



COMMONWEALTH OF AUSTRALIA

**JOINT PARLIAMENTARY
COMMITTEE**

on

PUBLIC WORKS

**Reference: Development of operational facilities at RAAF Base Tindal, Northern
Territory**

TINDALL

Monday, 21 October 1996

OFFICIAL HANSARD REPORT

CANBERRA

WITNESSES

GRAY, Group Captain Norman Arthur, Director, Aerospace Systems Development, Director-General Force Development (Aerospace), Department of Defence, Russell Offices, Canberra, Australian Capital Territory 3

HAMMOND, Wing Commander Owen James, Project Director D, Director General Facilities—Air Force, Department of Defence, Campbell Park Offices, Canberra, Australian Capital Territory 3

KENNEDY, Air Commodore James Frederick George, Director General Facilities—Air Force, Department of Defence, Campbell Park Offices, Canberra, Australian Capital Territory 3

LEE, Group Captain Geoffrey Ronald, Officer Commanding 322 Air Base Wing, Headquarters 322 Air Base Wing, RAAF Base Tindal, Tindal, Northern Territory 3

JOINT COMMITTEE ON PUBLIC WORKS

Development of operational facilities at RAAF Base Tindal, Northern Territory

TINDAL

Monday, 21 October 1996

Present

Mr Andrew (Chair)

Mr Forrest

Mr Hatton

Mr Hollis

The subcommittee met at 1.00 p.m.

Mr Andrew took the chair.

CHAIR—I declare open this public hearing into the proposed development of operational facilities at RAAF base Tindal, Northern Territory. The project was referred to the Public Works Committee for consideration and report to parliament by the House of Representatives on 21 August 1996. 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.

This morning the committee inspected RAAF Base Tindal, including sites for various works components in this reference. Today we will hear evidence from the Department of Defence. I will now call representatives from the Department of Defence who will be sworn in by the assistant secretary.

GRAY, Group Captain Norman Arthur, Director, Aerospace Systems Development, Director-General Force Development (Aerospace), Department of Defence, Russell Offices, Canberra, Australian Capital Territory

HAMMOND, Wing Commander Owen James, Project Director D, Director General Facilities—Air Force, Department of Defence, Campbell Park Offices, Canberra, Australian Capital Territory

KENNEDY, Air Commodore James Frederick George, Director General Facilities—Air Force, Department of Defence, Campbell Park Offices, Canberra, Australian Capital Territory

LEE, Group Captain Geoffrey Ronald, Officer Commanding 322 Air Base Wing, Headquarters 322 Air Base Wing, RAAF Base Tindal, Tindal, Northern Territory

CHAIR—Thank you. The committee has received a submission from the Department of Defence dated July 1996. Do you propose any amendments?

Air Cdre Kennedy—Yes, Mr Chairman. I can outline the amendment now, if you wish.

CHAIR—That would be helpful.

Air Cdre Kennedy—Paragraph 42 of the statement of evidence states that an Environmental Certificate of Compliance was issued in July 1996. The actual date of issuing was October. Paragraph 42 should be revised to read:

An Environmental Certificate of Compliance was issued by the Department of Defence in October 1996 to cover the proposal.

CHAIR—It is proposed that the submission, as amended, 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 care to read the summary statement.

Air Cdre Kennedy—Thank you, Mr Chairman. The construction of new facilities to improve the operational effectiveness of RAAF Base Tindal is advocated under this proposal. RAAF Base Tindal forms part of a chain of defensive airfields across northern Australia and is vital to the air defence of northern Australia. It is the home base for a fighter squadron and supporting RAAF elements. Together with RAAF Base Darwin, it is used for operational training of air elements of the Australian Defence Force, often in conjunction with regional air elements. The Delamere Air Weapons Range forms an integral part of the Tindal operational complex.

The layout of facilities on Tindal incorporates passive defence measures and separation of facilities to take account of ordnance safety regulations. Operations are structured to an environment where facilities and equipment are dispersed and/or hardened. These concepts are to be adopted with the provision of new facilities.

The proposed facilities are needed primarily to provide the base with the facilities needed to perform its operational role in a safe and effective manner. The prime deficiencies can be summarised as follows. The lack of explosive ordnance aprons for deployed maritime patrol aircraft presents constraints in the manner in which aircraft can operate at the base. There are no operational and technical support facilities at the base to support deployed maritime patrol aircraft. There is no facility at Tindal for the safe loading and unloading of C130 transport aircraft used to transport ordnance, and this imposes constraints on airfield operations. Aircraft placed on alert lack an appropriate sheltered facility with rapid access to the main runway for take-off. Such a facility is required to improve the air defence potential of the base. The air movements apron becomes congested when used simultaneously by wide-bodied and C130 aircraft. Command and control of the base is a critical function which needs to be managed from a secure central location which is lacking. The existing exercise and contingency personnel accommodation or deployment accommodation requires replacement because of its age and its unsuitable location.

