be required?

Mr Wilson—One case in point would be the Belconnen transmitting station. I would not want to put a real estate price on it but it would be many millions of dollars. Two sites are in the outer western suburbs of Sydney and, similarly, they would be fairly attractive pieces of property. Another two in the Perth area are now in suburbia. So I would expect they would be attractive pieces of property.

In terms of the disposal of those properties, there are procedures one has to follow, and the government department will be following those procedures. A part of that would be the assessment of the sorts of materials that might have been used on the sites over history. Those activities will be undertaken as the sites are put up for disposal. By and large, you will see that the development we have had is concentrated in a fairly small area as we discussed today, whereas the land consists of many acres. The main complex of technical equipment and materials usage is confined to buildings and things in the very centre of that area.

Senator FERGUSON—Is it the intention of the department that they be sold off; has that decision been taken?

Cdre Dovers—A decision to sell has not been taken but that is the clear intention where those major sites, particularly the large ones in the suburban areas, are not required for future reuse. As far as I am aware, the one in Belconnen being the most notable one, there is no intention for reuse. To strictly answer your question, the decision has not yet been taken but we would anticipate that most of those sites would be put up for disposal.

Senator FERGUSON—If they are to be disposed of, how lengthy a process is it; what mechanism do you have to go through? You have already said you have to do some assessment of the sites for contamination or other purposes. Is the mechanism for selling it a lengthy process?

Cdre Dovers—I must admit I have never been directly involved, so I cannot give you an answer from first-hand knowledge.

Mr Noble—I have not been involved at all either.

CHAIR—Perhaps the question could be asked: what sort of contaminants would there be? This committee has become a bit authoritative on contaminated sites as the result of an experience it had in Melbourne. I would have thought it would be difficult to imagine contaminants on a transmitter site.

Senator FERGUSON—I do not know what they could be either, but it is one of the issues that is always raised.

Mr Noble—Certainly there have been some problems with contaminants at these sites in the past because of the means by which they disposed of things like transformer oil and old spares. Sometimes pits were dug and these things were tossed into them. Where they have been identified, I am sure that some corrective action has been taken. But there will need to be a thorough survey before these old sites can be disposed of.

Cdre Dovers—I have received some advice. The older sites will not be decommissioned until the new system is operational, which is around 2001. We would anticipate that around that time a decision should have been taken to dispose of the site. The best guess we can make is that it will take somewhere in the order of one to two years following the actual decision to dispose of the site for those other processes to go through.

Senator FERGUSON—The other area I am interested in is the health concerns that may or may not have been raised because of the transmitters. Having spent a very lengthy inquiry on another project, which was a connection of power lines between Queensland and New South Wales—where we were subjected to street marches, demonstrations and halls full of people who were very concerned about electromagnetic radiation or EMR—I am just wondering whether it is a situation that you have had to be aware of or make some assessment of. Was it assessed during the environmental impact

assessment; what can you tell us about any likely or unlikely health impacts?

Mr Wilson—There are no electromagnetic energy issues associated with the receiving stations. Their function is quite the reverse, because we really want to keep those things very quiet in electromagnetic energy terms. With the transmitting sites, that is part of the reason we procure this large amount of land. We are well aware of Australian standard AS 2772 which is the baseline for considerations of electromagnetic energy and which incorporates protection zones for the transmitters.

I would also say that the power levels we are talking about are considerably down on what we have been using in the past. We do have some 10 kilowatt transmitters but, in the past, we would have had up to 40 kilowatt transmitters in most of our transmitting sites. The general transmitters we will be using are of the order of one to 1½ kilowatts. Whilst we have bought land in the Riverina, the other transmitting stations are in protection zones that were procured against much higher power levels than what we are talking about today.

Yes, there are electromagnetic issues in a transmitting station, but the land we have procured is designed to keep people out of those areas. By and large, the power levels are much lower than they were in years gone by. So we are well covered in terms of the land we have procured against those AS 2772 requirements.

Senator FERGUSON—Is it fair to say that your department still stands by the concept of prudent avoidance which the Gibbs report recommended for any transmissions or power lines where there was any danger of EMRs. Because it could not be proved one way or the other, he said that the best policy to adopt was one of prudent avoidance of people being located near transmitters. Is that a policy that the department follows?

