This article was first published in Australian Defence Magazine in April 2007. It reports the decision to acquire the F/A-18F Super Hornet Block II as a so-called 'Bridging Fighter' to prevent the emergence of a potential capability gap between the retirement of the RAAF's F-111s and the arrival of the F-35A Lightning II Joint Strike Fighter. GF

RUMOUR CONTROL
$6B for Super Hornet

INTRO: The RAAF will fly Super Hornets for at least a decade from 2009/10. The price tag for 24 aircraft and the full weapons, training and support package is causing sticker shock in some quarters, however.

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Australia will become the first export customer for Boeing's F/A-18F Super Hornet when the first of 24 aircraft, worth $6 billion, enters service in 2010.

The Minister for Defence, Dr Brendan Nelson, announced 6 March the RAAF would acquire 24 Super Hornet Block 2 aircraft as a temporary replacement for its ageing F-111C strike aircraft. The F-111s will retire in 2010 and the Super Hornets will remain in service for about 10 years as a so-called 'bridging fighter' to ensure no capability gap emerges while the RAAF awaits delivery of its first F-35A Lightning II Joint Strike Fighters (JSF).

"The JSF is the most suitable aircraft for Australia's future combat and strike needs," Nelson said in a statement 6 March. "Australia remains fully committed to the JSF. But the Government is not prepared to accept any risk to air combat and strike capability during the transition to the JSF. The next-generation Block II Super Hornets will provide a more flexible operational capability than currently exists with the F-111."

The RAAF still aims to acquire up to 100 F-35As in three separate phases from 2013 to replace its F-111Cs and 'classic' F/A-18 Hornet A/Bs. Under Project Air 6000 2nd Pass approval for Phases 2A and 2B, worth an estimated $12 billion, is scheduled for 2008 and approval for Phase 2C, whose budget is currently an additional $3.5 billion, is due around 2014/15, according to the DCP.

"My strong view would be that the government of the day should essentially on-sell the Super Hornet back to the United States in around 2020 and acquire the fourth squadron of Joint Strike Fighter," Nelson said when he announced the Super Hornet purchase. "That's a decision that will be made…in around 2014. But obviously Australia could choose to fly three squadrons of JSF and continue to fly the Super Hornet."

Nelson said the $6 billion for the Super Hornet purchase will be provided as a supplement to Australia's 2007/08 defence budget – the budget for Air 6000 remains unaffected by the Super Hornet deal.

Explaining Australia's decision to retire its 21 F-111s in 2010, the Chief of Air Force, Air Marshal Geoff Shepherd, said the technical risks and operating costs associated with being the sole operator of an ageing aircraft such as the F-111 were growing significantly with time. An unexpected engineering problem could ground the entire fleet, putting at risk Australia's strategic strike capability, he said.

The Super Hornet offers a smoother, lower risk transition to the F-35A, Shepherd said: "It's that increasing technical risk, increasing financial risk and the increasing operational risk that really weighs on our mind, and that's why the Super Hornet offers us that network-centric future. It provides that jump to the next generation, it allows us to work the issues of stealth, work the issues of network-centricity, so that when we move into the Joint Strike Fighter future, we're up and running on day one."

The $6 billion cost of the Super Hornet program includes "aircraft, weapons, initial training, spares, facilities, program management, personnel and support costs," according to Defence. "It also covers sustainment over a 10 year period which includes all support costs associated with… the F/A-18F including personnel (aircrew and ground crew), fuel, expendables, weapons, logistics and engineering."

The aircraft will be equipped, like standard US Navy Super Hornets, with Raytheon's AIM-9X Sidewinder Within Visual Range Air-Air Missile (WVRAAM) and AGM-154 JSOW stand-off strike missile, Boeing's JDAM GPS-guided bomb and Harpoon Block 1 anti-ship missile, and Raytheon's ASQ-228 ATFLIR targeting pod. The weapons and sensors currently slated for integration with the RAAF's 'classic' Hornets – the Litening targeting pod, ASRAAM WVRAAM and JASSM stand-off missile, won't be integrated with the Super Hornets, though Defence says JASSM could be integrated with the Super Hornet before the 'classics' retire, if circumstances demand.

But the hefty price tag for a single squadron of aircraft came as a surprise to analysts.

"At $6 billion it's difficult to see how this is a cost-effective solution to a problem we may not have," Andrew Davies of the Australian Strategic Policy Institute told ADM. "This is almost 50 per cent of the budget for [Phases 2A and 2B of] Project Air 6000," he added.

