
Girt by Air

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The 2009 White Paper has redefined Australia's military posture, away from participating in unwinnable expeditionary wars of choice on the other side of the world, towards *shaping* and *detering* in the Asia-Pacific region. Australia's unique strategic geography and the ineluctable effects of globalisation, both ethical and practical, have been the catalysts for this fundamental policy shift. The key capabilities the Australian Defence Force now requires are information/surveillance/reconnaissance, strategic strike, and the ability to control Australia's maritime approaches. The application of each of those capabilities must be characterised by a fleeting footprint. Maritime (air and sea) and space power will be the centrepiece of the necessary force structure.

The immutable force of geography as a strategic determinant has reasserted itself in the new White Paper, *Defending Australia in the Asia Pacific Century: Force 2030*.¹ There is a very good reason for this—propinquity is the most common factor in human conflict. Even a cursory reading of history will reveal that most disputes occur between contiguous nations, tribes and interest groups. Other, more emotional, factors such as ideology, religion and race are also likely to be involved, but geography is a near-constant. Consequently, using 'proximity' as a primary element in security determinations (and, therefore, in defence policy and force structuring) is more likely to lead to useful answers than is the alternative of making somewhat abstract estimates based on alleged national interests, noting that interests can be "jarred and reshaped in an instant" (the Molotov/Ribbentrop pact, the fall of Singapore, the collapse of the USSR, September 11, etc.) and then "refigured with incredible speed".²

No less important than recognising the reality of location is the 2009 White Paper's implicit acknowledgment that the era has gone in which predominantly white, predominantly European, predominantly Christian armies could stampede unquestioned around the world invading countries their governments either do not like, or want to control.³ The practical and ethical effects of globalisation have made that kind of mentality obsolete. Perhaps more to the point, the subjects of invasion have learnt how to exact costs that far exceed any benefits an occupying force might realise. These days, once we deploy an invasion force, the Taliban, al-Qa'ida and their ilk fight on their terms, not ours. Thus, at present in the Middle East and

¹ Department of Defence, *Defending Australia in the Asia Pacific Century: Force 2030* (Canberra: Commonwealth of Australia, 2009).

² Joshua Cooper Ramo, *The Age of the Unthinkable* (London: Little, Brown, 2009), pp. 33-36.

³ Department of Defence, *Force 2030*, pp. 41-57.

Central Asia, the most advanced armies the world has ever known are spending billions of dollars unsuccessfully trying to counter homemade roadside bombs and primitive suicide bombers.⁴

The preceding observations indicate that the West needs to reassess its attitude towards formulating military strategy. It is to the credit of the Australian Government and the Australian Defence Organisation that they have done precisely that. The 2009 White Paper has broken with the failed model of the recent past, and in the process has provided a rational template for Australia's distinctive military/geostrategic circumstances for the next twenty years.

Australian Defence Policy

Since federation, Australian defence strategy has oscillated between two main forms, expeditionary campaigns and the defence of Australia, with the former being the dominant model. Within that broad framework, Australian forces commonly have been subsumed as a component part of a larger coalition force, a fate which in general has rendered irrelevant any Australian voice in shaping higher strategy. Moreover, and without denigrating the courage and professionalism of the service-men and -women concerned, frequently that fate has also rendered irrelevant Australia's warfighting efforts. For example, it may be displeasing to hear but it is nevertheless true that in Vietnam and Iraq the operations conducted by Australian Army, Navy and Air Force contingents were of little consequence to the ultimate outcome.

Indeed, within the expeditionary model generally—a category that covers some nine decades—few instances can be found in which Australian forces have played an independent or decisive role. In other words, an inference of political tokenism as the *raison d'être* for our expeditionary campaigns would be justified.

Given that the Australian Defence Force (ADF) has spent the last eighteen years fighting and losing ill-considered expeditionary wars of choice in the Middle East and Central Asia, the explicit inclusion of 'Asia Pacific' in the title of the 2009 White Paper is instructive. The significance of this geographical characterisation of national defence priorities cannot be overstated. It is a shift of the first order which will do nothing less than redefine Australia's defence strategy, away from expeditionary operations, which by definition are *responsive* in nature, towards a posture that in the first instance will seek to *shape* and to *deter* in our region.

⁴ For analysis of the implications of this, see Douglas Macgregor, 'Refusing Battle', *Armed Forces Journal* (April 2009), <<http://www.afji.com/2009/04/3901424>> [Accessed 15 June 2009].

