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PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

**Australian War Memorial, Treloar E Large Technology Objects Store Project,
Mitchell, Australian Capital Territory**

FRIDAY, 15 SEPTEMBER 2017

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PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

Friday, 15 September 2017

Members in attendance: Mr Buchholz, Ms Keay, Mr Zappia.

Terms of Reference for the Inquiry:

To inquire into and report on:

Australian War Memorial, Treloar E Large Technology Objects Store Project, Mitchell, Australian Capital Territory

WITNESSES

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BELL, Mr David, Principal, Architecture, GHD

DAWSON, Major General Brian Robert (Retired), Project Director, Treloar E Facilities and Logistics Projects, Australian War Memorial

FITZGERALD, Mr David William, Head, Buildings and Services, Australian War Memorial

WISE, Mr Timothy Charles, Project Manager, Xact Project Consultants

Committee met at 09:22

ACTING CHAIR (Mr Zappia): Welcome to this hearing of the Parliamentary Standing Committee on Public Works into the Australian War Memorial Treloar E Large Technology Objects Store Project. Although the committee does not require you to give evidence under oath, I should advise you that these hearings are formal proceedings of the parliament. Consequently, they warrant the same respect as proceedings of the parliament itself. The giving of false or misleading evidence is a serious matter and may be regarded as a contempt of parliament. Would one of you like to make some brief opening remarks?

Major Gen. Dawson: I am happy to start off. Would this be the right time to run through a short briefing we have prepared?

ACTING CHAIR: Yes, it would.

Major Gen. Dawson: My role is project director. We are running two projects concurrently. One is the Treloar E Large Technology Objects Store, which we are here today to talk about the design and construction of, and the second project I am responsible for is the logistics planning. You will appreciate that we needed to clear the Treloar E site of the collection material and then, over the period of construction, which we hope to be in 2018, we need to be able to cope with some large objects coming in, one of which will be a P-3 Orion four-engined maritime surveillance aircraft, which we will have to store from mid-2018 until the new facility is completed. We will store that at the airport. The consequences of occupying Treloar E will obviously impact on logistics. So that is the logistics piece, which I won't refer to again.

We can go to the slide, thanks Tom. The Australian War Memorial commemorates the sacrifice of Australian service men and women who have died in war and peacekeeping and certain peacetime operations. Its mission is to help Australians remember, interpret and understand the Australian experience of war and its enduring impact on Australian society. The memorial's main building was opened in 1941 and has had several major upgrades over the intervening period. The memorial is widely regarded as one of the most significant memorials of its type in the world.

What's a large technology object? These are any technology object that requires two or more persons and/or mechanised equipment to handle or move it. Examples of large technology objects are: wheeled vehicles; artillery pieces; tracked vehicles, such as tanks; aircraft and large ship parts, including items such as propellers and missile launchers—and you saw some of those today in our walk around earlier this morning. You also see the abbreviation LTO which is referring to large technology objects.

The current floor space available for storage at the Treloar facility has progressively been developed since 1978. Treloar A—which was the last building we walked through—was occupied in 1978, and has 4½ thousand square metres of available storage area. Treloar B, the unenvironmentally-controlled large building, was occupied in 1986 is 3½ thousand square metres. In 1993, Treloar E was occupied. It is environmentally controlled and includes storage and a large-object workshop. Treloar D was purchased in 2011 and gave us 2,000 square metres of storage. That's a total of 15,500 square metres. We've not listed Treloar E. We did have some collection items stored in the old sheds up there, but they are completely inadequate for storing the collection. The collection generally occupies about 65 per cent of the available storage floor space, and the other 35 per cent is required for circulation and fire egress. Historically, the collection's growth has been about 2,600 square metres per decade, which equates to a required storage floor space in total of about 4,000 square metres per decade.

