

**ORDER OF AUSTRALIA ASSOCIATION-  
ADDRESS BY THE DEPUTY CHIEF OF THE AIR FORCE 8 OCTOBER 2014**

It is a great honour to be invited to address our Association this evening. Since its inception in 1975 this uniquely Australian system of Honours and Awards has recognised the distinguished and unselfish service of Australians from all walks of life.

This audience represents a microcosm of the diverse range of people whose service to the nation has been recognised either in the Military or the General Division of the Order of Australia. I am humbled to be among you and thank you for your contributions to our community. It was a very fine airman, Air Chief Marshal Angus Houston, who played a central and formative role in the establishment of this address and was asked to inaugurate it in 2011. To follow RADM Walker and MAJGEN Gilmour is personally very rewarding.

Our system of distinctly Australian Honours and Awards came into being during a groundswell of assertive Australian nationalism during the 1970s. The Whitlam Government sought to carve out an independent identity for Australia in the area of arts and culture as well as in the domain of foreign affairs. Australia began to focus more on our role in our own back yard rather than in Europe.

Although that view was controversial at the time there is now a broad political and social consensus that Australia must seek its security and prosperity in the Asia Pacific region.

As we reflect on 1975, it is interesting to observe some parallels with our present era. These are useful to provide some context for my remarks this evening about Air Force modernization, especially our move to becoming a 5th Generation Force.

In 1975 the Vietnam War ended with the defeat of the South Vietnamese Government and the unification of Vietnam under a communist regime. For a time there was fear both of regional destabilization as well as of US withdrawal into isolationism.

Australia was obliged to re-examine its strategic posture. The future looked somewhat ominous, especially in light of the proclamation of the so-called Guam Doctrine by US President Richard Nixon in 1969, which espoused the view that the US would not be responsible for the direct defence of its Asian allies.

Although fears of a fundamental US strategic change proved unfounded, every Australian Government since 1976 has pursued a policy of defence self-reliance whereby Australia maintains forces capable of defeating direct attacks without depending on the combat forces of any other nation. In practical terms this has been consistently interpreted as requiring maintenance of potent forces capable of defeating any potential adversary in the approaches to Australia.

This has remained a fundamental force structuring principle of the ADF and will no doubt be invoked as a primary element when the next White Paper is released in 2015. The Air Force has consistently responded to that strategic guidance by maintaining a balanced force capable of operating independently in our maritime approaches. That emphasis on the defeat of attacks against Australia contributes to the argument of needing to maintain a technological edge. Specifically, both our demography and geography demand that Australia maintain a decisive edge in air power.

The great benefit of maintaining potent forces capable of providing the full spectrum of air power effects has been demonstrated recently. In 2003 we delivered kinetic effects through Hornets operating as part of a Coalition force. Last month we delivered biscuits rather than bombs, through the rapid response of our C 130 J's, which participated in a major humanitarian airdrop to besieged civilians in Iraq. Our C 17s were able to rapidly deploy to Europe to assist with recovery of remains after the MH 17 atrocity. Our AP-3C's have completed overland Information Surveillance and Reconnaissance or ISR in Afghanistan while still supporting illegal fisheries and immigration roles to our North West and the vital work following the loss of Malaysian airlines flight MH 70.

Last week Air Force forward deployed the Super Hornets, KC30A tankers and Wedgetail to the Middle East to support coalition efforts against the so-called Islamic State. The agility and global reach of our Air Force make us a tool of first resort in many contingencies. And those instances demonstrate that we can execute the full range of air power roles at short notice and at great range. That is the benefit of a balanced 'state of the art' force.

Now, as in 1975, our forces are returning from a period of extended land-centric expeditionary operations. Although we continue to be engaged in Afghanistan and the new ISIS threat in Iraq, it is important to also prepare for the effects of tensions between nation states and not just operations against non-state actors demanding land force contributions.

The Chief of Staff of the Royal Air Force Sir Andy Pulford has argued that we are entering a new strategic era, which will be characterised by a shift from 'campaigning' to 'contingency.' Our Chief of Air Force has endorsed these remarks. The implication for force planners is that the risk of conventional state on state warfare is rising. While there may be an ongoing requirement to engage in contingency operations, it would seem desirable to limit exposure of our soldiers and employ air power to enable indigenous forces.

So how is our Air Force responding to this evolving security environment? First and foremost we are implementing one of the most comprehensive modernisation programmes in our history. Every aircraft and major system upon which we will rely over the next three decades has just entered service or will do so in the next 5 years. By 2021 the oldest platform will be the C130 J, making us one of the most modern and capable Air Forces in the world.