Simultaneously, the policy places a much sharper focus on the critical distinction between wars of choice and wars of necessity, which in turn should lessen the risk that Australia will be drawn into unnecessary, unwinnable wars as a junior member of a coalition.⁵ The end result should be a greater degree of defence self-reliance than has previously been the case. By advocating a proactive posture, the 2009 White Paper offers the potential for the ADF to become a leader, not a follower.

Australia's unique strategic geography as an island continent is central to the 2009 White Paper's implied policy of shaping and deterring within our region. As a wealthy, educated, technologically advanced middle power, Australia is able to support a very high quality defence force. Furthermore, that force does not have to share land borders, an immense strategic advantage which not only removes the threat of substantial, short-warning cross-border incursions (which might range from refugees, to terrorists, to full-scale military invasions), but also eases the demand on Australia's relatively small population for defence manpower. This fortunate combination of first-world status and the physical protection provided by an air-sea barrier enables the ADF to pursue a solution to Australia's military security needs based on a small but highly skilled workforce and advanced technology. Moreover, that solution—to shape and to deter, and to respond only as a last (instead of a first) resort—is consonant with the geostrategic and ethical imperatives of the 21st century.

Also central to 2009 White Paper's logic is the changing balance of power in the Asia-Pacific, where China will become more influential and the United States relatively less so. By refocusing the ADF to better address this seminal shift, the White Paper is not implying that China is any kind of threat, but is simply making a prudent adjustment to objective circumstances.

Having acknowledged Australia's comparative geostrategic advantages, the 2009 White Paper then details the force structure needed to implement the resultant concept of operations.

Air Power in the Joint Force Structure

Much of the White Paper's post-release publicity centred on the proposed acquisition program for the Royal Australian Navy (RAN); in particular, considerable attention was given to the decision to acquire twelve new submarines fitted with long-range land-attack cruise missiles. Other high-profile planned naval capabilities, including new destroyers and frigates also armed with land-attack cruise missiles, and at least 24 new combat helicopters, added to a general impression that Australia was adopting a maritime strategy reliant on surface and sub-surface warships. That,

⁵ For more on this topic, see Alan Stephens, *Dien Bien Phu and the Defence of Australia*, Working Paper, no. 404 (Canberra: Strategic and Defence Studies Centre, Australian National University, 2007).

however, is a narrow interpretation of the term 'maritime'. Perhaps some commentators have been subliminally influenced by the quaintly expressed reminder in the national anthem that 'our land is girt by sea'.⁶ Australia is, of course, like every other country, also girt by air, a more pervasive and, in the 21st century, far more flexible medium for military activities than either sea or land. Any shaping and deterring the ADF pursues during the Asia-Pacific century will be at least as reliant on the air component of its maritime forces as on its navy component, probably more so.

The relatively restrained media response to the 2009 White Paper's acquisition program for the Royal Australian Air Force (RAAF) was perhaps attributable to the fact that none of the main announcements was unexpected. But familiarity should not be an excuse for reporters beguiled by the spectre of missile-equipped submarines to let their attention wander from the implications of the ADF's emerging air power system. Moreover, given the budgetary pressures the White Paper is certain to encounter, it is essential to understand that most of the components of that system are either in place or are very close to being so (Jindalee Operational Radar Network (JORN), F-35 Joint Strike Fighter (JSF), Wedgetail Airborne Early Warning and Control (AEW&C) platform, F/A-18F Super Hornet, and KC-30A Multi-Role Tanker-Transport (MRTT)), whereas the Navy's proposed submarines, destroyers and frigates will all be new-build and will not enter service for perhaps 25 years, if at all.

Force structuring is a complex business, evidenced by the fact that many countries get it wrong more often than not. Vested interests, politics, inter-service rivalries, insufficient funds, the demands of local industry, and having to persevere with legacy platforms are only some of the complicating factors. The Australian Defence Organisation has been subject to all of those pressures, and more. Against that background, it needs to be said that the ADF's emerging air power system will be exceptional, by any standard.

A force which seeks to shape-deter-respond must possess credible capabilities in the following domains:

- High quality people, incorporating recruitment, training, education and retention practices;
- Excellent command and control, and planning;
- Pervasive, continuous, real-time Information, Surveillance and Reconnaissance (ISR);

⁶ The national anthem 'Advance Australia Fair' is derived from a 19th century patriotic song.