In addition to our current floor space deficit—examples of that were the HMAS *Brisbane* components and the HMAS *Arunta* components, which are stored outside—there are a number of items which will be transferred to the memorial's collection in the next five years or so. The Squirrel helicopter, which we saw this morning, arrived only a week or so ago. A C-130 cockpit section, which is really a third of a C-130H, will arrive at some point in 2017. In early December this year a Navy Seahawk helicopter will arrive into the collection. The P-3C Orion aircraft I mentioned will arrive in mid-2018 and, since we put the submission in a month or so ago, we are expecting to receive a Royal Australian Navy Fairey Firefly, which is a Korean war era aircraft, and a Wessex helicopter, which was used in antisubmarine warfare by the Royal Australian Navy.

In 2021, around March—which will be the hundredth anniversary of the Royal Australian Air Force—we are expecting to receive an F/A-18 classic Hornet, which will go probably, initially, on display as part of the events around the hundredth commemoration of the Air Force. Then that aircraft will come out to Mitchell and go into long-term storage. There is also a Mack recovery vehicle and an SASR Unimog, a 4-wheel drive truck, which we expect to receive in 2019. As you can see, there are some large objects on the agenda coming out of their defence service and coming into the memorial's collection.

As storage will be required on a permanent basis, the War Memorial has considered superior value for money will be achieved by developing Commonwealth owned facilities. Ownership would provide a certainty of control of the collection and provide the memorial with the opportunity to control whole-of-life cost and environmental conditions for the management of the collection—and co-located storage facilities enable optimum management of the collection stored remotely from the main Campbell site. Our predecessors have progressively purchased blocks of land around the Callan Street area to give us one major storage site. With the large technology storage requirement, the current storage capacity is 15,500 square metres, the current collection storage requirement is around 17,307 square metres and the current collection storage deficit, therefore, is about 1,807 square metres.

With our requirement for the next 10 years or so for current collection storage deficit, it is the 1,807 I mentioned. Four hundred square metres per year has been our typical growth of the collection, and that would give us 4,000 square metres over a decade. The storage required for 10 years, including the current deficit, is 5,807. If anything, we're over the 4,000 square metres per decade at the moment. We have a number of large objects coming out of service, just through the concurrency of Defence refreshing its capabilities. But that 4,000 square metres is a pretty solid requirement.

The figures on this slide show the current storage deficit, and we've pretty much run through that first group. If we look at the Treloar capacity and storage impact, the current collection storage deficit of 807, the Treloar E building footplate is currently designed at 5,240 square metres, which leaves us a residual capacity after the deficit of 3,433 square metres. Given the 400 square metres per year, Treloar E will give us a forward storage capacity of around 8.6 years. We would prefer that to be more, but we are limited by the block of land that's available and the capital that the memorial council has allocated to this project.

The Treloar E key space and system matrix has a total floor space of 5,240 square metres. The entry roller-door size is 12 metres wide, to cater for those very wide aircraft like the Dakota and the Caribou, and eight metres high. The floor-to-ceiling height, or the trusses, is eight metres for most of the building but for a couple of bays in the unloading it is 11 metres high. The mechanical system to control the environment will be variable air volume and a lighting system that will rely on 240 watt LED high bay lights will be evenly spread to provide an even lighting throughout the storage facility. We intend to install a rooftop solar system, which will give us a 100 kilowatt capacity to augment the electrical supply to the building.

Rolling over to the Treloar E site—and we should now be familiar with this—as I said this morning, this is on ACT leased land. The Treloar B site is on National Capital Authority land, and we are constrained, to some extent, by the Treloar F site, which is on a long-term lease although the land is now owned by the memorial. If we look at the proposed solution visualisation, clearly, we have a very large mass of a building, which the designer is proposing to break up using that panelling colour scheme that runs along the eastern or Flemington Road side of the building. You'll note there are three rectangular blocks on the eastern side of that building, to which we will install banner-fixing points. As exhibitions come up in the memorial we can use that to advertise upcoming exhibitions and memorial activities. If anything, Flemington Road will get much more traffic, both in terms of road and with the light rail going along there. It provides us with an excellent advertising facility. I didn't point this out this morning, but north of this facility, in what looks like a number of low buildings, is now the new National Archives repository building, which is quite a large facility in its own right.

