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PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

Jindalee Operational Radar Network phase 6 facilities project

MONDAY, 30 JULY 2018

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PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

Monday, 30 July 2018

Members in attendance: Mr Buchholz, Mr Hill, Mr Zappia.

Terms of Reference for the Inquiry:

To inquire into and report on:

Jindalee Operational Radar Network phase 6 facilities project

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Committee met at 13:40

CHAIR (Mr Buchholz): I declare open the public hearing of the Parliamentary Standing Committee on Public Works into the Department of Defence Jindalee Operational Radar Network phase 6 facilities projects. I welcome representatives of the Department of Defence. Do you have anything to say about the capacity in which you appear?

Brig. Galton: I am the Defence lead witness.

Air Cdre Chipman: I am the project sponsor.

Mr Kis-Gyano: I am with Lucid Consulting, the design services consultant.

Mr Wynd: I am responsible for delivery.

Air Cdre Tammen: I am the accountable branch head for the delivery of the JORN upgrade.

CHAIR: Although the committee does not require you to give evidence under oath, I should advise you that these hearings are formal proceedings of the parliament, and consequently they warrant the same respect as the proceedings of the House itself. Giving false or misleading evidence is a serious matter and may be regarded as a contempt of the parliament. Brigadier, would you like to make brief introductory remarks before we proceed to questions?

Brig. Galton: Yes, I would. Thank you. This proposal seeks approval of the Jindalee Operational Radar Network phase 6 facilities project for the Department of Defence. The project is predominantly being delivered across two sites: Harts Range and Mount Everard in the Northern Territory.

By way of background, the Jindalee Operational Radar Network, commonly known as JORN, is a world-leading and 100 per cent Australian-owned surveillance capability. With many elements of the existing JORN now reaching in excess of 30 years old, a significant upgrade of the JORN capability is being conducted to maximise its effectiveness and provide increased capability arising from innovation and technological advancements. JORN allows the Australian Defence Force to monitor air and sea activity approximately 3,000 kilometres away from any one of Australia's three radar sites. The JORN capability does this by seeing over the horizon and overcoming line-of-sight limitations due to the curvature of the earth. The JORN radar bounces radio waves off the earth's ionosphere to detect targets as small as a military fighter jet or a navy patrol boat. The JORN facilities project will support the larger Air 2025 phase 6 capability project, which is investing \$1.2 billion over the next 10 years to increase and secure JORN's surveillance capability beyond 2040.

The JORN system comprises three elements: the over-the-horizon radar, ionospheric sounding sites—commonly known as ISS—and the JORN Coordination Centre. There are three over-the-horizon radar transmit and receive sites, located in Longreach in Queensland, which is Radar 1; Laverton in Western Australia, which is Radar 2; and Alice Springs in the Northern Territory, which is Radar 3.

The 2016 *Defence white paper* reinforces the need for decision-making superiority by investing in Defence's intelligence, surveillance and reconnaissance capabilities. This includes the upgrade to the JORN system. The capability project will do this by upgrading the JORN system-wide architecture and user interface functions. This will improve JORN's target detection performance and increase the radar scan rate across Australia's northern approaches.

In early 2018, the Australian government announced BAE Systems Australia as the successful contractor to implement the upgrade of the JORN system and sustainment of the asset. As part of BAE's sustainment contract, it will assume responsibility for the operation of JORN's three radar sites and ISSs, meaning that BAE Systems Australia will staff and support the three radar sites 24/7 on a rotational travel-in travel-out support model.

Our present JORN's three radar sites are supported under different workforce models due to the intent behind their establishment. Radar 3 has personnel and some families living permanently either in Alice Springs or remotely at Harts Range, a 200 kilometre commute back to Alice Springs. The risks associated with commuting to and from the site back to Alice Springs, after a 12-hour work day, is an unacceptable WH risk to Defence. While aligning all radar sites to a travel-in travel-out model, the WH risk is mitigated.

Condition assessments undertaken in 2016 at the Radar 3 facilities highlighted that the existing facilities and supporting infrastructure are inadequate to support a future travel-in travel-out model and will pose an escalating maintenance cost to maintain the deteriorating assets. Accordingly, Defence seeks to redress these facility shortfalls through the consolidation, refurbishment and construction of purpose designed facilities.