- Powerful, quick reaction, small footprint, long-range strike forces; especially submarines, special forces, and strike aircraft, all with advanced weapons and sensors;
- A defensive component relevant to geographic imperatives;
- Integrated systems across all three combat environments (air, sea, land);
- Skilled stabilisation/intervention forces; and
- Sustainability in terms of logistics and the ability to improvise technologically in-country.

As well as providing the human and technical wherewithal to apply force effectively, expertise in those domains creates a regional awareness that the force is both credible and worth engaging with. In other words, interest groups are likely either to want to form an affiliation of some kind (we are shaping), or will be intimidated (we are deterring). All of the necessary capabilities are present in the 2009 White Paper's blueprint for Australian air power.

High quality people and a sustainable organisation must be the start point for the Australian way of war. Yet too many commentators continue to equate 'hardware' with 'capability', in the process ignoring the reality that hardware by itself is useless. For example, much has been made in recent years of the arrival in the Asia-Pacific region of Russian fighters like the MiG-29 and the Su-30, to the extent that some critics have claimed that Australia's long-standing air dominance will be lost. Such assertions misrepresent the nature of modern air power, which can only be understood as a system. Sustainability illustrates the point.

Over the past 40 years, on combat operations in the Middle East and Central Asia, advanced air forces from countries such as the United States, the United Kingdom, Israel, Canada, France and Australia have routinely achieved aircraft availability rates of 90%, often 95%. By comparison, air forces operating Russian strike/fighter fleets have struggled to achieve 50%. Fleet numbers thus are effectively halved even before combat starts, and before other systemic liabilities begin to further erode availability rates. Russian logistics support is abysmal; systems integration weak; and the ability to adapt, modify and upgrade on the run poor.⁷ Similar kinds of comparisons can be made regarding the development of campaign planning and warfighting practices. The end result is that Western forces have

⁷ See for example Stéphane Lefebvre and Roger McDermott, 'Air Power and the Russian-Georgian conflict of 2008: lessons learned and Russian military reforms', *Royal Air Force Air Power Review*, vol 12, no. 1 (Spring 2009), esp. pp. 104-106.

without exception achieved air supremacy within days of a campaign's start (see Operation Desert Storm 1991, Operation Deliberate Force 1995, Operation Allied Force 1999, Operation Enduring Freedom 2001, and Operation Iraqi Freedom 2003).

It follows from the preceding commentary that the single most important section of the 2009 White Paper is Chapter Fourteen, 'People in Defence'. Indeed, people are not merely 'a' key strategic priority as the paper states, they are *the* priority.⁸ Absent the right people and a military force will unravel, full stop. Questions have already been asked about Australia's capacity to pay for the White Paper's equipment acquisition program. The issue here is that even if a funding shortfall does threaten the paper's force structuring logic, on no account should it be allowed to threaten the ADF's investment in first-class people. Given the ADF's long-standing difficulty in attracting and retaining suitable people, staffing is likely to be the greatest challenge to the implementation of the White Paper.⁹

Turning to equipment, the air power component of the 2009 White Paper reflects the concept of operations the RAAF has been patiently advocating since the early 1970s, when capabilities such as JORN, air-to-air refuelling, and AEW&C were first mooted.¹⁰ That some 30 years later the network of systems needed to control and manage events in the region is finally emerging in an organisationally robust and technologically credible form is nothing short of remarkable, and is a testament to the vision and resilience of those responsible, both uniformed and civilian.

JORN has been working satisfactorily for some six years now and will continue to become more effective as operational techniques and technical boundaries are extended. The exceptional situational awareness JORN provides will be considerably enhanced by the introduction into service of six Wedgetail AEW&C platforms. The 2009 White Paper's endorsement of Wedgetail is noteworthy in view of the technical problems the program has experienced, especially with its multi-role electronically scanned array radar. If Wedgetail failed to meet the ADF's operational requirements, the White Paper would lose some of its logic, so recent positive reports are welcome.¹¹ So too is the sound progress of the KC-30A MRTT program. Derived from the Airbus A330, the KC-30A will add a new dimension to the ADF's capacity to manoeuvre rapidly over vast distances.

⁸ Department of Defence, *Force 2030*, p. 113.

⁹ See Greg Callaghan, 'Defence force recruitment on the ropes', *The Australian*, 11 May 2009; Mark Dodd and Patrick Walters, 'Empty Vessels', *The Australian*, 8 May 2007; and Gerard McManus, 'Nelson seeks Dad's Army', *Herald Sun*, 26 March 2007.