We are now over at the main entrance solution. This image is looking up the driveway into the new Treloar E facility from Callum Street. You can see the large main entrance door. We envisage that being used infrequently. Clearly, when we put our collection in the building there will be quite a lot of activity around there. But, really, once it settles down as these major pieces of equipment come from Defence and into our collection then there will probably be only the one or two times a year that we will need to open the whole of the main door. That will help us to preserve the controlled environment within the building.

Turning over, the largest LTO is a C-130—in fact, it's a J model that we're talking about. They won't come out of service until something like 2030, but we've designed the building to enable that size of aircraft to be taken up the ramp and enter the building.

One of our constraints, really, is getting these aeroplanes to the site itself. The real constraints are the gauges of the bridges and the width of the roads. Even though we will move these objects early in the morning in very low-

traffic and very controlled environments, we are constrained by the bridge heights and, to a lesser extent, by the light rail which is being constructed.

If we turn over to the next slide, it's about the current state of the design from GHD. The floor plate of the building is 5,240 square metres. Essentially, it has long walls and we will install pallet racking on some of those walls. The shaded area to the east of the main door indicates another 1½ metres or so into the roof space. We will keep that clear of any cabling or trusses so that cranes can be used. We intend to use mobile cranes rather than having a fixed-crane system. As you would imagine, that would have resulted in a fairly substantial expenditure for what would be a relatively very low frequency of usage.

The mechanical systems are in the western side of the building, halfway along, and in three tiers. The building itself is open span inside. We intend to try to have as little obstruction for internal movement of large equipment as possible. The drawing is probably a bit deceptive, in that it has aircraft with their wings out and helicopters with their rotors on. Obviously, that would be a pretty inefficient way of storing things. We envisage that most of the aeroplanes will have a portion of their outer wings and maybe their tails separated, and that the helicopters will be stored with their rotors off. Some of the Navy helicopters—the Squirrel and the Sea King—do have the ability to fold their rotors, so that gives us a nice, simple storage solution.

CHAIR: Does the Chinook also?

Major Gen. Dawson: No. You physically have to remove the blades from a Chinook. I didn't put them out—currently they are stored just outside the Chinook.

There have been a couple of changes to the design since the submission, so I will just update you on those. We're going to have to remove the screening shrubs to the north and east which run along Flemington Road and on the northern boundary, due to fire and egress requirements. As you can see, we have put the floor plate of the building as close to the boundaries of the block as possible to maximise the available storage space. The building has increased its maximum site coverage, with a slight reduction in storage capacity. I think that we had 5,288 square metres on the plans in the submission. Now, after various design evolutions it's at 5,240.

We have maximised storage by straightening the internal wall on the eastern side, along Flemington Road. The version that was in the submission had a staggered effect. Fire hydrants and hose reels have been removed from the inside to be external, to increase collection safety in the event of any water leakage into the space. On the original drawings there was a requirement for an internal personal airlock which protruded into the collection space. After consideration, we decided that the fact that that would impose an impediment inside the space really wasn't worth it. There will be pedestrian access doors which can be opened and closed; the system, in fact, will have a slight overpressure, so that should help to preserve the environment inside the building. We had increased the building height to the trusses from eight to 11 metres in that unloading area and the batter on the boundary has been moved into the Treloar E block. We will require a letter of consistency from the National Capital Authority to enable us to put that batter into the B block, but that will help us maintain that high level of floor space.

In summary, the Treloar E project addresses the current's LTO storage deficit and allows for existing LTOs to be moved to the appropriate storage. It provides capacity for future identified LTOs to be handed over from the Australian Defence Force as they come to the end of their service life. It incorporates well into the Treloar master plan for collection and will provide storage for the next 66 years at excellent value for money. The budget for construction is \$16.1 million. We are now well into the design, and we are confident with the contingency that we've allowed and some other value management that we've conducted that we will bring the project in at the \$16.1 million that the War Memorial Council has allowed. We anticipate low ongoing operational costs; the inclusion of the solar panels will clearly help. The building will be designed to a very high spec, in terms of leakage of air from inside the building, which should enable us—once we've established the environment inside—to maintain that at a relatively low ongoing operational cost.