The proposed works comprise the provision of four explosive ordnance aprons, an operational and technical support facility, modification of two existing fighter ordnance loading aprons to form an aircraft quick reaction alert facility, an extension to the air movements apron, a base command post, exercise and contingency personnel accommodation for 450 personnel and associated site works and engineering services. The out-turn estimated cost of the works is \$31.4 million, including professional fees and charges, furniture and fittings, and a contingency provision.

Subject to parliamentary approval of the proposal, tenders are planned to be called in January 1997, with the objective of having construction completed by the end of 1999.

The proposed development works would enhance the operational effectiveness and capability of RAAF Base Tindal. Of paramount importance is the provision of facilities to enable deployed maritime patrol aircraft elements, including their support, to operate at Tindal in conditions that accord with ordnance safety regulations and to enable safe loading and unloading of air transported ordnance.

The oxygen equipment maintenance workshop needs to be replaced and additional technical support facilities are required. Such proposals have been included as separate items in Defence's Medium New Works Program at a ceiling cost of \$0.58 million and \$4.6 million respectively. These proposals are being referred to the Public Works Committee as they are being undertaken in the same time frame as the operational works for the base.

Replacement of the oxygen equipment maintenance workshop is required because the present workshop cannot safely accommodate the activities required to be performed locally on oxygen equipment needed by fighter aircraft.

Additional technical facilities are required to enable surface finishing of fighter aircraft and large components to be undertaken locally, to perform increased maintenance of composite aircraft components and to improve the facilities for remote computer based training of personnel.

An Environmental Certificate of Compliance has been issued for the operational works, and separate certificates will be obtained for the oxygen equipment maintenance workshop and technical support facilities when those proposals are sufficiently advanced. No direct adverse environmental effects are foreseen, and measures to contain any possible environmental degradation are being incorporated into the design of the facilities, including safeguards to prevent the possibility of contaminants entering in surrounding water courses. Ordnance safety aspects would be improved. No heritage implications are evident in respect of the works. Consultation has occurred at Commonwealth, state and local government levels. Tindal's base management maintains ongoing consultation at the local level with Aboriginal associations at Katherine. Thank you, Mr Chairman.

CHAIR—Thank you, Air Commodore. I now open the hearing to questions. Should committee members have any questions, this is the opportunity to ask them. May I first ask: as is always the case in proposals such as this, a sum of money has been set aside for construction contingencies. Could you comment on the proportion of the total budget that has been set aside for contingencies, how that has been determined and what is proposed to do with that money if it is not spent.

Air Cdre Kennedy—A contingency of eight per cent has been set aside in this project to cover unforeseen events, which include latent conditions and aspects of market forces that we are unaware of. For example, the heating of the construction industry in terms of its workload in the Northern Territory. Eight per cent to 10 per cent is normal for

a facility of this complexity. The project will be managed by a management control group under my chairmanship which ensures, amongst other things, that the cost cap for the project is not exceeded. That requires very close monitoring of the construction contingency that has been set aside for this project.

CHAIR—In a similar vein, part of the runway extension proposed for the improved accommodation of 747 aircraft involves a large area—not large by airport standards but large in terms of Katherine construction—of concrete or some other reinforced surface. Given the experience of Tindal, are there adequate contractors in the Katherine area or in the Darwin area who can tender for this work; will the necessary material have to be brought from Darwin or is it available on hand; and what has been your experience with the allocation of this work to Northern Territory contractors?

Air Cdre Kennedy—We do not have any preference for engaging contractors by geographical location. The works are competitively let Australia-wide. They are advertised at least in the *Weekend Australian*. We are looking for competition and value for money. This Defence policy in terms of letting contracts has been espoused to the Northern Territory industry through an industry forum. In fact, two have been held in the last couple of years. One was held just a few months ago and was well attended by the industry, both consultants and contractors. They are fully aware of the way Defence does business. There will be a competitive tender let for Tindal.

In terms of the pavement works you referred to, we would envisage that the works comprise either a rigid pavement such as cement concrete; a flexible pavement in terms of an asphalt type surface; or interlocking pavers, which are currently being used on an apron at Scherger that is situated just east of Weipa in north Queensland. We will leave it to the industry to determine the most cost-effective method of delivering the pavement works. I believe it will either be rigid or interlocking pavers. The industry that would respond to this work would have no difficulty with any of those forms of construction.