Mr Wilson—That is partly why we procure the land and own the protection zones. By and large, these sites will be unmanned. If that is your definition of prudent avoidance, I guess that is true. AS 2772 does have different levels of exposure limits for occupational workers and non-occupational workers. But you are aware of all of those issues. I guess that is why we bought the areas of land we are talking about.

CHAIR—While we are dealing with the question of health, the other issue that invariably arises when talking about a defence facility anywhere is whether, if Australia were under attack, the location of the facility would pose a hazard to the local community. Would you care to comment on the hazards you would see initially here to the Urana community with the location of this facility but, perhaps since this is a public inquiry on behalf of the federal parliament, you could comment generally about the attraction of these facilities overall for a hostile enemy reaction.

Cdre Dovers—Mr Chairman, the department is extremely conscious of its obligations under the Geneva protocols which cover these issues. I do not believe that any

of these installations that we are proposing to be installed would pose a hazard. As you have seen here, the transmitting and receiving sites are well out of town and away from any inhabited areas. The local management facilities that are being put in for each of the four sites are going onto existing defence facilities. I do not believe they are of such importance that they would significantly add to the threat that any of the bases they are going onto would attract in any case.

We think that the central management facility is going to be located in Canberra but, again, we do not believe that is of such strategic importance that it would raise the level of threat above what might already be allocated to the facilities in Canberra. That is the only one that is going into a really built-up area. All of the others are well away from main centres of population. We believe this project entirely satisfies our obligations under those protocols and does not pose any additional threat to the population.

Mr HOLLIS—What about the reverse though; what security will be in place? As you have said, these facilities will be in remote locations. But there is sensitive equipment on the sites and what is to stop me from going out there in the middle of the night and wreaking a bit of havoc on this facility?

Cdre Dovers—Sir, it is very difficult given the size of Australia and the dispersion of our military facilities to give an absolute assurance that they cannot be attacked, vandalised or whatever level of damage you might envisage. It essentially comes down to a level of risk management. The assessment we have made is that we do not believe these facilities are likely to attract casual vandalism. The level of security that is envisaged with security fences and remote security devices is a reasonable trade-off against the security, as distinct from ongoing operating costs. In terms of enemy action, I think the very nature of the dispersal of the sites allows us a level of redundancy and protection but, again, it is a matter of risk management—cost against the level of threat.

CHAIR—We have dealt with the question of public health from a number of perspectives. I wanted to link the comment about the defence risk to the statements Senator Ferguson made about the health risk of being exposed to radiation. There was a comment that Mr Hollis made that I wanted to pursue, but we got off to another subject and so I left it.

Prior to this hearing when the committee had been considering what its options were for this project and how it could responsibly deal with the inquiry, there had been, as Mr Hollis has indicated, some talk of Jindalee and any parallels that could be drawn. That has largely been dealt with by Mr Noble. The question I am uncertain about is precisely why defence chose a turnkey approach to this construction project. What are the alternatives to that approach and why were the other alternatives abandoned?

Mr Noble—The decision to take a turnkey approach goes back some time before I was associated with this project. It is part of an assessment that, if it was not a turnkey

approach, then defence itself would effectively be the prime contractor having to pull together a number of smaller contracts. With the pressure on resources in public service terms, the prime contractor approach was seen to be an effective way of making sure that the contractor has the appropriate responsibility and that he can muster the resources required and probably do it better than we could as public servants—assuming that we could get a large enough project team to manage a range of different subcontracts.

That approach of a turnkey contract was made some years ago when it was decided to identify a number of companies involved and to short list those companies after a request for proposal, which was done a couple of years ago. That reduced it to two companies—Telstra Applied Technologies and Rockwell—that are now in a run-off to the implementation contract. But there are various trade-offs between a turnkey project and managing it as a lot of separate smaller projects. But the decision was made some years ago that it was better to go that way.

CHAIR—When one of these companies is appointed as the 'manager', for want of a better word, how long will this contract run; is it subject to review at a particular period of time; are you able to indicate what the management period is for?