CHAIR: Thank you. I congratulate you and your team for an extremely comprehensive and well thought out presentation. The site visit this morning allows me and the committee the benefit of a greater insight. That's a benefit that you have of being located here in Canberra.

Major Gen. Dawson: Thank you.

CHAIR: Congratulations to you and your team. I acknowledge Tony Zappia—our deputy chair who kicked the show off this morning—and Ms Keay for their attendance here this morning. It just shows the weight that we put on the importance of this issue.

I have two lines of questioning to kick off with. First, I want to ask you—for the benefit of *Hansard* and getting some statements on the record—if you can give the committee an overview of the significance of the War Memorial and the significance of the storage there. I want you to speak to the reasons why the storage facility is

only open for two days of the year and how you transitioned from, I believe, one day to two days, and why there are not more, considering the significance of what's in storage out there and the love affair that Australians have with the War Memorial—even if it were to be open only to selected groups.

My second line of questioning is on the tail end of the 66-year plan. I want a better snapshot of what that looks like. I know it's moving into the future, but an understanding of that, and getting it on the record, helps us understand what future investments look like. Could you address those two points please?

Major Gen. Dawson: Let me start with the Australian War Memorial, which is a unique Australian national institution. It was conceived by CEW Bean, the official war correspondent with the Australian Imperial Force in the First World War, who subsequently became the official war historian. Bean's concept was to have a national institution that recognised the sacrifice of Australian service men and women—in his mind in the First World War, but, as we know, the Campbell site wasn't open until 1941, and by that stage Australia was involved in another global conflict. Bean's vision came in three parts. It was commemorative, and that role is played by the central area within the Campbell site: the Hall of Memory, the Tomb of the Unknown Australian Soldier, and the Role of Honour, which records over 102,000 Australians who have died in all wars. It was a museum, and it is, in many ways, a world-class museum. World-class museums are supported by the depth of their collection, what we refer to as the next national collection. Depending on how you count it, probably over one per cent of the national collection is actually on display in the Campbell site, and the bulk of the collection is stored at Mitchell, at Treloar, with some elements in the National Library—basically film material—and some nitrate material which has to be in specialised storage also at Mitchell but in a National Film and Sound Archive site.

As you've seen with the recently redeveloped First World War galleries, the ability to produce that world-standard gallery, which will be in existence probably for 30 years or so, depends on the strength of the collection. In Australia we have been very lucky there was a methodical approach to collection, which started with the war records section in 1917, which was headed up by Lieutenant Treloar, and that really provided the basis for the collection, which we have been able to build on ever since.

The third part of Bean's vision was, in his words, an archive. We now refer to that as the research centre. There are literally millions of pages of documents, diaries and letters that have come into the collection and provide the basis for research and display. The modern processes of digitisation and putting those materials on the internet have made those collections much more accessible to Australians and other researchers than maybe they were in decades in the past.

The 66 years provides us with a firm pathway to the future. There was significant work done around the master plan for our deeper level storage, which envisaged a contiguous facility around that Callan Street area. As I mentioned earlier, we have gone from a tin shed at the bottom of Duntroon in the early seventies to the Treloar A facility, which was designed to cater for the then collection, to a collection which expands pretty much at a known rate. As I mentioned, the only thing you can guarantee about new military equipment is that it's bigger, heavier and more expensive than the previous generation. We have planned against the C-130J as the biggest item to come into the collection in the foreseeable future, and that gives us a benchmark for going forward.