In summary, the project proposes to deliver the following at Radar 3: contemporary transit accommodation at both Radar 3 receive and transmit sites, located at Harts Range and Mount Everard; new and upgraded site infrastructure to support the new transit accommodation and associated new and upgraded facilities; a replacement storeroom and new transit building at Harts Range; refurbishment of the receive building at Mount Everard; and demolition of Radar 3 legacy buildings.

To meet the capability upgrade requirements, four new ISSs are proposed to be established in Western Australia at RAAF Base Learmonth and Ajana, in Queensland at Horn Island, and in South Australia at Murray Bridge. The total cost of the proposed works is \$50.7 million, excluding the goods and services tax. The cost estimate includes construction costs, professional management and design fees, and all fittings, equipment and infrastructure. It also includes appropriate allowances for contingencies and escalation. Subject to parliamentary approval, construction is expected to commence in early 2019. The majority of the works are expected to be completed by late 2020.

Mr Buchholz, that concludes the Defence opening statement. Defence witnesses are now ready for questions.

CHAIR: Thank you. Of the capability, can we only see large boats?

Air Cdre Chipman: You can see boats down to the size of a patrol boat.

CHAIR: I didn't understand what a patrol boat was.

Air Cdre Chipman: A patrol boat is like—

CHAIR: An Anzac?

Air Cdre Chipman: It's smaller than an Anzac. An Armidale class patrol boat's about 56.8 metres in length. The detection performance of the system depends on the physical size of the target and the materials used to construct the target. It's better at seeing metal than wood, for example. There are a couple of factors at play.

CHAIR: So what are we looking for?

Air Cdre Chipman: We're looking for returns of high-frequency energy that have bounced off targets back to the receive sites.

CHAIR: From a Defence perspective, are we looking predominantly for aircraft or both?

Air Cdre Chipman: We're predominantly looking for aircraft and surface tracks. It was designed as an early-warning queuing radar to detect enemy aircraft that might be coming through northern Australia or ships that might be operating in our northern approaches.

CHAIR: In the event that there are, what do we do?

Air Cdre Chipman: At that point, it would queue a response from Defence. We've got other assets that are able to get a more accurate track. Then we would respond by sending aircraft or naval ships out to intercept them.

CHAIR: Do the other assets pick up smaller boats?

Air Cdre Chipman: You have a range of assets with a range of sensors that are capable of picking up smaller boats. So the answer to that is, yes, we can pick up smaller vessels and we can pick up vessels made of different materials. But they would normally need to be on a particular task and looking for those to see them.

CHAIR: With reference to the accommodation and so on, is there a family currently at Harts Range? Is it just a consultation process with them, and are they happy to move on?

Air Cdre Tammen: At this stage, there are residual families. We're in consultations with them through British Aerospace. Consultations are proceeding very well. There was some initial unease, but people are becoming accustomed to the future model. Whilst there are some who are not wholly reconciled to it, at this stage, the transition is going ahead productively.

CHAIR: With this new travel in and travel out, how long will they rotate?

Mr Wynd: It's a two-week-on two-week-off roster, which is the model that's been used at the Radar 1 site at Longreach and the Radar 2 site at Laverton for quite some years now.

CHAIR: Where do they rotate out of? If you're at that Longreach site, they don't live in Longreach.

Mr Wynd: No. We've got a number of hubs. There are hubs in Brisbane, Sydney, Melbourne—

CHAIR: Is the hub, like at Enoggera, an existing Army base?

Mr Wynd: No, the hub is where those people reside. The technicians will live in one of those capital cities and then they will fly out to Longreach.

CHAIR: They're not necessarily Army people.

Mr Wynd: No, they're not. They're tech systems employees. We'll be taking on the Lockheed Martin employees who are currently staffing radar 1 and radar 2, integrating them with the Alice Springs workforce as well.

CHAIR: And what do they do when they're there?

Mr Wynd: They maintain the equipment. They perform maintenance tasks. If electronic equipment breaks or malfunctions, they will replace that. They do some level of repair and then send more difficult repairs back to South Australia for the deeper-level maintenance in that space.

