Submission No 24

Inquiry into Australian Defence Force Regional Air Superiority

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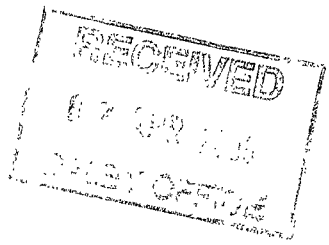

4th April 2006

Defence Sub Committee Chair - Hon Bruce Scott MP
Joint Standing Committee on Foreign Affairs, Defence and Trade
Parliament House
Canberra ACT 2600

Dear Chairman,

As one of the authors of the ASPI paper "A Big Deal" I attended the Sub Committee's recent public hearing into "Australia's Defence Force Regional Air Superiority"

I regret that I was not able to provide a submission prior to the hearing but wish to place my views on record for the consideration of its members.

I am not without experience in the matter under consideration and enclose a CV for you information.

I remain willing to amplify or discuss any matters under examination.

Yours faithfully,

Brian Weston

Australia's New Air Combat Capability
A Personal Perspective

Air Vice-Marshal Brian Weston, AM (Rtd)

JSF SDD Phase - the Decision by Government to Participate

It is almost four years since the government decided to participate in the SDD phase of the JSF project. Essentially that decision was made on two grounds:

- that the JSF was the only candidate aerospace system that came close to satisfying the wide ranging new air combat capability foreshadowed in the Defence White Paper 2000, and
- that an early decision by government would best allow Australian industry to exploit the industrial and technological opportunities offered by the largest military aircraft development and procurement contract of all time.

The F-35 is now even more clearly the best solution; indeed in my view the only solution, to Australia's new air combat capability operational requirement. Some four years of development has seen the project evolve and develop into a project that has strong prospects of delivering on its promise.

On the other hand, no other project has emerged to threaten the overall operational pre-eminence of the "fifth generation" F-35 in the multi-role strike fighter role.

As well, by being part of the SDD phase, Australian personnel are well placed within to F-35 project to know more about the F-35 than any other air platform ever contemplated for purchase by Australia.

From an industry perspective, the jury is still out. While Australian industry has made a start on winning a range of useful contracts, the overall progress is less than desired.

However, Australian industry has done better than that of many other countries, and the really substantial global supply contracts are yet to be finalised. If Australian companies win just a few of the major F-35 global supply and sustainment contracts, then the SDD decision will be well justified from an industrial point of view.

Progress with Development of the F-35

The following three factors set the F-35 capability apart from other contenders for Australia's new air combat capability:

- The F-35 is by design, a multi-role system optimised to meet the range of individual capabilities that are necessary to fulfil the air superiority and strike roles.

- The F-35 is a stealth aircraft with robust and affordable active and passive stealth capabilities.
- The sensor and integrated mission systems of the F-35 are optimised for the multi-role requirement and incrementally build on the technology already used in the F-22 sensors and mission systems.

While the F-35 possesses a lesser air dominance capability than the purpose built F-22, the F-35 still possesses a strong air fighting capability by virtue of its stealth, sensor performance, and both short and long range air-to-air missile capabilities.

In regard to strike capabilities, the F-35 is superior to all other fighter contenders by virtue of its combination of stealth, sensor capabilities, systems integration and weapons mix.

Finally, on balance, the F-35 project is proceeding well. While not without some development problems, the project in relation to other aerospace development projects must be assessed as travelling well. A further assessment of the project's performance to date will be able to be made soon after first flight – well before Australia finally commits to purchase.

The Acquisition and Transition Strategy: F-111, F/A-18 and F-35

The decision to replace both the F-111 and F/A-18 fleets of aircraft with only one operational type is sound. It reflects the increasing flexibility of new aircraft types and it reflects the need to reduce the expensive logistic and support overheads involved in operating two relatively small fleets of RAAF combat aircraft.

The costs involved in simulators, spare parts, weapons, ground support equipment, unique technical support equipment, software support laboratories, documentation libraries, and training systems for each type of aircraft exceed hundreds of millions of dollars.

Rationalisation of two such support systems into one means that more of Australia's defence dollar can be spent on acquiring a credible number of operational platforms.

But how can Australia introduce the F-35 without suffering a "capability gap" or incurring hundreds of millions of dollars of costs while concurrently maintaining fleets of F-111 and F/A-18 aircraft, and simultaneously introducing the F-35?

Even if the government where to commit to such a transitory hump in spending, Australia does not have the recruiting and training capacity to boost air force skilled manpower to the levels required over say a five year transition period.

So either the F-111 or the F/A-18 must be phased out first to provide the skilled manpower and financial resource to dedicate to F-35 introduction.

As the F-111 cannot adequately fulfil the air superiority role and as the older and less flexible platform, there is no option but to phase it out first. Prior to F-111 phase out, the F/A-18 needs to be upgraded to cover the strike "capability gap".

The F/A-18 upgrade is extensive and expensive, but is low risk. The upgrade "piggybacks" on elements of upgrade programs (including the F/A-18 centre barrel replacement) for US Navy F/A-18 aircraft already underway.

In summary, the transition strategy involves:

- Completing the F/A-18 upgrade program to enhance F/A-18 capability to cover the "capability gap" left by phasing out the F-111;
- Phasing out the F-111 and diverting those resources to F-35 introduction;
- As F-35 capability progressively becomes operational, incrementally phase out F/A-18 capability; and
- Build in sufficient surplus F/A-18 capability such that the F/A-18 can be extended to provide "schedule insurance" against the risk of F-35 acquisition slippage.