CHAIR—The other thing that struck me, along with most Australians, and which was reinforced by your briefing this morning was that I had been led to believe that there is no apparent threat to Australia's security. That does not mean we do not need to have all arms of the defence force in a state of readiness—I am not detracting from that at the moment—but there seems to be no apparent threat. As we drove around this morning, it struck me that some of the works were being undertaken in order to have Tindal in a state of readiness that would not be necessary unless we were under threat. For example, with the transit accommodation that was used for the initial construction of Tindal, that is now largely outdated and that is proposed to be removed. One of the alternative sites for that accommodation means providing residences underground from a noise attenuation point of view. Is that sort of outlay necessary, given that we could simply provide the accommodation and then, if we were under threat, go to the additional expense of placing people in a state of readiness and closer to the air strip than they are able to be in the present Tindal accommodation areas?

Group Capt. Gray—One of the issues is that we have to actually train people the way we expect to have them fight. The issue with a place like Tindal is how you defend the vital assets that are dispersed all around the airfield. Technology at this stage does not give us a way of doing it without throwing a lot of manpower at it. The number of people involved is significant. To an extent it means we have to take every single person—every technician, cook and bottle washer—in the air force and train them to be soldiers as well. We need to have them sleeping as close as possible to the assets they are protecting. That is the only way to provide that sort of vital protection.

The trial that we are doing with the temporary accommodation here at Tindal is designed to allow us to develop the command and control arrangements, the training and the expertise in having people living, working and fighting in their required zones around the airfield. If it works out as successfully as we expect it will, then this design will become the pattern that we will use to implement in other bases when the threat develops.

CHAIR—I appreciate what you are saying. But it also seems to me that one of the quite expensive parts of this whole project is the undergrounding of accommodation facilities largely because of the noise. As I indicated earlier, we could have those people located further away from the noise source and only put them underground if we really were under threat and therefore needed them so strategically located. What would the timelag be in providing minimum underground accommodation, if that were only provided when we were under threat?

Group Capt. Gray—There are two issues. The Air Commodore can talk about the time. I come back to the issue that you need to be able to train with that as well. It is not simply a matter of having people sleep. It is the very short response times that are required. You need to get them out of their bed, armed and into location defending the asset that they are assigned to. To do that they need to be very close to the asset they are defending. They need to train in that position.

Air Cdre Kennedy—We have a requirement to accommodate up to 450 people. The current transit exercise accommodation area was only temporary. It is the old construction camp. As the Group Captain said, it is essential that they be able to train in the activities they have to perform. If we go back in history, even 20 years ago people on deployment used to carry their housing on their backs more or less in terms of tentage. When you talk about the environment the people have to work in, they require more permanent and more environmentally friendly accommodation to be able to sustain the operation that they are performing.

The accommodation we are putting in here is primarily designed for but not with the type of protection that you are alluding to, with one exception, and that is in terms of the environment in which one element of the accommodation is being placed. I should emphasise that accommodation is not below ground; it is protected above ground. But it is a trial. In fact, we want to work through the *modus vivandi* and *modus operandi* of that sort of accommodation here at Tindal before we introduce it into other locations in our

northern airfields. Just like many other engineering and operational initiatives that have been undertaken, Tindal is to be the trial horse for testing. The accommodation is in that area.

CHAIR—Thank you for the correction. I appreciate that it is above ground but I was thinking of it as covered by ground and, for that reason, used the term ‘below ground’. I had envisaged that you could almost have a hangar type construction—which you now have deployed at strategic spots around the airfield—with sufficient buffers on each side to allow it to be covered fairly easily, which would avoid the expense of cover until the threat was actually evident.

Air Cdre Kennedy—I should emphasise that the facilities have not been designed yet. In fact, the method of delivery of these facilities are by design and construct to meet certain performance criteria which have been specified. The sketches, the concepts that you have been shown confidentially, are indicative only. But we would expect them to resemble in finished form something similar to that.

Wing Cmdr Hammond—If I can add something. You asked the question on time delays that would be inherent in providing that cover. I think you would be looking at a two- to three-month design delay if we do not have a pre-existing design. Recognising that this is a trial, we will get a pre-existing design out of it which will minimise the timelag should we extend this trial to other areas. The construction would take approximately four months. In this environment we would also have wet season considerations. So if the balloon went up, it could mean a 12-month delay in establishing this accommodation. Twelve months is a fairly extensive delay when you are in that sort of period.

CHAIR—As the chairman of this committee can I say that I think 12 months is quite unacceptable. But I had envisaged we may have had the building—I use the term loosely not knowing what form it will take—without having an earth cover but built to withstand an earth cover. An earth cover could then go on when it was necessary. There would therefore be a saving in the construction. I appreciate now that it is not as easy as that. You have largely answered that question. We are using the earth cover, if that is what we finish up with, as part of the noise attenuation and the building would therefore be unoccupied—

Air Cdre Kennedy—That earth cover in one of the accommodation elements is necessary because of the environment that it is being placed within.

CHAIR—For noise attenuation?

Air Cdre Kennedy—Yes, noise attenuation because of it being situated very close to a high noise area. The others do not require that same level of attenuation. If we did not require that, we would not be putting that earth cover on at this time. I think that would be

the key.