CHAIR: And Longreach has facility for accommodating.

Mr Wynd: Yes. Longreach and Laverton, the two newer radars, were both built with that accommodation in place, and we're bringing Alice Springs up to that similar model of what's operated successfully at those two sites.

CHAIR: So we fly them into Longreach and then they drive?

Mr Wynd: Yes, they then drive out to one of the two sites for receive or transmit.

CHAIR: How far is that?

Mr Wynd: The transmit site at Longreach is about a 30-minute drive. The receive site is at Stonehenge, which is about an hour-and-a-half or two-hour drive, I think.

Mr HILL: I'm interested in the modular construction. Can you tell us a little bit about what you see as the benefits and the challenges of modular construction and why you've chosen that approach?

Mr Kis-Gyano: We looked at modular construction versus in situ for a number of buildings on the operational base and also for the transit sites. On the transit accommodation, modular construction proved to be more cost effective, and in that way we can also have a greater level of quality assurance as well by conducting inspections before the units are shifted. This sets a precedent for quality.

Mr HILL: You said it's more cost effective, so you've run a value-for-money comparison with other sites and are confident that that'll be the best approach here?

Mr Kis-Gyano: Yes.

Mr HILL: What's the nature of competition for modular construction in the Australian market?

Mr Kis-Gyano: There are a number of manufacturers at the moment. The other thing is that we haven't designed to lock into any manufacturer, so they can put up their designs to make sure they are competitive.

Mr HILL: You say 'a number'. What kind of number? Are we fingers or fingers and toes or—

Mr Kis-Gyano: I'm not sure exactly, but I know there are at least five that we looked at during the design phase.

Mr HILL: And so you've used this approach in previous tenders?

Mr Kis-Gyano: Not on any project that I have specifically, but, in liaising with those companies, they've used that on similar projects.

Mr HILL: Does anyone from Defence know?

Brig. Galton: If I can, I'll take on notice how many other times we've done that. I'd say yes would be the answer, but I'd have to get you specifics of projects where it's been looked at.

Mr HILL: Yes. Could you take that on notice and let the committee know of some examples where you've previously used a tendering approach for modular construction and how many tenders were submitted that were broadly compliant in those previous exercises. To be clear: the rationale for my questioning is not in any way second-guessing. What you say makes sense: these are remote locations, and presumably there are a lot of efficiencies in construction, quality control and so on, but this is still a developing market, and I'm curious about the level of competition that we're confident in, which goes, of course, to price and value for money.

CHAIR: Can I add to Mr Hill's question? Earlier on we spoke about transport components. I understand that your engineers can't build it, but Army also has an amazing capacity to shift stuff around. I've seen their logistics firsthand at Shoalwater Bay. It would appear that you have many semitrailers that sit dormant. Would it be conceivable that there could be a save on transport by putting them on your own semitrailers, which would be absolutely adequate?

Brig. Galton: Possibly. It would depend on the training regime of the units involved though. A lot of those sit in the logistics support units or the force support battalions. Whilst the 6th Engineer Support Regiment, which is the main engineer support regiment, does have a lot of wide-haul capability, a lot of that is being used to actively support training and is on standby for operations as well. I can certainly ask that question. I don't know if it would end up being cost effective given that you still are paying allowances to the soldiers above and beyond normal wages for them to be on the road doing those sorts of tasks.

CHAIR: You already own the trucks and the trailers.

Brig. Galton: We own the trucks, but I think some of the sizes that would go on these loads as well are not what our guys and girls would be licensed to be doing as well. They've got licences to carry the military equipment, and I think some of these prefabrication units that we're talking about would be beyond what they're qualified to be hauling.

Mr Jones: To add to that: some of the companies that we spoke with during the design and development are able to use the side-lifter functionality on some of the trailers to lift the modules and position them, which removes the use of cranes and those sorts of things. So there is some benefit behind that approach.

CHAIR: Sure. Thank you.

Mr HILL: On the modular construction side of things, the other thing I'm curious about—and obviously you wouldn't state figures in a public hearing—is benchmark costings for the modular construction. Do you have those?