Such a strategy is sound, provides coverage of the strike "capability gap", is pragmatic in view of financial and manpower limitations, and provides insurance against F-35 schedule slippage.

Why not Purchase the F-22?

While an outstanding air dominance fighter, the F-22 is not a multi-role aircraft. Australia would either have to sacrifice strike capability or somehow fund an enormously expensive strike capability enhancement program.

Even if it were released to Australia, the following figures from the US December 2006 defence budget approval for 183 operational aircraft are sobering:

- the total F-22 project cost is US$61.3billion for 183 operational aircraft; which
- is equates to a per aircraft project cost of US$334 million.

US industry sources attempted to put these F-22 costs into a better light by quoting at the December 2006 budget approval, a per aircraft flyaway cost of US$150 million.

Either way, at an exchange rate of A$0.70c, a 30 aircraft F-22 fleet could be expected to cost well beyond A$6.5 billion and not much short of A$14.3 billion depending on the amount of non-recurring cost the US government would be prepared to waive.

In reality, the F-22 is an US "icon defence project" like the B-2 Spirit bomber and the Nimitz nuclear powered carrier. They are the "badges of a superpower"; they make a statement about the enormous military capability of a superpower; and they are unaffordable by middle powers such as Australia.

Why not Refurbish the F-111?

It seems often a fact that the more ridiculous the proposition, the harder it is to refute.

To be effective to 2040, the F-111 would require the airframe and associated aircraft systems to be "zero lifed". It would require redesign and retro-fit of modern engines, and

the replacement of all sensors and their integration with a new open architecture integrated mission system.

All this, without the support of any other operator of the F-111 in the world.

Given that it took the world's best aerospace companies 8 years and A$600 million to integrate the AGM-130 standoff missile in to the F-111, the suggestion to refurbish the F-111 sufficient to take it to 2040, simply cannot be taken seriously.

Conclusion

Australia's new air combat capability decision is a critical decision which will shape the balance and capability of Australia's defence forces into the first half of the Twenty-first Century. It quite rightly merits the closest scrutiny.

By deciding to join the SDD phase of the F-35 project - which is the stand out contender for the new capability - Australia is well placed to know more about the F-35 than it otherwise would, and it has provided to Australian industry the opportunity to participate in one of the most technological advanced defence projects of all time.

The proposed transition strategy towards an all F-35 capability is simple, practical and effective.

The priority now is not to question past decisions but to closely monitor the continuing project evolution of the F-35 so as to ensure that when the time comes to purchase, the decision is informed by the fullest understanding of all aspects of the F-35 capability and with a total knowledge of all the risks and mitigations involved.

Brian Weston, AM, FRAeS

(Air Vice-Marshal, RAAF Reserve)

Brian Weston's flying career included postings to all four RAAF fighter squadrons, graduation from and subsequent instruction of the RAAF Fighter Combat Instructor course and command of No 75 fighter squadron. He has in excess of 3,600 flying hours - almost all on fighters including tours on Hunter, Sabre, Mirage and F/A-18 aircraft.

His air force career included five overseas postings and three major commands including command of the Tactical Fighter Group comprising 106 aircraft, four radar stations and 2,200 personnel. His planning appointments included planning defence force structure (1987/90), and conducting the *Post Implementation Review of the Defence Regional Support* arrangements of the Australian Defence Force (1993).

On completion of his appointment as Assistant Chief of Defence Force for Operations in July 1997, he transferred to the RAAF Reserve. In 1998 following the Black Hawk mid-air collision, he conducted with John Faulkner (Deputy Chair of Air Services Australia), an *Independent Review of ADF Airworthiness*.

Among other assignments, he has worked as a defence and industry consultant to *Northrop Grumman* in their bid with *Lockheed Martin* for Project Wedgetail; he worked with *P&O Services*, in their bid for Defence Corporate Support contracts; and to the *Allied Technology Group* – a successful IT enterprise in Canberra.

In 1998 he joined the major industry representative organisation, *Australian Business Limited,* to set up the *ABL Defence Industry Unit* and acted as *Executive Director Defence Industries.* Over the same period he held the appointment of *Executive Director of the Association of Australian Aerospace Industries.*

He was the inaugural *"Industry Chair"* of the *Defence Capability Advisory Forum* from 1999 to 2003, and was a member of the *Defence and Industry Advisory Council* chaired by the *Minister for Defence* from 2001 to 2003. He is now a company director and consultant. Recently he acted as a consultant to the Australian Strategic Policy Institute and in September 2003, he published a concise history of the Australian Aviation Industry under the aegis of the RAAF Aerospace Centre.

From 2001 to 2004 Brian Weston was a non-executive director of National Air Support, headquartered in Adelaide and operating the Coastwatch fleet of aircraft for Customs Australia. In 2002 he was appointed Chairman of the SAI Global Certification Board. He presently consults to Northrop Grumman Integrated Systems.

His professional and related qualifications include:

- *Bachelor of Science, University of Melbourne (1965), and Master of Business Administration, Auburn University (US, 1983),*
- *Graduate of the United States Air Force, Air Warfare College (1983), and Directing Staff of the Australian Joint Services Staff College (1984/85),*
- *Graduate of the Royal College of Defence Studies, London (1994),*
- *Fellow of the Royal Aeronautical Society, and Graduate of the Australian Institute of Company Directors.*

31st March 2006