Mr Noble—We expect the implementation contract to run through until about 2002 when the final system should be delivered and, on the back end of that, there is a five-year maintenance contract with the same company but perhaps managed with a different team of people. So, effectively, we are looking at contracting one company out to something like 2007.

CHAIR—So defence will then have a facility that will be managed by a civilian company; have I got that picture right?

Mr Noble—Yes, it will be very much like our commercial support program where we use companies to maintain defence facilities and to provide services to the defence department. It is the same sort of model as the commercial support program.

Cdre Dovers—I can only add that, through a whole range of other projects we have found that in terms of maintenance and actually running the technology, there are companies that do that better than we do. They do it more cheaply. It relieves us of letting some of our more highly skilled and scarce manpower be used close to the front line and the sharp end.

CHAIR—I want to ask about a couple of environmental issues. The committee have been alerted by the briefing notes to the fact that an endangered species of bird called the Plains Wanderer is located on the Riverina site and that for that reason the Riverina receiver would be relocated a matter of barely half a kilometre to the north from what we saw today. In conversation this morning we gathered that perhaps the Plains Wanderer in doing its plains wandering may have been more successful than had been

anticipated in the breeding program so that there are more of them around. Do you have any evidence that the Plains Wanderer may not be as endangered as we first thought? If this is the case, would defence care to reconsider and choose once again what it saw as the preferred of the two sites?

Mr Wilson—We had the university at Wagga conduct an environmental assessment of the sites out here. They are the ones that really determined the locations and habitats for the Plains Wanderer. So we have involved the local community in establishing and conducting environmental studies of the sites.

In terms of whether there is any real detriment from our point of view in being south of that road or north of that road, either site has its advantages but, by and large, it is a marginal change from our point of view. We do not know anything other than it is on the endangered species schedule. We have not heard it of being any more prevalent than that. The analysis we have conducted is that it is on the endangered species schedule and we are taking steps to protect it from that point of view.

CHAIR—I guess from my point of view I am saying to defence: is this so nominal a decision it does not matter to you where you are; or, if you have a preferred site, would you like the right to investigate whether or not the numbers are as endangered as was first thought and reconsider the location?

Mr Wilson—I think the former rather than the latter. It does not matter much to us whether it is north or south of the road. In fact, looking at the maps, the north is better in some respects. It is marginally higher and it is further away from swamp area and so on.

Mr HOLLIS—On the various sites there will be some new buildings and other buildings that will be refurbished; is that correct?

Mr Wilson—Yes.

Mr HOLLIS—Will the techniques vary; that is, will we be able to go into one and they will all be the same or will they all be different?

Mr Wilson—By and large, the functions of a transmitter building or a receiver building will be the same. There will be different construction techniques required for various zones in the country where we are actually building them, because we will have to adhere to different building codes in the tropics, for example, as opposed to the Riverina. It is a decision that has not firmly been made because it will be subject to design reviews and so on in the course of the contract. But I think each of the sites will look fairly much the same. Bearing in mind there are really only three greenfield sites, the Townsville receive site and these Riverina receive and transmit sites. So we have the chance to build much the same sort of facility there. Apart from that, we will be using existing buildings. So there will be similarities, but we will be constrained by the existing design and floor

space.

Mr HOLLIS—Bearing in mind what you have just said that it is early stages yet, what plans have you got for local involvement; will locals be able to tender for construction, will it be done centrally or what?

Mr Noble—The work will be placed out to one of the two prime contractors, and we will be encouraging them to engage local contractors. In fact, I think the normal commercial drivers would probably favour some local companies in certain circumstances. We have to let the commercial reality play its game. But it would be essentially up to the prime contractor, whoever it is, to make all those local arrangements. But we would expect a fair level of work to go to local companies.

Mr HOLLIS—In terms of access, this morning I asked the mayor and others about whether the area we saw this morning was subject to flooding and I was told not out of normal and that if there was heavy rainfall it was not subject to massive flooding. But it seemed to me the access road we were looking at today could be quite difficult in a prolonged period of wet weather. I am not quite sure how different the site is today from the other sites. I know that, with the site at Humpty Doo, you are going to have asphalt road all the way. I would imagine that even in the wet at Humpty Doo there would be good access to that site. But what about in a prolonged period of wet weather with the proposed site here, will we have access to that?