Mr Kis-Gyano: Yes, we've got some benchmark costings from another Defence project that we've compared against, and ours are greater than those, but our project has a number of reasons behind that.

CHAIR: Again, the reason I ask is that, from my very short time—soon to come to an end—on this committee, I see there is a great body of knowledge, particularly in the large capital procuring departments, around benchmark costs per square metre for office fit-outs and fairly standard commercial things. If this is a way that you're looking at going, it would be worth exploring with other government agencies what the kind of benchmark costings were for modular. Have you had any discussions or thought about what other agencies or, indeed, entities may be procuring this kind of thing?

Mr Kis-Gyano: A lot of the comparisons that we've had on other projects are mine sites, which are a bit different. The one that we picked for this project was a similar Defence facility. That was the only one that we were able to compare against.

CHAIR: We've talked before about how there are in some areas of the market a body of contractors that see the Commonwealth logo coming and put the prices up, and so, the greater the extent to which you can have benchmarks, the greater the assurance the taxpayer has that they're not being ripped off blind just because it's a Commonwealth project.

Brig. Galton: Yes. We certainly do go through and do that benchmarking. Part of the cost-agreement process we go through with the Department of Finance puts us through the wringers and understandably puts us through that as well. We certainly don't go into it blind or opening ourselves up to have people quoting more at us than what is reasonable.

Mr HILL: You get the line of questioning.

Brig. Galton: Yes.

Mr HILL: If there is further information, you could provide that about both previous competitive processes but also anything you want to provide in confidence to give us a sense of where your benchmarking is at and the basis for your estimates. That would be quite useful for the committee's development.

Brig. Galton: So it's specifically for the prefab?

Mr HILL: Yes—particularly for the modular side of things. A lot of the other stuff is fairly standard: it costs this much per square metre to pour concrete or a toilet costs this much. Your commercial fit-outs are a fairly well established range, but this is less so.

Brig. Galton: Okay. Will do.

Mr ZAPPIA: We're spending \$50 million. I assume that this means that there will be an increase in the area under surveillance or that can be surveilled.

Air Cdre Chipman: That's an operational improvement to the site that's being delivered under 2025. Yes, there is an increase in the area that's being surveilled and the efficiency and performance within the area that's being surveilled.

Mr ZAPPIA: So it's both.

Air Cdre Chipman: Yes.

Mr ZAPPIA: Can you tell us the percentage increase?

Air Cdre Chipman: I don't have that to my knowledge.

Air Cdre Tammen: That rapidly becomes classified. We could offer a separate briefing if one were requested about surveillance volume, frequency and refresh rates.

CHAIR: I did see a map of where—

Mr ZAPPIA: Yes, I saw that. I don't know how much the earlier map would have been. I'm trying to ascertain whether it's sufficient value for the dollars being spent. But, if it also includes better types of surveillance, I suppose you could argue that that's one of the considerations.

The other matter relates to the staffing situation. This project is also done in conjunction with BAE. Are the people who are going to be working and located in, for example, the Northern Territory, Defence personnel or BAE personnel?

Mr Wynd: It's going to be BAE Systems personnel who will be maintaining the radar.

Mr ZAPPIA: And Defence personnel don't, at any time, get involved in that?

Air Cdre Tammen: Defence personnel will visit it as a matter of course. From time to time, we actually conduct radar operations from these sites as a fallback mode. Then for the purposes of experimentation and ongoing testing we quite often bring defence science people to the sites and then occasionally we will bring people through for capability familiarisation or indoctrination purposes.

Mr ZAPPIA: I ask the question because I am curious as to how we ensure that BAE Systems are, in turn, providing value for service to the Department of Defence.

Air Cdre Tammen: That's an excellent question. The performance of BAE Systems will be managed under a performance based contract run by the wide area surveillance system program office. As part of that, they will do some on-site assurance. They will also get access to all the data coming back out of the radar. BAE will work in a very cost-transparent way with us and they will be partnered very, very closely through the life of both the upgrade and the follow-on operations. We have a whole performance and cost assurance regime centred upon them.

