

Significance of Army Aviation Capability Upgrades

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The Australian Army's newly formed Army Aviation Command nests with the current strategic context as well as with Defence and Army's modernisation initiatives. Army's aviation capability under its own command will optimise army aviation to better support land, amphibious and special operations forces. Current plans for the introduction into service of new helicopters and uncrewed aerial systems, as well as how Army Aviation Command will enhance and assure the effectiveness and the sustainability of our current aircraft by transforming our organisation's training and workforce structures are key focuses for the Army Aviation Command.

Key words: Force Structure Implementation Plan; army aviation; Army Aviation Command; CH-47 F Chinook; AH-64 E Apache; UH-60 M Blackhawks; Uncrewed Aerial System (UAS); Australian Defence Force (ADF).



*Rotary Wing Army Aviation Air Vehicles.
[Source: Department of Defence].*

In July 2020, the Australian government released the 2020 Defence Strategic Update combined with the Force Structure Plan outlining a new strategy for Defence and the capability investments required to deliver it. The Update sets out the challenges in Australia's strategic environment and the implications for defence planning. It provided a new strategic policy framework to ensure Australia is able and is understood to be willing to deploy military power to shape our environment, deter actions against our strategic interests and when required respond with military force.

Australia now face in the region an environment of increased strategic competition, the introduction of more capable military systems enabled by technological change, and the increasingly aggressive use of diverse grey zone tactics to coerce states under the threshold for a conventional military response. Overall, this is expected to lead to a heightened risk of high-intensity conflict with lessened strategic warning time than has not been seen in decades. Coupled with increased threats to human security in some nations of

the Indo-Pacific, the likelihood of increased political instability in the region is possible.

Australia's security environment in the Indo-Pacific region will be reshaped also by threats compounded with population growth, urbanisation and extreme weather events in which climate change plays a part. While the response to these challenges is frequently discussed in terms of platforms, our submarines, helicopters and tanks; as leaders, meeting such challenges will rely upon our ability to provide more people in more teams for more missions more often. As demands and expectations placed on the Australian Defence Force (ADF) are increasing rapidly, our current workforce models are proving increasingly unsuited to the contemporary environment. Demographic change is limiting the effectiveness of our traditional means of attracting and retaining people with the necessary skills to fully utilise the raft of new platforms being introduced into service. The complexity and speed of technological change requires a more contemporary point-of-need training system able to keep pace with the human machine interface. The rate of geostrategic change demands agility and adaptability in our workforce, in our workforce management systems, and the means by which Defence teams with other organisations can deliver solutions and options to the government of Australia.

Shifts in the labour market are altering the propensity of Australians to consider Services life as a viable employment option. "Competition and conflict simultaneously" is termed "accelerated warfare" by the Chief of Army. This requires us to be an army in motion, balancing the needs to be ready now to meet current requirements against the need to evolve our organisation, our culture, and our people to bring the next generation of platforms into service and be future ready. For this reason that the Army has developed the

Army Force Structure Implementation Plan¹, a road map for the modernisation of our structures, our equipment, our organisations to support the required level of transformation over the coming decades.

Army Aviation Command

One of the work packages is the raising of Army Aviation Command with myself as its inaugural Commander. As is widely acknowledged, the Australian Army has faced significant challenges with its current generation of rotary wing platforms. Supportability of the current generation of platforms has played a part across multiple reviews and restructures of the army aviation capability. However, since 2002 such reviews have been unable to resolve three persistent challenges:

- unwieldy command and control with multiple points of accountability;
- organisational complexity exacerbated by geographical dislocation; and
- the overarching requirement to manage the air worthiness of increasingly advanced systems.

The decision taken was to reform Army Aviation into a functional command optimised for accelerated warfare to generate and sustain Army's aviation elements for deployment. This places Army Aviation in a parallel structure to the existing functional commands within Forces Command, Special Operations Command and the First and Second Divisions. Army Aviation Command is designed to align command control force generation, capability management, sponsorship, air worthiness management and governance. The Commander Army Aviation Command commands all of Army's aviation units, assumes military air operator accountable manager responsibilities for all of Army's aircraft, and thereby therefore becomes the single point of accountability to the Chief of Army for Army's aviation capability. The end-state is for headquarters Army Aviation Command to reduce the burden of air worthiness and capability program sponsorship currently born by other headquarters in Army; and to optimise force generation and individual training; and be poised to lead transformation of current and future Army aviation capabilities.