CHAIR—Would anyone care to comment on the relationship between the Tindal base and Katherine community; what will be the attitude of the Katherine community to what will very likely be more extensive air operations here in Tindal, particularly as the Air Force's presence in the north becomes more and more self-evident?

Group Capt. Lee—With the level and scope of the work that is envisaged, I doubt that will increase the actual air activities here. The air activities associated with this base during 1995-96 could very much be drawn as a baseline where the two existing OLAs were fully utilised for 16 to 18 weeks. The new facilities for aircraft relate to maritime and transport aircraft, and those aircraft by course transit through here during those exercise periods. It is not opening up a new operational capability to be located in the Tindal area. It just allows us to utilise more fully those aircraft that come through here as a matter of course.

Turning to our relations with the Katherine community, we represent very close to one-third of the active Katherine community. With my experience over the last three years, our interaction has caused little discontent. Noise complaints in particular are down to one or two per year.

Mr HOLLIS—Air Commodore Kennedy, I listened to what you were saying to the chairman about the tendering process. I take it from your answers that you do not have a select group of tenderers that you invite to tender. Some of the works have tenders that people can tender for up to \$4 million and \$12 million. You do not have a list; it is just open tendering. Is that right?

Air Cdre Kennedy—It is for here. In certain geographic locations like Darwin where we have a significant amount of work, we adopt the principle of panels. We will be using panels for the RAAF Base Darwin proposal, with two exceptions, both for the Army works and for the Air Force works. The exceptions are the aircraft pavements and the aviation fuel installation, which are one-off type facilities in which there is no benefit in going to panels.

Mr HOLLIS—In the work that has already been carried out, have you ever had any examples of collusive tendering?

Air Cdre Kennedy—To my knowledge, no, although there has been at least one incident where collusive tendering was investigated. I understand that it turned out to be negative in proving that collusive tendering actually took place.

Mr HOLLIS—Did someone complain about that, such as the local contractors?

Air Cdre Kennedy—I am not certain what the complaint was or how the

Australian Federal Police became involved in the investigation. I am only aware that an investigation took place. But I understand it could not be proved that collusive tendering took place.

Mr HOLLIS—I know that we are in open tendering but surely it would be good for the relationship with the local community if a local contractor or firm got an amount of the work. I do not know what the situation is here but, in almost every project we go to, we have representations made from the local chapter of the Master Builders Association and local people like that. It has always seemed to me that the locals have a bit of an in-built advantage because if you brought people down from Darwin there would be extra expenses in accommodation. Has there been any discussion with the local people? I don't know if you have a Masters Builders Association here in Katherine.

Air Cdre Kennedy—The industry forum addressed those issues. We do not see Darwin as being too isolated from Katherine. The industry forum that was held between the industry and the Department of Defence addressed those issues. Certainly, the policy of the Department of Defence is to introduce competition into the industry. If there is some advantage in terms of direct local involvement, that would be reflected in the competitive tenders. I think that history has shown in the development of Tindal to date and in the APIN developments—we are about to emanate on stage 4, hopefully—that a significant amount of work has gone to the local area. That was not necessarily through the prime contract being let to them but through the extensive subcontract work that came out of each of those prime contracts.

Mr HOLLIS—I note that in your introductory remarks you talked about the crowding on the apron. Somewhere along the way did you get it wrong; did we, having approved the development of Tindal, get it wrong; given the increased scope of Tindal is this inevitable; or did someone miscalculate somewhere along the way?

Air Cdre Kennedy—No, it is an evolutionary process. Tindal has been developing from an existing field that was built during the Second World War. The apron that exists now was built by the RAAF's Airfield Construction Squadron back in the 1960s. No further work has been done to that general purpose apron. The role of Tindal that was espoused in the confidential briefing this morning in terms of the type of transport aircraft that need to use that apron indicate quite clearly that the apron that was envisaged back in the early 1960s is no longer appropriate. None of the Tindal stage 1, 2 or 3 works involved the general purpose apron.

Mr HOLLIS—Last time this committee held a hearing here at Tindal, there was quite an extensive discussion on flooding in the direction of Katherine. The claim was made that, because of the layout of the base and I guess the amount of concrete on the base, somehow the course of the water had been changed and that it was now all directed towards the township of Katherine. Looking through the recommendations of the last committee, I see that we recommended a study be carried out, funded by Defence, the

Northern Territory government and the Katherine Council. I understand that that study has been completed. Perhaps for the record, you could give the committee the details of that study and the conclusions.