Mr ZAPPIA: This is probably my last question and if you can't answer it because it's classified then I'm happy to accept that. It seems to me, based on the response given earlier about the purpose of these facilities, that there would be information that could be shared with other government security agencies. Is it the case that that information is shared with them or is it strictly used by only Defence?

Air Cdre Chipman: We use the information that we get from this radar site to develop what we call a recognised air picture. That information is provided to other government agencies and we do collaborate with them, for example, on activities such as people smuggling or illicit drug trafficking in the northern part of Australia.

Mr ZAPPIA: Perhaps I will just go back to a question I asked a moment ago. Given that this is all headquartered in Edinburgh, is the headquarters also operated and managed by BAE or does Defence have any role in that?

Air Cdre Tammen: What happens is that BAE supports the equipment there, but it's actually operated and executed by Commonwealth uniformed personnel. So if you were to go into the joint coordination centre what

you would see is a lot of uniformed operators, predominantly Air Force, with a small number from other services. The maintenance staff at this stage are in transition but in due course they will be from BAE exclusively.

Mr ZAPPIA: You said earlier the life span of the investment was several years. I can't recall the number of years.

Air Cdre Tammen: Thirty.

Mr ZAPPIA: Given that we are dealing with technology that I would imagine could well be superseded even in 10 years, let alone 30 years, is it realistic to plan, develop and construct something with a 30-year lifespan when it is probably going to be superseded?

Air Cdre Tammen: That is an excellent question. It's a bit like the smartphone. You know you're going to have one in years to come, but you don't know exactly what it's going to be. So for the upgrade project we have set to work a fair amount of scope already and then there are a range of ideas that we are working on in partnership with the science group which we know are quite viable but the engineering is not yet at a point where we can roll it out in the system. So, across the life of the system, the existing phase of its upgrade program already includes a number of planned upgrades. Whilst this system will mean the JORN is sustainable out that far, it is possible that we will do other enhancements and upgrades through the ongoing support system, if they are relatively small and cost-effective. But if we needed to make a further major upgrade then we would be going back to NSC with a more substantive policy proposal.

Mr ZAPPIA: Okay.

CHAIR: I just want to go back to that family that were living at Harts Range. Where they happy to stay there?

Air Cdre Tammen: I might let Mr Wynd talk to the current BAE staff there.

Mr Wynd: We've been engaging with the families for at least two years. This process started some time ago on the health and safety of the family out at the site. Over that period of consultation with all the employees at that site the people there have accepted the fact that we need to change and that we need to change the approach around the health and safety aspects at Harts Range.

CHAIR: Where will the new accommodation be?

Mr Wynd: The accommodation that is being developed under this proposal?

CHAIR: Yes.

Mr Wynd: You can see on this map where it is located. If you have a look at Harts Range, it is third from the left. You can see at the top the actual transmit site, the operational installation.

CHAIR: So they were happy to stay there? There were workplace health and safety issues highlighted—dingoes and snakes.

Mr Wynd: It was more around the bushfires and the remoteness from medical facilities. I think it's fair to say that over a period of time a number of children from the families have grown up and moved back into Alice Springs or other locations around there. At the moment there are only a small number of children remaining at that site.

CHAIR: But will they get the opportunity to stay there?

Mr Wynd: No.

CHAIR: They are going?

Mr Wynd: They are going.

CHAIR: Do you know where they are going to go?

Mr Wynd: We worked on relocation with them. Part of their agreement is that we will relocate them to where they would like to go. Some families have said they would like to move on and take on different challenges. So we will be helping to redeploy those people wherever possible.

CHAIR: As BAE employees?

Mr Wynd: As BAE Systems employees, yes.

CHAIR: Will they be part of the rotational 'travel in, travel' out arrangement?

Mr Wynd: Of those, seven of them have accepted the 'travel in, travel out' arrangement. Eight of them have elected to pursue other opportunities.

CHAIR: Okay. Thank you for the flexibility you have shown us with bringing this forward a bit. Does anyone have anything else to add before we finish? No. Then thank you for your attendance here today. You'll be sent a copy of the transcript to make any corrections. I declare that the public hearing is now closed.

Committee adjourned at 14:07