Mr Noble—It is planned that we have all weather access to all sites. So that road we saw today will be upgraded and probably bituminised to ensure that we have all weather access.

Mr HOLLIS—But we do not live in a perfect world and I understand that if you bituminise that road today it will in itself raise a problem because it could well be used as a short cut for other areas down here. How are we going to deal with that?

Mr Noble—That road is now owned by the Commonwealth. We can put gates on that to control access.

Mr HOLLIS—They would be locked gates?

Mr Wilson—Yes.

Mr HOLLIS—It will probably make you popular with the locals. What would be the problem in allowing that to become part of the highway going past, if it cuts off half an hour in travel time from one point to another; what is wrong with that?

Mr Wilson—Basically, with the receive site we want to keep vehicular traffic down to the minimum in terms of the radio frequency noise that motor vehicles create.

That is the main problem. But as you can see out there, there would not be a lot of traffic on today's standards. What it will be in 20 years time, I do not know. I guess we could lock the gate or we could restrict the access via gates and just have a range of keys available to locals and have signs saying 'no public access'—those sorts of things. But the main problem is that we are trying to keep the receive site quiet. Whilst we drove right through that road, I would envisage we would only develop half of it anyway. It costs a lot of money to build the road, we would only build the road for what we want, which is to get into the site.

CHAIR—I also gather that it is only petrol vehicles or vehicles with ignition that pose a problem and it would not be a worry if diesel vehicles were using the road. So the level of interference may be relatively low, given that a large number of the local vehicles, particularly farm vehicles, would have diesel power.

Mr Wilson—The main noise problem is from electric ignition systems but anything that rotates will create some radio frequency noise. The diesel ones will have alternators and so on which will make some level of noise but not as much as a car ignition system.

Senator FERGUSON—In view of the fact there is not going to be any people around, can you explain to us in detail how the management of this system will operate? I am not just talking about the sites here. Can you tell us in general how the management will operate?

Mr Wilson—It will be won competitively by whichever prime contractor we choose. They will basically be responsible for the operation of the sites. For example, they will have security contracts with local people to manage the security aspect of it.

Senator FERGUSON—So one contractor will do the whole of the sites around Australia?

Mr Wilson—Yes, as a prime contractor. He may choose to have a range of subcontractors in local areas do portions of that.

Senator FERGUSON—Can you imagine there will be any jobs around here for anybody?

Mr Wilson—There will be the need to maintain fire breaks, security and fences, provide fuel to the sites and maintain the roads—those sorts of things. Whilst the actual equipment will be fairly technical from one perspective, it will be a matter of just changing modules in that equipment. Potentially there will be some contract personnel in my terms, which could be local personnel, involved in maintaining the sites. Of course, during the construction phase, there will be quite a bit more activity in terms of building the roads, putting the concrete in for antennas, constructing the buildings, landscaping and

those sorts of issues. There is potential for work for locals, particularly in the construction phase.

Senator FERGUSON—But you see it more as part time or contractual work rather than anything else?

Mr Noble—There may be some full-time staff in the network management facility at Wagga.

Senator FERGUSON—But not here?

Mr Noble—Not full time. I would expect there would be one or two people—I am not sure how many people ultimately—at the network management facility. They would be allocated to go and investigate a problem at one or other of the sites, to repair or replace a module.

Senator FERGUSON—How often in Department of Defence work do you have civilian employees of contractors who are involved in the management and maintenance of key operations like communications installations; is it a common practice?

Mr Noble—Yes. For example, Rockwell currently has the commercial support program contract for the Belconnen transmitters as well as at North West Cape. So we already have contractors doing the sort of work that we envisage they will be doing under this contract.

Senator FERGUSON—Have you called for tenders for management yet?

Mr Noble—Yes, that is part of it. We have already called tenders and we are evaluating those tenders.

Senator FERGUSON—Was there much competition for the tender?