Wing Cmdr Hammond—Certainly. The study was jointly funded by Defence with the Northern Territory Department of Transport and Works and the Katherine Town Council and was undertaken by an independent consultant from Transport and Works. We determined that RAAF Base Tindal was just over one per cent of the total stormwater catchment, which itself indicates that we do not have much play in the overall result of flooding across the Stuart Highway. It also determined that nobody could actually say that the water that runs off Tindal does not go down limestone sink holes. Further limestone sink holes are opening up all the time.

It also concluded that we are nearer the point of flooding on the Stuart Highway compared with the other 99 per cent of the catchment. That would actually accelerate the water reaching that point of flooding—if any did not go through the sink holes—and get it away quicker before the main bulk of the flood reached the Stuart Highway. So the overall conclusion was that we have played no role in increasing flooding on the Stuart Highway.

Mr HOLLIS—So a clean bill of health. Just one final question, if I may, Mr Chairman. I think it was also in that hearing that the recommendation was made to have a cycle way linking the base to Katherine. Air Commodore Kennedy, your predecessor—who shall remain nameless—was not a great advocate of that cycle way but the cycle way is up.

CHAIR—The cycle way is down not up.

Mr HOLLIS—I suppose the question should be towards Group Captain Lee: has it been successful and what are the benefits of it?

Group Capt. Lee—It certainly has been successful. It is fully utilised daily. A considerable number of our people cycle from work. We now have some 220 married quarters in the township itself, and many of them use that facility to transport themselves to and from work. The main benefit to me is that it allows them to do that safely and they also have a higher level of health. That is a high priority in our service at this time.

Mr HOLLIS—I have no further questions.

Mr HATTON—In terms of location factors, the discussion has been about where best to base the RAAF. Given that this airport was built in the Second World War, is there any better location for the RAAF to defend the north of Australia than Tindal; would we be better based in Darwin or is Tindal the optimum site?

Air Cdre Kennedy—Perhaps if I get Group Captain Gray to talk strategically and

then I can talk about whether this is the best location.

Group Capt. Gray—The strategic importance of air operations out of the north of Australia, particularly the Northern Territory, was highlighted this morning in our confidential briefing. In order to conduct operations in all the approaches to the Australian continent, we need to have at least one airfield in the Northern Territory. Tindal was chosen, rather than expanding on somewhere in Darwin, primarily for reasons of security and of getting us away from urban encroachment. Tindal gave us a more secure place to have as a key Defence asset in the north of Australia. That was why we had a second airfield.

Air Cdre Kennedy—In the early 1980s, when it was determined to relocate 75 Squadron out of Butterworth, Malaysia, and back into Australia, it was proposed to put that squadron into Darwin. In fact, the proposal went before the Public Works Committee and was agreed to by parliament. The work had commenced but was then stopped in view of a reassessment by the government of the day. It was then determined that the airfield should be relocated further inland—in fact, at Tindal. As part of that exercise, we looked to see whether Tindal was the best location or whether a more economic and better operational solution could be found, noting the existing infrastructure that was already here and also noting the type of geology in the area being limestone and cavernous. It turned out that this was the most cost-effective and operationally the best location we could find.

Mr HATTON—Looking at the impact on the community of the Northern Territory and in particular of Darwin, the location of the major base here in Tindal keeps the pressure of Air Force operations well away from Darwin. Instead of developing Darwin to the level that we have developed here in Tindal, particularly in terms of the urban environment, I would think that is a great advantage to the people of Darwin.

Air Cdre Kennedy—Yes, I would agree. I think there is a balancing effect, as was discussed this morning. A detailed environmental impact statement was prepared for this base back in the mid-1980s when Tindal stage 1 was mooted. It looked at all the economic and other factors.

Mr FORREST—I have four questions which take what has already been asked a little stage further. I am a civil engineer; so I am really interested in the construction of these trial deployment accommodation facilities that are not going underground but having earth over them. To me, from an energy conservation point of view, it seems something that you would want to do anyway in this environment. Why is the trial necessary and how will it be conducted; will it be an assessment by the professionals that design it or will there be questionnaires to the people that live in it; will you actually try to bomb one and see how it stands up; what is the whole function of the trial?

Air Cdre Kennedy—The trial is more extensive than just the survivability of the

structure. If you look at the TEAL camp, as was detailed this morning, that was an old construction camp. It consists of very small single rooms that can take one or two people. There is also provision for catering and dining room facilities. This particular trial does not have any catering facilities as such. We are experimenting a more efficient way of victualling people in these particular areas. The concept is for up to four people per room. So we are entering into something that is a little bit uncharted.

We believe it is quite operationally feasible but we do not want to go too far until we have actually proven the success of the design—in conceptual form anyway. We would expect there to be improvements that can be made out of these particular facilities. We will use the results of this trial to develop further accommodation requirements on other northern airfields. I should point out that we expect there will be a more significant requirement for deployment accommodation here on Tindal, but we are only developing accommodation for 450 people at this time.