As I mentioned in the tour, we do have one open day per year at Mitchell, called Big Things in Store, normally in the September period. We also run tours on request. I don't have the number off the top of my head, but we would have several tours of various sizes conducted normally by our curators through the collection at Treloar on request. We are not set up to have it open a couple of days a week. There are obviously staffing cost implications with that—but we are cognisant of trying to provide the opportunity for people who are motivated enough to request a tour, and we will facilitate that.

Mr ZAPPIA: Thank you very much, and thank you also for the inspection this morning. To follow up on the issue of your long-term plans, you have a major precinct there right now, where I imagine over the years there has been considerable investment made by government. Once this project is complete, looking at the layout of the precinct, there doesn't seem to be much room left for further expansion—maybe some minor expansion could be accommodated. Do you believe the precinct will become outgrown in the years to come, and if that happens what is the next step?

Major Gen. Dawson: The current intent is that, once we complete Treloar E, we probably need to seriously consider a midlife upgrade for Treloar A. By that stage it will be a facility which is decades old. There is architectural significance with it, which we'll need to take into account. In a fabric sense it is a reasonable facility, but it does need some serious tender loving care to get another few decades out of it. Once that's complete we will probably look at redeveloping the Treloar B site. That's the un-environmentally controlled area. As you can see, we have an area of land which can butt up to the southern wall of Treloar E. That should provide us significant capacity for a number of decades as well.

At the old postal site at Treloar D, the building itself—I think from memory—is around 2,000 square metres of storage capacity. It is not environmentally controlled, but we are making the best of what's available there and it will probably see out a decade or so. And then Treloar F, which is currently on long-term lease to a building supplies company, would probably be the last one. That would see us out many decades in the future, and the figure of 66 comes from the principal design consultants' calculations.

Early versions of this envisaged a two-storey facility. On the Treloar E site, the early plans are around a two-storey facility which would have given us about 4,000 square metres. It also presented a significant challenge as to how to get the large aircraft onto that second story, which is where the open-span building needed to be. And after a considerable amount of analysis with the principal design consultants and the people who are going to have to use the facility, we've come up with a large, single-storey, open-span building which will certainly cover our aircraft requirements for the foreseeable future.

Mr ZAPPIA: So Treloar F is currently not being used.

Major Gen. Dawson: It's on a long-term lease from a—

Mr ZAPPIA: But it's not being used by the War Memorial.

Major Gen. Dawson: No, it's not.

Ms KEAY: Can I just explore a bit further on that? You have a current deficit of 1,807 square metres, you have a growth of 4,000 square metres every decade, and this facility is now 5,244. That gives you current capacity availability of—what, 8.6 years, 8.7 years?

Major Gen. Dawson: I think we said 8.6, yes.

Ms KEAY: And Treloar D is in utilisation for storage now—

Major Gen. Dawson: Yes, we are using that for storage at the moment; we didn't go through it today.

Ms KEAY: Yes. And Treloar F is in a long-term lease. What is the next plan, in eight years time? Are you going to find yourself in the situation you are in now?

Major Gen. Dawson: As I said, we've yet to make a final decision but there are opportunities with Treloar A to do a major refurbishment.

Ms KEAY: What sort of floor area could you gain from that?

Major Gen. Dawson: We wouldn't increase the actual floor area. We would probably retain the conservation labs, because they are largely fit for purpose. They need a bit of an upgrade but they are largely in the right place, and there is a good relationship between the textile store and the textile laboratory, and the art store and the painting laboratories. That un-airconditioned area we walked through at the end, in Treloar A—there is potential there to convert that into an environmentally controlled space, and possibly move our art store into that area that we first walked into, and that would resolve for a long time our art storage problem, which is currently at capacity. I didn't point it out to you, but there are actually paintings stored in the floor in Treloar C, because it is an environmentally controlled area.

Then after that, the next big opportunity is demolishing Treloar B, and using all of that Treloar B site to construct the new facility. That is contemporaneous in terms of environmental control with Treloar E. It would be at the same level, the ground floor, and we could go to two levels if we chose to. But the ground floor would be at the same level as Treloar B, and that would put us on the path to having a single ground-floor level for all of the buildings eventually built around Callan Street.