Of course much of the focus on our modernisation has been on the Joint Strike Fighter (JSF). While that is understandable it has tended to distort discussions about air power in Australia and a number of myths have emerged. Too often critics have underestimated the capability of the JSF and they have failed to comprehend how the introduction of an electronically scanned radar, airborne and ground based early warning and control and air to air refuelling has truly created more than just the single parts effect to the way Air Force can do business. It is important to point out that the JSF is simply the most visible element of our transformation into a 5<sup>th</sup> Generation Force.

As a 5th Generation platform the F35 will provide Air Force with an unprecedented level of capability across the core air power roles of strike, control of the air and ISR. It possesses an array of Intelligence Surveillance Reconnaissance (ISR), Electronic Warfare (EW) systems and Radars, which make it an incredibly versatile platform. It can perform multiple air power roles simultaneously. Indeed it does not recognise arbitrary distinctions between 'Strike' or 'ISR' or EW tasks. We have gone past being limited by switches and screens.

Not only can JSF engage other aircraft and ground targets simultaneously, it can also continuously share a vivid operational picture with every other JSF in the force and ultimately with other elements of our Joint Force. An Air Warfare Destroyer and a land force element will be able to see further and more discerningly because of what the JSF provides.

Moreover, it is capable of providing these effects without being seen and with a degree of stealth beyond any system currently deployed by any regional power. It is capable of providing us with a substantial technological edge well into the third decade of this century.

Earlier this year, at a forum arranged by The Williams Foundation, we had the opportunity to hear directly from US pilots who fly the JSF and an Australian pilot who flew the F-22 Raptor. They spoke of 5th generation concepts of operation not of 5th generation hardware. A sad but poignant statement for this old F-111 pilot was that it is no longer a case of 'speed is life – information is now life'

The JSF put simply is a transformative system in its own right and as such it takes Air Force -and ultimately the entire ADF- into a new era of information warfare. The risk is not that the JSF will not

enter service as a highly capable system, but rather, that the Air Force and the ADF fails to exploit through human and cultural failures - its unprecedented capabilities

Pieces of the future puzzle are already in place. We are currently operating unmanned systems and it is likely that their employment will increase over time. They have already been used extensively in the ISR role and have potential to be employed in strike roles.

Similarly, our operations have expanded to include space and cyber. Every aspect of our daily lives from our vehicle GPS and laptops to our banking and essential communications are reliant on Space based systems. Air Force has the ADF lead on space capabilities and our operations will reflect our core mission to ensure that Australia is able to utilise this realm of the global commons without interference from any hostile power. This intricate mix of 5th Generation systems will take the ADF into a challenging new era in which we must be able to adapt our doctrine and training rapidly to technological change.

Every aspect of our recruitment, training, sustainment and logistics support will be required to adapt. The changes in my view are every bit as profound as the changes from sail to steam in the Royal Navy in the early 1800's or the introduction of radar, jet aircraft and missiles into our Air Force in the mid 1900's.

We have not always been good at this challenge. My own experience operating the F111 has illustrated our failure to see or seize opportunity. We flew for a decade with a radar warning receiver that could not detect Continuous Wave radar when all the worlds' fighters were using CW; we had the ability on the aircraft to have a moving map displayed but chose to stay with interpreting latitude and longitude readout. It took an 'outsider' to reveal the true potential of the F-111 – perhaps our JSF 'outsider' is a young pilot or engineer that we only recruited a couple of years ago.

Our key institutional response to the introduction of 5th Generation technology to Air Force is contained in Plan Jericho, through which Air Force will modernise and reorganise its raise, train and sustain functions. There is a risk that like the F-111 we will fail to maximise the opportunity gained through innovative technology such as the JSF. We are taking steps now to avoid this in the future.

It is not only Air Force which will be affected by the challenge of 5th Generation technology. Both the Navy and Army are exploring the opportunities and risks constituted by the proliferation of information technology in their own inventories and structures. Within a few years any joint force deployed by the ADF will field a range of sensors and systems capable of sweeping up vast quantities of data. Yet this will remain information rather than intelligence unless we are effectively joined up by seamless enabling capabilities. This is essential if we are to be able to disseminate the information to those elements of the force, which can transform it into actionable intelligence before, in turn, getting it to those able to act on it.

This has profound implications for how we fight and thus must influence our procurement, training and even our definitions of trades and skills. Plan Jericho will outline a vision for a truly 5th Generation Air Force and will seek to bring our joint partners with us in optimising our technology in the joint fight. After many years of talking about 'Effects Based Operations', 'Information Warfare', 'Decision Supremacy' and 'systems of systems' we will be in a position to match the rhetoric with tangible capability. CAF will release the plan in detail at Avalon early next year.

Ladies and Gentlemen - In closing, may I once more pay tribute to all Members of the Order of Australia for your unselfish service to our country. May I ask you to spare a thought for all of our dedicated young men and women who are currently serving on operations? They personify everything for which the Order of Australia stands and we can all be proud of them.

Thank you very much