CHAIR—Can I interrupt there and say that the Air Commodore's comments reminded me of a reference to the victualling in the submission, where you said the personnel should be 'close to their place of duty and be fed from hot boxes'. I thought that was a very appropriate analogy to use this afternoon.

Wing Cmdr Hammond—Could I expand on the answer to your question in relation to energy conservation. In this climate, most of the construction is built with a light frame so that you can dissipate the heat. When you put an earth cover over the top and install large airconditioning systems, you are not able to rid of the heat at night; so it becomes more expensive to control the environment inside an earth-covered facility than a light framed one.

You also asked about trials on bombing and weapon threats. While Australia does not maintain an Australian standard on the design of structures to resist explosive loads, we use the US manual on structures to resist accidental explosions to do the design work. I would much rather see us do that than perhaps conduct one trial to develop a statistical example of one against which we can say that it survived that particular weapon. The way in which we have been designing these buildings is something that is relatively new.

Mr FORREST—Is the trial for the whole 450 or just for a lesser number than that? It just seems to be a lot of money if we have not got it right.

Air Cdre Kennedy—We have a requirement, Mr Forrest, to replace the existing accommodation which can accommodate up to about 500 people. The current accommodation is beyond its economic life. It was never intended as a deployment camp. We just made use of an existing construction camp which, more importantly, is in a very high noise area. People who are accommodated in there are very badly affected by noise—we are talking about noise levels in excess of 100 dBA—so there is a requirement to replace that accommodation expeditiously. We are replacing up to 450 beds, because that

is the minimum requirement we can get by with at this time. We would like to put in more but we would like to prove the design before we go any further.

Mr FORREST—My problem is not the need. I can see the need. I just need some more information to satisfy me that, for a trial, we might not be better to do a smaller number rather than the whole 450.

Group Capt. Gray—If I can add to that. The point is that we are not just trialling the design of the individual structures; we are trialling the whole concept of defending our vital assets with troops living in close proximity to those assets. That is the issue. The size of deployments that we will have coming to this base for an exercise or for a real conflict is around 450 people. We need those people close to the assets they are protecting. That gives us problems with feeding—that is, shipping food backwards and forwards—with command and control of those people and with working out how we will actually get them awake in the middle of night on short notice and into their firing positions so that they are shooting enemy and not each other—all those issues need to be worked through. They need to be trialled; they need to be exercised. That is how we will actually do a lot of those trials—on exercises that the base runs.

Mr FORREST—They will be operational type trials?

Group Capt. Gray—They will be operational trials, and for that you need the full number of beds.

CHAIR—I am sorry to interrupt you again, but it just struck me that the other point is that we are talking about servicemen or women who would only be accommodated there for short periods of time, not for extended periods of time; is that right?

Group Capt. Gray—They will only be there for periods of time in any sort of conflict or during exercises in peacetime.

CHAIR—Three weeks or so?

Group Capt. Gray—It depends on the conflict. It could be significantly longer than that in a real contingency. But it would only be short periods of time like that for an exercise.

CHAIR—Thank you.

Mr FORREST—Just continuing further on buildings, I understand that the unhardened buildings are going to be of a steel clad type structure. Considering our present discomfort, I am just wondering whether somebody will provide some advice on engineering design of buildings out here in this harsh environment that would give you a good balance between airconditioning demand and what happens when the airconditioning

unit gets wiped out by an attack or something. This is pretty uncomfortable in here. If this is the kind of environment that somebody sitting out there in readiness for an aircraft would experience, you get some idea of the stress they will be under.

Air Cdre Kennedy—You are living in ambient conditions right now. If the airconditioning is not working, it is pretty close to ambient in terms of the temperature. A detailed study was carried out in terms of environmental models and the appropriate engineering form of construction. Unlike coastal areas such as Darwin with its sea breezes, there is very little benefit achieved here. You are looking at construction that lends itself to airconditioning rather than its ability to be able to dissipate heat in the cooler hours of the night, because the cooler hours of the night are still quite warm here. You do not get that very significant diurnal variation here that you get in the coastal areas.

Mr FORREST—The third question was just to follow up the point about the Katherine Town Council. I was interested in their recent complaints about worsened flooding. Are they now formally and publicly adopting the view that the base has no effect on the flooding situation for Katherine? If so, when did they actually commit themselves to that position?

Air Cdre Kennedy—Part of the review that Mr Hollis alluded to involved the three parties—the Northern Territory government, the Katherine Town Council and the Department of Defence. The outcome that Wing Commander Hammond alluded to was acknowledged in that joint committee; that is, that this base does not impact on the flooding of the Stuart Highway.

Mr FORREST—Do you have a date for that?

Wing Cmdr Hammond—I have a document here that you may care to read. It is the minutes of the meeting to discuss the executive summary of the Tindal drainage study. It notes that the meeting was attended by the consultant from Willing and Partners; by me representing the Department of Defence; and by representatives from the Department of Lands, Housing and Local Government, from the Power and Water Authority in Darwin and from the Katherine Town Council. There are significant concessions made by the Katherine Town Council in these minutes.

