Australian Naval Institute
A forum for naval and maritime affairs
(http://navalinstitute.com.au/)

NOVEMBER 24, 2014

F-35 strike fighters for the Canberra-class?

By David Baddams*

AIR power experts and aficionados cocked a collective eyebrow last autumn when Defence Minister David Johnston announced that F-35B strike fighters could operate from the two Canberra-class flat-tops.

Heavyweight endorsement by Prime Minister Tony Abbott propelled the Defence White Paper staff to examine the concept, and we await their words of wisdom in a 2015 review. The news has neither fuelled nor ignited political partisanship, and Labor's assistant defence spokesman David Feeney has maintained an active and lucid interestin the concept in social media for most of the year.

The RAAF then put itself into play with the launch of Plan Jericho. Air Marshal Geoff Brown pushed the plan into the public sphere, giving notice to all and sundry that stale, obsolete and intellectually sclerotic gospels of current and former RAAF fast jet operations are unwelcome in its F-35 future. In short, Brown demands of all stakeholders that nothing should be excluded from delivering maximum impact from 100 Australian F-35s.

A mix of the 72 ground-based F-35As already on order and the mooted 28 F-35Bs for the Canberra ships is an easy and logical fit with Brown's thinking and plan, as it offers far more capability to the ADF and options for government than retaining the limitations of only continental, ground-based air power.

Proximity means capability. Ground-based F-35As in their remote rear echelon bases will neither match or surpass the high tempo, high sortie capability of embarked F-35Bs launching and recovering to a Canberra LHD deck only 100 miles from target. A distant ground-based F-35A's combat radius of 600 miles and extra ammunition is irrelevant when an ADF task group – its ships, helicopters, Wedgetail and Poseidon aircraft, land assets and several thousand personnel – are deployed, say, 1,500 miles from the nearest RAAF-friendly, F-35 capable base.

Extraordinarily expensive long-range transits, burning eye-watering amounts of fuel and racking up even pricier airframe-hour maintenance costs, can not, do not and will not offer round-the-clock strike fighter support for amphibiosity anywhere in the world. No-one does it, because it cannot be done. Assertions

to the contrary are provably false.

Australia has a provable truth to hand. With only six or eight embarked F-35Bs the ADF could cycle decisive air power on and off a Canberra as, where and when chieftains choose, 24 hours per day, foul weather or fair, delivering immediate, on-call strike for ground forces and critical air defence to surface ships and their crews. Without that air cover all are exposed and vulnerable. Total reliance on the area and point defence missiles in the Hobart destroyers and Anzac frigates would be what Yes Minister's Sir Humphrey Appleby called "a courageous decision, Minister." It was not a compliment.

Distance disarms capability. It degrades it. It reduces options. Oft-asserted claims that Host Nation Support and overflight clearance can be counted on for long-range, ground-based F-35A support for an LHD task group are woefully misplaced. HNS and overflight are frequently denied, even among formal treaty allies. Both the 1986 and 2011 air offensives over Libya were degraded and delayed by the denial of overflight by multiple Nato allies of the United States and the refusal of HNS by Malta. At the time of writing Nato's Turkey still refuses HNS to the US for strike-fighter operations against ISIS.

In all these cases the capability of ground-based fast air was dramatically degraded, leaving both commanders and governments with fewer options and fast-jet pilots with precious little time where they needed to be but plenty of hours in operationally useless transit. At the same time, proximate air strike over Iraq continues apace and unabated from US flat-tops in the North Arabian Gulf, hundreds of miles and millions less flight-cost dollars closer to the coalface than ground-based fast jets based in the far south or in the Mediterranean. Commanders cannot wish-away the very real problems of HNS and overflight with optimism.

Bewildering rubbish masquerading as expert opinion and fact has flowed in the media as if on-tap beer since Johnston and Abbott piped the F-35B concept. From fiscal phantasms of $500 million here, to $12 billion there, and spurious nonsense about "decades" of implementation to "severe challenges" and "what for?" to "helicopter displacement" and "melting decks" and "niche capability" to we have not been treated to excellence by either journalists or very, very learned PhDs in the echo chambers of their think thanks. Their whistled-up and fabulous amounts of money cited are just that – fables. All up, the Australian F-35 programme is slated to deliver 100 aircraft and all they need, including

permanent support systems, for around $20 billion. The costs of buying 28 F-35Bs and the minor refits required to the Canberras will not bust that bank.

Minor refits indeed. The never-ending claim that the Canberras are not F-35 capable is the bloviating of spectacularly ill-informed mugwumps. The Canberras are delivered with the same hardened fast-jet deck and underpinnings as the Spanish navy's lead ship, and all essential internal aviation spaces for fast jets have been retained. All of them. This was intentional and a specific factor in the acquisition process. The much-maligned aviation fuel bunkers and weapons stowage spaces have near-identical capacity to the enormous ones in the Spanish ship. Senior personnel have been poorly briefed if they state otherwise.