Ms KEAY: So in the next five to 10 years you have a number of other projects to try and fit the capacity that is on its way.

Major Gen. Dawson: There are a number of other opportunities. Obviously, money will be part of this. But in terms of the land available, I think we are in a strong position, certainly for the next 66 years, in terms of a path forward.

Ms KEAY: Why have you chosen Treloar E now, and not, say, demolished Treloar B and expanded that out?

Major Gen. Dawson: Treloar B, even though it's not environmentally controlled, is still a functional facility. Rather than demolish a functional facility and then build a new one, we want to take the opportunity to use the Treloar E site. The other issue is that we would have to decamp the collection material that is in B to some other site, and we really don't have an option for doing that at the moment.

Ms KEAY: But, as you said before, you do intend to demolish Treloar B at some stage.

Major Gen. Dawson: Yes.

Ms KEAY: So you could get a few more years out of it before you have to.

Major Gen. Dawson: Yes. What we want to achieve with Treloar E is to have the national collection items in the environment that is best for their preservation.

Mr ZAPPIA: I have one other question on this. Is there any proposal to increase the floor area of the War Memorial site itself so that some of the material that has been stored in any of the facilities that you have in this precinct could be transferred and be on public display?

Major Gen. Dawson: The government, in the recent budget, allocated \$5 million to an initial business case for a major redevelopment of the Campbell site. Without going into the details, the underpinning idea is to try to maximise the exhibition space in the main building and the existing Anzac Hall to get the back-of-house functions out of the main building but to preserve the heritage aspects of the external nature of the building. That business case is being developed now and I understand it will go to government consideration and their view on further developments.

If the government chose to allocate money for a major redevelopment on the Campbell site, we would be—to use a very rough analogy—doing four or five First World War gallery redevelopments over the next 10 years or so. So, as the gallery spaces came up for redevelopment, we would need to decamp the existing collection material, redevelop a new exhibition—and there would be consideration conservation required, as many of those items have been on display for 30 years or so—and then we would be reinstalling new exhibitions. In a net sense, you would wind up with more collection material and probably more large technology objects on display at the Campbell site once that redevelopment was completed.

Mr ZAPPIA: I'm just trying to work out if that would help make more space for future objects or whatever else you wanted to store.

Major Gen. Dawson: In 10 or 15 years.

Mr ZAPPIA: Yes; I'm looking long term.

Major Gen. Dawson: One of the reasons that we are developing a logistics project is to do the necessary work on how we would support a major redevelopment at the Campbell site. Where would the decanted collection material go? Where would it be prepared? Where would it be stored before it went back into the facility? Treloar E gives us much more flexibility with a highly environmentally controlled space.

Mr ZAPPIA: I'm looking at both; I'm not suggesting one or the other.

Ms KEAY: I have a question about the solar that you plan to put on the building. I would imagine that the cost of running an environmentally controlled space would be quite expensive. Have you modelled the savings you'll make by installing solar?

Mr Bell: I'm not the electrical engineer on the project; I'm the architect. To address the first part of your question, the environment controls on the building should mean that it is actually fairly low. The temperature settings are not normal office settings—they're 12 to 28 degrees. That means that, for much of the year, the air-conditioning won't run, because the facility will have the right environmental controls for the temperature. It still has to maintain humidity at 50 per cent. The mechanical plant will tick over to maintain that. The building has been designed with tight thermal control. So it doesn't leak a lot of air and it's really well insulated in terms of both the roof and the walls. So, relatively, it will use much, much less energy than the existing facility.

Ms KEAY: So why put solar on there?

Mr Bell: There's opportunity to put solar on the building to offset those costs. It will run for at least 30 years, and it will pay itself back within 10 years, I think. So everything you get out of it is a bonus, basically. It is designed as a 100 kilowatt system.

CHAIR: Thank you for your attendance here today. You will be sent a copy of the transcript, to which you can make corrections of grammar or fact.

Committee adjourned at 10:00