The formation of Army Aviation Command is only the beginning of changes underway for Army aviation. The Command is also commencing a significant recapitalisation of our fleet including the acquisition of an AH-64 E Apache Guardian, UH-60 M Blackhawks, additional tactical uncrewed aerial systems and CH-47 F Chinooks as we move towards future vertical lift in the next few decades. In doing so we have three key priorities;

- stabilise our legacy platforms including the Armed Reconnaissance Helicopter (ARH) Tiger and the multi-role helicopter 90 or MRH90 Taipan to a level of sustainable capability to provide a foot on the ground as we move forward;
- reinforce the enduring systems including CH-47 F Chinooks and AW139 general support utility helicopters to provide a wider span of support to the nation such as during the recent volcanic eruption in Tonga and flooding in northern Australia; and
- prepare for the introduction of new systems including the Apaches the new Blackhawks and new tactical uncrewed aerial systems.

Helicopter Assets - Army Aviation Command

The history of the ARH Tigers and MRH-90 Taipan in Australia has been sufficiently litigated in the public domain. However, despite recent government decisions these systems will remain in service for several years. We need to reset our expectations of them so that they can reliably achieve what we set, and therefore stabilise our support system around them. To do this we will need to reinforce our enduring platforms at the core of which are the CH-47 F Chinooks which is Defence's largest helicopter. It has a proven track record of supporting ADF operations in Australia, our near region, and further afield. The Chinook provided essential airlift capability in Afghanistan through the period 2006-2013 and has been instrumental in relief efforts domestically including operation bush fire assist, operation flood assist throughout our region.

The reliability and the performance of Chinook helicopters in both domestic and operational environments has exceeded our expectations. It's an example of a mature, proven, reliable and affordable helicopter and support system. Defence recently acquired four additional CH-47 F Chinooks increasing the fleet from 10 to a more effective and sustainable 14. First of the two additional air vehicles arrived in June 2021 the remaining two are due to be delivered in June 2022. The additional Chinooks will provide resilience to the essential fleet of battlefield lift support helicopters. While it technically falls into the category of new acquisitions, the recent government decision to pursue the acquisition of UH-60 M Blackhawks is also an example of our focus on mature, proven, reliable and affordable systems.

Defence has requested information from the United States government on the acquisition of up to 40 UH-60 M Blackhawks through foreign military sales. The UH-60 M is the latest version of the Blackhawk and is combat proven in comparable roles. Representing one of the largest single utility helicopter variants in the world, this acquisition will resolve current capability limitations and improve value for money through delivering a reliable, sustainable and enhanced battlefield utility helicopter for Defence.

¹The 2020 Force Structure Plan outlines a new strategy for Defence and the capability investments to deliver it. The Plan details the Government's intentions for new and adjusted Australian Defence Force capability investments to implement the new strategic objectives contained within the 2020 Defence Strategic Update.

Regarding the remaining upcoming acquisitions; while the introduction of new platforms may be routine activity, however, these are not like-for-like replacements. A significant increment of additional capability will require substantial organisational changes to support them. The best example is for the 864 E and the tactical Uncrewed Aerial System (UAS). The acquisition of the AH-64 E Apache Guardian under 'Land 4503-1'² armed reconnaissance helicopter replacement, seeks to provide an armed reconnaissance capability that is assured in the future battlespace leading to 2050. Army is seeking approval for the acquisition of 29 Apache Guardians. The schedule is deliberately aggressive. Introduction into Service activities commence in 2023, with initial operating capability scheduled for 2026, and final operating capability for 2029. Apache is also a proven and mature platform that will provide an enhancement in reconnaissance attack and security operations. Apache is equipped with systems that will provide an increased ability to sense battlespace actors and conditions. It can attack targets with a scalable range of kinetic and non-kinetic effects across the battlespace to provide greater situational awareness and enhanced decision making across the joint force. Its capabilities represent a level of firepower and connectedness that our combat aviators at the First Aviation Regiment are keen to deliver to the Army and to the joint force. Apache will survive and thrive in the close and deep contested battlespace utilising sophisticated self-protection and manoeuvre at speeds and ranges commensurate with other in-service rotary wing capabilities. Apache capabilities will include tactical data link fire control radar, modernised target acquisition and designation, site cognitive decision aiding system, modernised radar frequency interferometer, and advanced aerial teaming (formerly known as manned/unmanned teaming).

The Land 129 Phase 3³ tactical UAS enhancement upgrade and/or replacement seeks to acquire new tactical and UAS to replace the Shadow 200. Initial operating capability is planned for fiscal year 2324 and final operating capability in fiscal year 2526. The project will deliver a resilient airborne I-star capability for the combat brigade that accelerates joint force tempo. It will be introduced into service and be operated by the 20th Regiment Royal Australian Artillery. The system will be deployed as configurable tactical UAS capability bricks, each capable of 24/7 coverage of a focal area. Six tactical UAS capability bricks will be delivered equipped with highly integrated protected mobility

vehicles capable of providing battle management intelligence and targeting outputs. The project includes a third tactical UAS subunit at the 20th Regiment and updated facilities for housing new equipment and conducting training including improved simulation. Acquisition of the replacement system will reduce performance issues noted in the in-service Shadow 200⁴ which is approaching the end of its service life. The new system will be runway independent with protected mobility secure data links and a reduced footprint, a lower noise signature, a modular and multi-payload capability, longer endurance and enhanced teaming capabilities.