¹⁰ For background on this, see Alan Stephens, *Power Plus Attitude: Ideas, Strategy and Doctrine in the Royal Australian Air Force 1921-1991* (Canberra: Australian Government Publishing Service, 1992), esp. pp. 166 and 178.

¹¹ Patrick Walters, 'Flying colours for Wedgetail in flight tests', *The Australian*, 19 May 2009.

Important as AEW&C and the MRTT will be, the centrepiece of the ADF's ability to shape, deter and respond throughout the Asia-Pacific region for the next two decades will be Defence's preferred option for a new air combat capability, the F-35 JSF. The White Paper confirmed the government's intention to acquire a fleet of 'around' 100 F-35s to equip four operational squadrons, with the initial tranche to comprise 'not fewer' than 72 platforms.¹²

The subject of extraordinarily naïve and misinformed media criticism for the past three years, the F-35 will elevate the ADF's joint ISR, strike, and air control capabilities to new levels. The F-35's full suite of capabilities has been examined in detail elsewhere, but a number warrant special mention here to illustrate the quantum advance the aircraft represents.¹³ These are: the advanced networking capabilities, including inter-flight data links; the exceptional situational awareness systems; the electronically-scanned array radar; and the distributed aperture system, which uses multiple infrared sensors to generate a full spherical image and allows the pilot to 'look' through the airframe via a helmet mounted display. While the distributed aperture system's manufacturer, Northrop Grumman, may be overstating the case by claiming that it will make manoeuvrability 'irrelevant', the technology has the potential to fundamentally change within visual range air-to-air combat. When the F-35 enters service, it will be the only fighter in the world with such a system.

Reference should also be made to the RAAF's approach to the human factors dimension of operating the F-35; that is, to the dimension that acknowledges that acquiring a capability involves much more than simply buying hardware. Ever since Australia joined the JSF program as a partner in 2002, RAAF pilots have been periodically visiting the United States to fly the F-35 simulator in order to develop warfighting tactics relevant to the aircraft's unique combination of characteristics (such as stealth, advanced networking, and the distributed aperture system). Additionally, for some two years the RAAF has had a pilot on exchange with a USAF F-22 squadron, accumulating experience on the world's only other fifth generation fighter, which will be directly transferrable to the F-35.

The 2009 White Paper's policy on the F-35 was supported by confirmation that the 24 F/A-18F Super Hornets ordered as a bridging capability should arrive late next year. Also confirmed was the intention gradually to replace the Super Hornets with up to 28 additional F-35s as the new air combat

¹² Analysis of the ramifications of various F-35 fleet sizes is presented in Peter Nicholson and David Connery, *Future Joint Strike Fighter Fleet*, Kokoda Paper, no. 2 (Canberra: Kokoda Foundation, 2005).

¹³ For a detailed comparative study of the F-35, see The Williams Foundation, *Fact versus Fiction: The Truth about Australia's New Air Combat Capability*, <<http://www.williamsfoundation.org.au/research/download/air-combat-capability.pdf>> [Accessed 12 May 2009].

capability program progresses. An introduction date for the F-35 was not given, but it would be optimistic to expect the first aircraft to arrive much before 2015; in the meantime, the F/A-18Fs will be an excellent substitute. Because 12 of the Super Hornets will be prewired for possible conversion to the EA-18G Growler electronic warfare variant, some analysts have suggested that the Hornets might be retained regardless of the final number of F-35s. The 'standard' F-35, however, will come with an inherent electronic warfare suite, primarily courtesy of its powerful active electronically scanned array radar.

At this early stage it would be sensible not to make too much of the nominal in-service timings that the White Paper has proposed for the air combat force, noting that most are deliberately vague. The two key points are, first, that a single-type fleet—namely, all F-35—would offer valuable operational, engineering and administrative savings; and second, that regardless of the eventual composition, the ADF will have the best air combat/ISR/surface attack capability in the region.

More needs to be said about ISR, which is fundamental to the 2009 White Paper's implied concept of operations, but before that, important developments in air manoeuvre must be noted.