CHAIR—Is it the wish of the committee that the document be incorporated in *Hansard* record? There being no objection, it is so ordered. I presume it is the wish of the witnesses.

The document read as follows—

Mr FORREST—My last question in that same sort of community consultation theme is the attitude of the Aboriginal community around here. Could you describe the way that the base liaises with its local indigenous people; is there a formal process in place for that to occur; and how are relationships generally?

Group Capt. Lee—In the first place, the environmental study identified a certain number of sacred sites and designated the rest of the Commonwealth property as being an area of significance to the Aboriginals. The Jawoyn tribe through the Jawoyn Association are the predominant interested parties in that. They have not in my time here exercised any access to the land. We protect those sacred sites in the way that protocol dictates. We have an Aboriginal liaison officer who works on a day-by-day basis with the executive of the Jawoyn Association on a range of matters.

Our contact to date has been in lending assistance—physical assistance and material assistance. We are involved in a cross-cultural program where we are looking to put together training packages with the Jawoyn Association that meets both our needs and their needs. A certain amount of our work force here are Aboriginals. We have daily contact with those people as part of our work force. There is no formal process where I sit down on a monthly basis and talk with the executive of the association. It is an open day-to-day function, and we make that contact at the working level.

We also have sporting involvement. Half of our Australian Rules Football team is from the Barunga community. We also have a work program at the moment where we have taken on board 10 Aboriginals. We are looking to refine that work program into an apprenticeship here in conjunction with one of the local TAFEs. It is very much a day-to-day contact. I have not had any adverse interaction either on their part or my part; nor have I had cause to take any further action.

Mr FORREST—Just a supplementary on that: there are no issues that you think we as a committee ought to be advised of in respect of relations with the Aboriginal communities?

Group Capt. Lee—Nothing for the Tindal property. The Delamere weapons range, which we have no works on in this part of the project, is the subject of an Aboriginal land claim. That claim is being processed through formal channels.

Air Cdre Kennedy—I met with the elder of the Jawoyn community, Mr Robert Lee, to discuss this particular proposal with him and to ascertain any concerns that he may have. There were no difficulties at all.

CHAIR—Back to this question of the buildings. There was reference in the report to providing facilities that were appropriately hardened. I must say I presumed—and I want my presumption clarified—that was a generic term for using, for example, poured concrete slabs rather than concrete blocks in order to make buildings as impenetrable as

possible from the point of view of missiles and so on. Is that what the hardening refers to; and what is the cost involved in providing hardened buildings rather than standard construction buildings on the site?

Wing Cmdr Hammond—Hardening is achieved by degrees and it is determined by the weapon threat. A light frangible building like this one is hardened against no weapon. But if somebody said, ‘Your likely threat is a bullet’, I would semi-harden the building to defeat that weapon threat. That is the first level of hardening. If we go from a bullet to a mortar, then we have to harden to a different level. So the term ‘hardening’ is really achieved by degrees until we ultimately get to a penetrating 2,000 pound bomb such as the USAF deployed against Saddam Hussein. We would have to harden a lot more to defeat that threat. That would need perhaps rock rubble overlays, followed by concrete, followed by earth and followed by concrete down until you get your structure deep below the ground and below that protection level.

CHAIR—So my comment about it being a generic term is largely right in that it refers to a threat rather than a particular density of concrete.

Wing Cmdr Hammond—That is correct.

Mr FORREST—Just on that, how do you harden a tarmac because I have also noticed a reference to hardened runways?

Wing Cmdr Hammond—We would provide protection to the aprons by different methods. You can construct the apron out of blocks and know that, if a weapon hits the blocks, you have only got to basically replace the small subpavement underneath the blocks and then replace the blocks. If we do it with bituminous concrete, that will just cause a crater. We can come back and put sand in and then we can put mats over the top to protect against that. If we do it out of reinforced cement, then the slabs can go all over the place. It is not an effective method to protect our pavements against a weapon attack.

Air Cdre Kennedy—I think the key aspect is that we have an element of redundancy built into our pavements. As you would have seen this morning, with the completion of stage 3 we now have a number of airfield operating surfaces that can be used as runways.

Mr FORREST—That is because of the harsh environment here which is fairly hard to design for. There would be a natural economic life of a very short period for pavements here, wouldn’t there?

Air Cdre Kennedy—No, the pavements actually have very good life. With our flexible pavements, we would estimate only having to resurface them with an asphaltic surface probably every 15 to 20 years. But in terms of their load bearing capability, provided that we operate aircraft within the design parameters of the pavement, there is no

problem at all. They will last several hundred years, if need be.

Mr FORREST—That is good.