Of note we are delivering against sovereign industrial capability priorities by harnessing innovation and using industry to design and upgrade surveillance capability; for instance, utilising an Australian made Spitfire Camera Gimbal⁵. This is the first successful defence innovation hub proposal to be fully integrated into service.

The above two capabilities are being introduced in parallel as a part of the battlefield aviation program's 'Attack and ISTAR line of effort'⁶. There is a compelling case to bring these two combat systems much closer as the basis for a formidable aerial combined arms team at the core of a broader combined arms ecosystem; similar to the infantry and the armour form the core of a powerful ground-based combined arms team complemented by combat engineers. Herein, the gunners of the 20th Artillery Regiment and the combat aviators of the 1st Aviation Regiment should form the nucleus of an aerial combined arms team complemented with intelligence, electronic warfare and long-range rockets. This aerial arms team comes together as a formidable air-land combat team with our armoured ground reconnaissance regiments, special forces logistics and C4 ISR capabilities that represent the connected, protected, enabled and lethal capability at the heart of Army's contribution to the joint force.

An example in a future ready context is described by the British Army in their future soldier system establishment, of a deep reconnaissance brigade combat team to include Apache Wildcat rotary wing Istar helicopters, tactical UAS, multiple launch rocket systems, electronic warfare and Ajax armoured reconnaissance elements at the heart of this combat system. This type of advanced teaming forms a step-change of how we operated in the past, and nests with wider army and ADF modernisation initiatives including the acquisition of uncrewed combat aerial vehicles through

²LAND 4503's program of delivery aims to support the Australian Army and is designed to contribute to the creation of the modernisation and development of a 'networked and hardened' Army.

³'Integrator' tactical uncrewed aerial systems (UAS) designed to deliver enhanced intelligence, reconnaissance and surveillance (ISR) capabilities, while also supporting the acquisition of targets for weapons systems across the Australian Defence Force.

⁴Shadow 200 is the smallest of the Shadow family of unmanned aircraft systems, operational with the Australian Army.

⁵Optical camera sensor and image stabilisation technology that offers a significant capability, incorporated into the Australian Army's new tactical unmanned aerial system.

⁶NATO-owned Intelligence, Surveillance, Target Acquisition, and Reconnaissance (ISTAR) capability.

the Royal Australian Air Force's 'Ghost Bat'⁷ project and ongoing Army's experimentation with autonomous vehicles. It preserves Army's focus on combined arms warfare by which we achieve success in the battlespace.

Army Aviation Capability

On assuming the role of Commander Army Aviation Command, I undertook a 100-day assessment of Army's aviation capability. The assessment identified a need to develop a holistic strategic framework for providing coherent and consistent direction across the capability to enhance planning and inform strategic thinking now and into the future. It was determined that the framework would encompass a new fighting concept that will ensure Army Aviation Command realises the Army Force Structure Implementation Plan work package for Army's aviation capability, while remaining culturally and operationally fully aligned and in lockstep with Army's fighting concept. This will be expressed as a future operating concept document to be realised and harnessed through the development of an Army Aviation strategy. The concept document will describe and set the requirement for how Army Aviation capability will fight as a component of the combined arms. In order to generate land power to the joint force, it must meet the requirements of Army to deliver land power to the joint force in land, amphibious and special operations environments, both, domestically and externally. The document must align to the Chief of Army's guidance as expressed in Army's contribution to Defence Strategy Edition 2 "Army in Motion", to meet the demands of accelerated warfare. Principally the concept answers how Army Aviation will respond to the need for increased capacity as described in the passage of that document, which states that "Army is increasing its agility and capacity and introducing new concepts and capability; this sets the conditions for Army to provide more teams for more missions and more operating environments".

More often the concept is to be grounded in the lessons, concepts and organisations that have evolved in our recent past to include the aviation battle group, the aviation amphibious combat element and the special operations aviation task group. From there it will take a pragmatic yet visionary view of what can be conceivably incorporated into the combat aviation system with a focus of the period 2028 to 2023, which approximates to the final operating capability of the 864 E under Land 4503 and then with lower fidelity onwards to 2043. The concept is to be evolutionary and operationally feasible from that time frame, ensuring that it outlines how Army Aviation will deliver more support in more places more often.