Mr Noble—We have only gone with the two contractors that we short listed through a competitive process. There were originally five companies but one dropped out. From that we finished up with two on the short list for this final run-off.

Senator FERGUSON—How long a contract are you likely to give these managers?

Mr Noble—The implementation contract will run out to about 2002 and then there will be a five-year maintenance contract once the system is handed over. So potentially out to 2007.

Mr Wilson—That is consistent with the commercial support program where we

contract out a whole range of things on a two-, three- or five-year basis. That is what we are doing with the electronic equipment we are talking about here.

Senator FERGUSON—In your submission you state:

Compatible communications links exist in most areas although some extension of existing networks may be required. Inter-node links will be provided by common carriers.

Forgive my ignorance, but what are 'common carriers'?

Mr Noble—When we are talking about inter-node links, these are the links that link the national network management facility in Canberra to Wagga, North West Cape, Darwin and Townsville. They are the long links and the common carriers at the moment are Telstra or Optus. In 1997 we might have one or two more.

Senator FERGUSON—With a bit of luck.

Mr Wilson—If you have a look at the top left-hand diagram, the nodes are the green circles and the red lines are the communications links we need to get from Canberra or wherever to those nodes. We will be using commercial infrastructure for that via those red lines, which are the communications links.

Senator FERGUSON—The answer was too simple. I never thought of Telstra or Optus.

Mr HOLLIS—Mr Noble, this project is rather unusual in that we have not got anyone opposing it. Usually when we have projects we have lots of people opposing it. I mean, with the Jindalee project, half of the people at Longreach thought they were going to be zapped and told us so in no uncertain terms. We had environmentalists protesting about it. Why have we not got anyone opposing it; have you done such a good sell job on it; has your PR been so effective? Surely people must have raised queries with you about it.

Senator FERGUSON—Or haven't you told anybody about it?

Mr Noble—The large number of sites has been mentioned but we only have three greenfield sites. All of the other sites are continuing in a communications function. So on all of those sites there is nothing new happening. As regards to this location, there has been a very active PR campaign. In fact, on display over there is a golden target award for community relations in regard to this project. That is one of the reasons why we have not had a lot of opposition to it: such a good job has been done here by the project office team in liaising with the community. The other reason is that the other sites are effectively being reused and are not changing their function.

CHAIR—Senator Ferguson raised a question or two about the opportunity for employment in the area, particularly in the Urana area, but obviously that applies at each of the nodes. It struck me that, while this is not a job creator, it is true to say that in a number of places in defence jobs will be lost as a result of this more efficient communications delivery. It is also worth putting on the record that, as I understand it, in every instance local jobs are not being lost because the land you are going to occupy will continue to employ the people it has employed in the past. Could you comment on the lease-back arrangements you have entered into, particularly here but, given the national interest in this project, it might be worth commenting on the other sites as well.

Mr Wilson—In terms of the Riverina, whilst we bought many thousands of hectares we are only using a core couple of hundred acres for the facilities we are creating. We require the rest of the land as buffer zones to basically prevent or retard urban encroachment. In the process of purchasing that land, we offered the existing land-holders lease-back arrangements for varying contracted periods. So the land will be essentially available as it was before, apart from the core 150 or 200 acres we will be using for our actual construction.

The site in the Townsville Field Training Area, which is the other greenfield site, that is really tied up with the Townsville Field Training Area activities but we do have some lease-back arrangements with the previous land-holders. For example, we bought a camping and water reserve from the Dalrymple Shire Council in order to protect our interests. We are leasing it back to them for the original stated purpose, but we wanted ownership of it so we could protect the developments on that particular site which may have impacted on our activities.

In Darwin we already owned most of the land that we need. We had acquired that against comparable projects 30 or 40 years ago. North West Cape is in the same sort of category in that the land usage is not changing. By and large, when we have acquired land for this project, we have leased it back to the original owners for comparable purposes with what it was used for in the past.

CHAIR—Are these leases for a fixed period of time or variable period of time to allow other local parties the opportunity to tender for access to the land?

Mr Wilson—Basically, they were negotiated with the existing land-holders. The periods of the lease are between three and 20 years.

Mr Noble—At the time of the land acquisition it was a package deal, as I understand it.