Misleadingly referred to as 'airlift' in the White Paper (the description 'manoeuvre' explains the task far more informatively as a military action),¹⁴ the RAAF's capacity to position forces, weapons and supplies over a range of distances and within a variety of topographies will be enhanced by the decision to acquire two additional C-130Js and up to ten 'light' fixed-wing transport aircraft (reportedly the C-27 Spartan is favoured), while simultaneously retiring 12 elderly C-130Hs. Substantial additional capacity will be added by the five KC-30As, each of which can carry around 270 troops plus cargo. Battlefield manoeuvre will be boosted by the replacement of the Army's Blackhawk and Chinook helicopters with more capable platforms.¹⁵

The maritime nature of the Asia-Pacific region means that most manoeuvre operations conducted by the ADF's air transport assets are likely to fall within the 'respond' category of the strategy continuum; that is, they are unlikely to be as important to the White Paper's implementation as ISR and strike.

¹⁴ While on the topic of misleading terminology, the White Paper persistently misuses the words 'strategic' and 'tactical', applying them as synonyms for 'long range' and 'short range' respectively. But it is the *effect* an action generates that determines whether it is strategic or tactical, not how, or at what distance, or by whom it was performed.

¹⁵ The Army's six CH-47D Chinooks will be replaced by seven CH-47Fs; while Army Blackhawks and Navy Seahawks will be superseded by a shared fleet of 46 MRH-90 helicopters.

ISR has been left until last because, while no individual system can achieve its full potential without being integrated into the total force, ISR is the ADF's single most important technological capability. Consequently, the White Paper's announcement that the ADF will acquire its own remote sensing satellite, probably fitted with a high-resolution, cloud-penetrating synthetic aperture radar, is enormously significant.¹⁶ So too is the decision to buy up to seven high altitude, long endurance Unmanned Aerial Vehicles (UAVs), when previously there had been some doubt about this program. Space and UAVs are an essential part of the future of air power.

The new UAVs—possibly the Global Hawk—will be complemented by eight manned aircraft, almost certainly the Boeing 737-derived P-8A Poseidon, which will replace the RAAF's AP-3C Orions. Although described in the White Paper as 'maritime patrol' aircraft, the P-8s are likely to devote much of their effort to broader ISR tasks, including cooperation with land forces, as is presently the case with the AP-3Cs deployed to the Middle East area of operations.

When networked with JORN, AEW&C, F-35s, F/A-18Fs, KC-30As, RAN surface and sub-surface units, and Army formations (especially special forces), the surveillance satellite, UAVs and P-8s will represent a fundamental shift in the ADF's approach to, and focus on, ISR. The end result will be an unsurpassed knowledge capability in the Asia-Pacific region.

Given the pressures associated with limited funding, the demands of local industry, and political and inter-service rivalries, the air power component of the 2009 White Paper represents an exceptional outcome. Two areas of concern nevertheless need to be raised.

The first is the use of space. As the White Paper notes, space assets are increasingly important to military operations.¹⁷ Advanced defence forces are already acutely reliant on space-based information, communications, and navigation systems, and will become even more so. Consequently, the White Paper's declaration that 'a career stream' will be developed for space specialists is to be commended, but whether or not the initiative ever amounts to anything will be one of the more intriguing promises from the Paper to monitor over the next few years.

Missile defence is the second area of interest. At a time when the proliferation of short-, medium- and long-range missiles is one of the major features of armed conflict and international tension, the White Paper has taken a hands-off approach to the problem, rejecting the idea of "a unilateral national missile defence system" and undertaking only to "review" its policy

¹⁶ Department of Defence, *Force 2030*, p. 82.

¹⁷ *Ibid.*, p. 85.

annually.¹⁸ But notwithstanding that declaratory policy, the ADF seems gradually to be assembling a *de-facto* missile defence system, through the sensors and weapons associated with JORN, the imaging satellite, AEW&C, the F-35, the F/A-18F, the RAN's air warfare destroyers, and the Cooperative Engagement Capability. Especially noteworthy for control of the air in general and missile defence in particular is the decision to fit the Air Warfare Destroyers with the Standard Missile-6, a top-of-the-range weapon which should have a genuine capability against ballistic and cruise missiles, among other targets.

Conclusion

Two features define the 2009 White Paper as one of the most significant statements of national defence policy in decades. The first is the fundamental shift away from ill-conceived expeditionary wars of choice, invariably as a non-voting junior partner, towards seeking to shape and to deter within the Asia Pacific region, as an independent leader. The second is the Paper's implicit acknowledgment that Australia's greatest geostrategic strength is derived from the reality that the country is 'girt' by air and sea, and that its military security will be best served if the ADF can exploit that unique comparative advantage.

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¹⁸ *Ibid.*, pp. 85-86.