CHAIR—One of the things that clearly makes Tindal attractive is the Delamere weapons range, and Group Captain Lee made reference to it being subject to an Aboriginal claim. For the purpose of the record, would you like to comment on its importance to Tindal; its proximity to Tindal; and the effectiveness of Tindal thanks to the range being there. In other words, what impact would there be on Tindal if the range was not available to the Air Force?

Group Capt. Lee—There are two questions there. The Delamere Air Weapons Range is an ADF asset used by a range of customers. Tindal being the closest military airfield to that location makes it ideally suited for economic operations into that range area for tactical training. But we have found that the Delamere weapons range area can be used with aircraft operating from both Darwin and Tindal during multiple squadron deployments up here for exercise.

Without the Delamere weapons range the 75 Squadron aircraft based here would be required, as they did prior to the implementation of that range, to deploy to southern locations. They would utilise the ranges that are in the Townsville area, the Rockhampton area, the Williamtown area and the Nowra area. It is a conscious decision to develop Delamere weapons range due to civil encroachment on those southern ranges. With public opinion being less than favourable to the continued use of those ranges down there, it is obvious to send deployments of aircraft to the north to operate out of Delamere Air Weapons Range. We have had aircraft from Amberley, Townsville, Tindal, Darwin and Curtin operate out of the Delamere range on various occasions as the training need arises. It makes little difference to Tindal having the range located there, other than it is the shortest distance between the two points. There is therefore an economy of scale by deploying to this location.

CHAIR—What is the flying time from Tindal to Delamere?

Group Capt. Lee—Ten minutes if you are in a hurry. It is 75 nautical miles.

CHAIR—This is unrelated to the works and therefore an unnecessary question, but is the range becoming polluted as a result of the activity?

Group Capt. Lee—The range itself, no. We operate that range on a clear range policy. We have an onus to pick up everything that we put down there. But, in honesty, once you have a bomb that disperses itself into a thousand fragments, we are not going to find them all. However, we have crew out there on a permanent basis whose task it is to clear the range and to maintain that clear range policy.

CHAIR—You do not have anyone who actually lives there, do you?

Group Capt. Lee—We have a population of some 18 personnel that live out there from Monday to Friday or as the requirement dictates. Their dependents and their home base is here at Katherine, but they are out there on a full-time employment basis for a posting of two years or at their choosing.

CHAIR—So that unexploded ordnances would be retrieved and exploded on site; is that right?

Group Capt. Lee—That is correct. During the periods of non-exercising, we bring up specialist crews from our weapons facilities down south for exactly that purpose of locating and detonating all material on the range.

Air Cdre Kennedy—Under Tindal stage 1 the environmental impact statement had a requirement for an environmental management plan to be prepared both for the base proper here and for the Delamere range, and that is in being.

Mr HOLLIS—When we are talking about the cover for the parked aircraft with the explosives in them, if the aircraft were sitting in the heat would there be a danger?

Wing Cmdr Hammond—The heat and weather conditions that those explosives are subjected to when an aircraft is flying at speed are far worse than they would experience on the ground. They are very benign. That is why we choose them so that they are safe. They are not exposed to a dangerous level of risk.

CHAIR—As there are no further questions from the committee, it is proposed that the documents listed on the sheet that has been circulated to members of the committee be incorporated in the transcript of evidence. There being no objection, it is so ordered.

The documents read as follows—

CHAIR—Before closing, are there any comments that Air Commodore Kennedy or any of the Defence witnesses wish to make for the *Hansard* record?

Air Cdre Kennedy—No, thank you, Mr Chair.

CHAIR—If not, I thank the witnesses who appeared before the committee today. I particularly thank those Air Force personnel who assisted in our inspections this morning and who have been so hospitable to us both yesterday evening and today. Can I as the chairman simply observe that, while from an Air Force point of view there may be bases of which the Air Force is more proud in terms of their longer historic links than its link with Tindal, the time that you have spent with us today and your attitudes displayed as you have taken us around the base have been self-evident of the pride you have in this facility. Having been here but a brief time, can I say on behalf of all the committee members that we can understand why you are so proud. We compliment you on the state of the base and on the commitment that you have all shown to keeping this base if not the jewel in the Air Force's Australian crown then certainly the jewel in the Air Force's northern Australian crown.

I am grateful to the Air Force for making this venue available for the public hearing. We would have preferred it to have been a little cooler, but it has certainly provided shade and a comfortable venue in which to hold the hearing. Can I thank the committee members who are present, *Hansard* for its support and the secretariat for providing a lot of the briefing papers.

Mr HOLLIS—I might say the climatic conditions here make us appreciate what it would be like in those small huts and why it is so necessary to have them airconditioned.

Motion (moved by **Mr Hollis**) agreed to:

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

Subcommittee adjourned at 2.00 p.m.