CHAIR—I can understand the department negotiating with existing land-holders because, after all, you are wanting to acquire the land and that would seem like a reasonable thing to do. Would it be in the department's interests to offer the lease up for

tender in order to see what the market was prepared to offer for it in future? Obviously, I meant when the existing lease falls due. I am not suggesting we should intervene in the present lease arrangement.

Mr Wilson—We used the Australian Property Group to negotiate much of the land we acquired. They are well aware of the sort of standards, broad acreage prices and things like that. So I guess we were guided by them in terms of what the best arrangements were. In terms of future leases, I think we would give the first option to the existing land-holders unless we were unhappy with what they are doing. In fact, the previous holders have options to renew the leases on the properties.

CHAIR—There is one further area I want to pursue. Some comments were made by Mr Hollis about the Belconnen site. There is allegedly a large earth copper mat between the transmitting masts at Belconnen. If it exists, does this pose any sort of contamination problem; is it intended to remove the mat; and is such an operation relatively easy in this day and age?

Mr Wilson—Just for the committee's benefit, an earth mat is a thing a radio engineer puts down to ensure that he has consistent ground conductivity. It would be at 20 to 30 radials out from the centre of the antenna for perhaps as much as 200 yards with single copper cables. I do not really see there would be any problem with leaving them in the ground. It is not going to impede on any construction activity.

Mr Noble—I would expect that, if it is reasonable sized copper, it would be worth recovering and disposing of it.

CHAIR—If it is copper, there would be little contaminants as well, I presume.

Mr Noble—Yes.

CHAIR—On that same subject, you have already indicated that it would probably be a site worth some millions of dollars, to use your words. Is it your intention to remove the existing very low frequency transmitter from the Belconnen site?

Mr Wilson—I guess the answer would be yes. In fact, the VLF transmitter has been deactivated for some six to eight months. The antenna strung between the three high masts has been removed. That particular capability is not being used. The transmitter and the antenna coupling units and things like that still remain there, but it is not being used.

CHAIR—But it has no application in its engineering form to any one of these sites?

Mr Wilson—No, it is redundant. To an RF engineer, it would make a beautiful museum piece.

Mr HOLLIS—I know this has been asked before but I just want to be assured that there are no contaminants at any of these sites.

Mr Noble—There may well be contaminants.

CHAIR—As a result of?

Mr Noble—Transformer oil. I am aware of contamination at one site, the RAAF receiving site near Pearce. As far as I am aware, that contamination was rectified when it was detected. There could well be residual contaminants at other sites that have not yet been detected, but it is something that the department would look at in disposing of those properties.

CHAIR—If there are no other questions, do you wish to make any concluding statements to the evidence submitted?

Cdre Dovers—Not from me. I think we covered the relevant points.

Mr Noble—No, not from me.

Mr Wilson—No.

CHAIR—This has been an extraordinarily short hearing and one, as the Vice-Chairman has indicated, without controversy which is welcomed by this committee but is not the norm. If there are no further questions, it is proposed that the documents lodged with the committee be received, taken as read and incorporated in the transcript of evidence. There being no objection, it is so ordered.

The documents read as follows—

CHAIR—Before closing I would like to point out to those present that this is not quite the committee in its normal state. In fact, as a result of the Senate sitting today, it has been difficult for any other senators to be present. Senator Ferguson was able to join us after a great deal of cajoling with the Senate whip.

I want to echo the sentiments I expressed earlier to express the thanks of the committee and all of us who are visitors to Urana to Mayor Coghill and the Urana Shire Council for the hospitality they have extended to us not only over lunch but also the way in which they have made us feel welcome in the town and taken us on site to see what is proposed as part of these facilities.

Before closing, could I also thank the witnesses who have appeared before us today and each of the departmental people who assisted with our inspection and particularly the people of Urana for making these facilities available. Can I thank my committee members who have joined me, *Hansard* and the secretariat.

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

That, pursuant to the power conferred by section 2(2) of the Parliamentary Papers Act 1908, this subcommittee authorises publication of the evidence given before it at public hearing this day.

Subcommittee adjourned at 2.45 p.m.