The fast jet and helo aviation capabilities of the French Mistral and Italian Cavour class were closely examined at the time, and the Spanish design came up trumps in all respects. Right now, the known requirements at refit for F-35Bs are a precision landing light called a HIHAT – it looks like a long green crucifix and is attached the middle mast – some sensor enhancements and Thermion coating on the flight deck. Some existing kit might need to be moved from A to B for electro-magnetic reasons. The glide slope kit, known as GLIS, is already fitted to the Canberras. This is the stuff of minor refit, and no more.

Refit and F-35Bs would deliver a motza more capability. More choices. There is no "niche capability" about six or eight embarked F-35Bs, where sensor fusion and data networking go merrily berserk when four are in the same airspace. That picture of threat and strike solution available to both pilots, controllers and commanders will offer startlingly long reach that any enemy is highly unlikely to penetrate without huge loss. He who sees first and shoots first wins. The days of close-up dogfighting or chasing missiles are long over, and a bad guy sneaking through a "niche" 4-ship of ADF F-35Bs protecting an LHD force would face being seen and shot at before he knew he or his ammunition was a target.

It is no good for pontificating PhDs of think-tankery to praise and extol emerging threats and the peril they pose to the LHDs and then dismiss the essential counterpunch as a tiny and extravagant toy. Further, their doctoral eminences need to learn that of 100 ADF F-35s only 60 or so will ever be in line service. The rest will be in attrition reserve, maintenance, repair or required for development work. The mooted 28 F-35Bs would easily provide three for attrition reserve, three in deep maintenance, one hangar queen, two flights of six or eight for the Canberras and a flight for conversion, training and reinforcement.

There is nothing "niche" in the relative or actual of these numbers. They are the sorts of numbers that current and probable F-35B operators use. So long as the powers-that-be are committed to supporting this through the F-35B's life-of-type then the ADF can do this in a doddle.

The other big doddle is quashing single-service tribalism. The purchase and operation of F-35Bs must be seen as a whole ADF capability, not as sexy new aeroplanes for any particular service. It would be easy for the concept founder if the RAN ever insists on re-upping its own fixed wing structure. RAN fixed wing is not in hiatus, it is not dormant, it is not waiting for its moment. It is extinct. Like the equally extinct dinosaurs it can be seen and enjoyed only in museums.

A feasible option would be for a unique, lean and joint solution within the RAAF where usual ground air command chops to LHD air command at the point of embarkation. For this to work efficiently and practicably it is likely that unit crews – an embarked unit of six or eight F-35Bs would require no more than 120 people – would need to be both light and dark blue. Should childish and tiresome single-

service tribalism and small-mindedness blight the F-35B/LHD concept, then the Canberras will be no more than a joint Army-Navy asset, and not a whole ADF capability. Rigid, unimaginative and unprofessional single-service warriors who cannot abide this sort of thinking are likely to get short shrift from what can be called the Plan Jericho Effect.

A few other publicised matters, easily hit for six:

(1) F-35Bs would not displace embarked helos where permanent deck parking rotations are used
(2) No F-35B will ever – repeat, ever – melt a flight deck with appropriate surfacing. Full stop, end of story
(3) What for? Strike fighter stuff, that's what for. That's also what the F-35As are for. Embarked F-35Bs also, by default, regenerate RAAF long-range strike lost with the retirement of the F-111s. That's another what for
(4) It might take a few years to generate the capability from decision to embarkation, but not "decades". The same applies to the F-35A
(5) Tiger helicopters are armed scouts, not flying artillery, and their ability to support ground forces is notably limited. On-call F-35B strike more than remedies that deficiency
(6) No "specialized facilities" are required for embarked F-35Bs operations in the Canberra LHDs, although very minor changes to existing systems may be required
(7) The Canberras are actually multirole ships, and the list of their aviation potential is as long as a very long arm, and
(8) The only known "severe challenges' to this concept rest in the closed and thinly stocked minds of naysayers and their ilk, not in the technical and tactical dynamics.

Plan Jericho and the F-35B would be best served by long, comprehensive and detailed briefings in the UK and USA. There are no serving ADF personnel with STOVL experience and no departmental experts, either. No credible analysis or planning is possible in this welter of inexperience. Appropriate forces and bureaucratic personnel, among others, can easily avail themselves to allies that pioneered and perfected both embarked and ground-based STOVL over 40-odd years, and only from there consider the specifics of how it would best serve the ADF and the government.

Without embarked F-35Bs, the LHDs and all their people will be as batsmen facing a horrifying and unremitting fast bowling attack while F-35As are only 12th man, back in the pavilion having a sleep. That would be entirely contrary to the ambitions, intellect and ethos of Air Marshal Brown's Plan Jericho.

(http://navalinstitute.com.au/wp-content/uploads/2014/11/David-Baddams.jpg)* David Baddams MBE was a fighter pilot in Australia and UK from 1978 to 1999. He commanded 800 Naval Air Squadron (FA2 Sea Harriers) on operations from HMS Invincible over Bosnia, Iraq and Kosovo. David submitted a detailed analysis of the F-35B/LHD concept available on the Defence White Paper website.

You do not have permission to view the comments.

Leave a Reply

Your email address will not be published. Required fields are marked *

NAME *

EMAIL *

WEBSITE

COMMENT

POST COMMENT

YES, ADD ME TO YOUR MAILING LIST.