And the Super Hornet may not be right for Australia in any case, Davies argued. In a 5-page paper published by ASPI in February, "The Generation Gap: Australia and the Super Hornet", he acknowledges that the Super Hornet's advantages "include a powerful radar, good networking abilities and stealth design features not available when the classic Hornet was designed (though the latter will be of little benefit when non-stealthy external strike weapons are carried)."

But countries such as Israel, Singapore and Korea who seek to counter the threat of Russian fighters such as the formidable Sukhoi Su-27/30 family have opted recently for the F-15, Davies noted. "Large, agile, fitted with a powerful radar and heavily armed,

these [Russian] aircraft present a significant challenge to Western fourth generation fighters. By far the best placed fourth-generation aircraft to counter them is the F-15."

However, at the ADM Congress in Canberra on 22 February, Nelson justified the decision to examine the Super Hornet option and ignore other 4th generation fighters, including the F-15: "The reality is the F-15 is about $30 to 40 million more expensive than the Super Hornet. It is approaching the end of its life. It also has a low observable profile which is not attractive to our country's needs. It also has limited transferability in terms of weapons. We are a Hornet country. The US Navy will fly it till 2030.

"The [Super Hornet] Block 2 has maritime strike capability. It can also transmit JDAM coordinates to an F/A-18. It's also off the shelf, so to speak, and the first could potentially be delivered toward the end of next year."

Recent disclosures about the range and capability of the Super Hornet's Raytheon APG-79 Active Electronically Scanned Array (AESA) radar, along with what is understood to be a very low Radar Cross Section (RCS) across its frontal aspect, suggest the Super Hornet Block 2 may be more capable and survivable than its critics contend. These attributes, and the aircraft's ability to fire Harpoon Block 2 anti-ship missiles, may have been decisive in steering the RAAF and government towards a Super Hornet buy: maritime strike is fundamental to the ADF's combat capability.

It's unclear what precise role the Super Hornets will fill in the RAAF order of battle. Ostensibly an interim replacement for the F-111C, and therefore a strike aircraft, it is clearly also superior to the 'classic' Hornet in the air-air combat role, thanks to its radar, reduced RCS, and integrated EW self-protection system. It is possible the Super Hornet will be tasked to carry out both air defence and strike missions with crews trained for both.

The RAAF had intended that its upgraded 'classic' F/A-18 Hornets would undertake both strike and air defence duties pending the arrival of the F-35A; but neither of these aircraft, nor the Super Hornet, will deliver its full potential without the support of the new Airbus A330 tankers, Wedgetail airborne early warning aircraft and Vigilare air defence command and control system which the RAAF has also ordered.

But all of these programs are running late or at risk of delay, Nelson pointed out: "The reality is that if the JSF and all of the capabilities surrounding [Australia's] new air combat capability could be delivered on time, it's not an option we'd be looking at and certainly not one we'd be looking at if the F-111s could confidently fly for another decade or more."

ADM understands the first four RAAF Super Hornets will be handed over in late-2009 but will remain at Boeing's St Louis plant to enable training to commence before being delivered to Amberley in early-2010.

And Defence and Boeing are currently discussing support arrangements for the Super Hornets. One proposal would see Amberley become a support facility for all US Navy Super Hornets in the Asia-Pacific region, as well as for the RAAF's fleet; this would enable the RAAF and Boeing workforce currently supporting the F-111s at Amberley to transition to the new fighter and maintain the fast jet support skills base that has been established at Amberley over the years.

"Local industry will be a key factor in developing the through life support concepts for the Super Hornets," ADM was told. "However, the relatively small number of Super Hornets will preclude the establishment of a similar Australian support infrastructure to that established in the 1980s for the Air Force's existing Hornets. Notwithstanding this, industry will undertake a more extensive role in supporting the new Hornets in that… Air Force personnel will be basically limited to flight-line maintenance and 'back shop' support will now be conducted by industry.

"The Australian Super Hornet program plans to contain local contractor owned and operated intermediate maintenance and training for aircrew and support personnel. Additionally, the supply chain infrastructure, warehousing and operation will be staffed locally in support of both Australian and US Navy Super Hornets in the region.

"The selection of the F/A-18F allows for an up-skilling of the workforce and brings growth of capability within the support and supply chain for low observable materials (stealth), advanced sensors and IT."

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