Importantly, the concept is to bring clarity to the roles, tasks, organisations and characteristics that Army Aviation employs in the battlespace for the benefit of the consumption of the broader combined arms team. The Army Aviation strategy will establish the vision, mission, goals, objectives, major lines of operation, and decision points across a 20 year time horizon from 2023. It will have higher fidelity in the first 10 years. The strategy will meet the needs of the future operating concept document; in the first instance describing how army's aviation capability will achieve the Army Force Structure Implementation Plan. It will encompass the battlefield aviation program strategy which is a strong focus on major systems. The strategy will take a broader view to include disposition and fundamental inputs to capability with a particular emphasis on workforce training simulation. For industry the strategy must be designed to offer leadership across the entire Army aviation enterprise including but not exclusively to the Army capital acquisition and sustainment group.

Army Aviation - Defence Industry

For our valued industry partners one key concept to be explored is the strengthening of the 16th Aviation Brigade and the Army aviation capability as a whole to improve our capacity to meet the ongoing and future operational liability. The main problem needing address is that there are not enough people within the 16th Aviation Brigade or the Army aviation capability to meet the demands that will be placed on them. The Army Force Structure Implementation Plan introduces two organisations:

- the aviation support battalion; and
- the domestic general support aviation squadron.

To enhance capacity each of these organisations represent the vessels for import and growth of substantial total workforce system in categories and service options other than the regular Army service category Sercat-7. The Army aviation strategy will define these with a view to commence operation from 2024-2025. The key outcomes associated with this growth allow for more assured Army aviation effects in more places, more often.

As you can see we certainly have our hands full between a significant body of work in developing new strategy for the way forward, as well as the significant recapitalisation of our fleet. Overall this begs the question of how we can balance generating more teams in more places more often ready now with freeing up organisational capacity for future ready new platforms. In a workforce constrained environment this was a key focus of the 100-day assessment for me to understand how we might go about navigating this challenging environment. The assessment revealed a number of key points;

- personnel within the capability already feel they are being asked to do too much with available resources;

⁷The first Australian-built aircraft in 2021.

- the need for low density high demand capabilities such as aviation is expected to increase into the future; and
- major increments in capability coming in the future include 864 E Tactical UAS and UH-60 M for which we lack sufficient latent capacity to support introduction into service.

So the question for Aviation becomes how do we support the wide span of tasks for ready now with a brittle specialised capability, while generating offsets to free up capacity for future ready. This will require bold strategic change to remediate issues quickly and to set the preconditions for introduction into service of 864 E and to meet increasing future demands and we have commenced this effort.

In the early 1990s, the Australian Army was structured around a model in which almost all functions were provided by uniformed personnel. This ranged from aircraft maintenance to engineering support through to catering, medical and pay administration. However, over time it became apparent that as a small military, the requirement to furnish these services from a finite number of uniformed men and women was artificially constraining the capability of the ADF. As a result a process began which was colloquially known as “feeding the tail to the teeth”, in which services which did not necessarily need to be performed by uniform members such as all of our pay administration, or in certain circumstances such as medical and catering were increasingly undertaken by contractors; with resulting personnel savings being reinvested in army-only functions such as the combat arms. This maximises the combat power able to be generated by a combat force. The finite size of Army Aviation capability saw the majority of engineering support being provided by contractors. Often original equipment manufacturers do the more complex maintenance tasks such as deep maintenance and component level of overhaul.

While this model achieved its stated objectives it was not without shortcomings. The transactional nature of the contractual arrangements with industry partners set preconditions for friction to develop. In circumstances where aircraft were delayed in deep maintenance, parts failed to return from overhaul at the required rate, or engineering advice was not forthcoming, relations ceased to be cordial. We learnt a lot from this experience, developing more blended workplaces to better leverage deep industry skills. We recognised the need to be less transactional and more transformative. As we go forward, we need to move away from a model where everything is in-sourced or out-sourced. The Army's cultural aversion to ceding control to outside parties has to be surmounted. To do this we must get defence and industry come together in a united enterprise which provides holistic inclusive and strategic leadership to deliver what is required of us by our nation and its citizens. In doing so

we can break down barriers of us versus them and cooperate more effectively. While we have already made some great strides in this endeavour there is much more to be done to prepare us for the systems of the future.

Conclusion

Given Australia's strategic environment, the formation of Army Aviation Command, new acquisitions and the organisational and workforce changes are crucial to support the Command into the future. The Army Aviation Command is a functional command for ready now and future ready. It's a functional command led by soldiers delivered by soldiers and above all else for the soldier.

The Author

Major General Steven Jobson is an alumnus of the Australian Defence Force Academy and Royal Military College, Duntroon, and was commissioned into the Army in 1989 into the Army Aviation Corps.

In 2001/02 as a Captain he served as an exchange officer in the U.S. Army's 82nd Airborne Division as a Black Hawk pilot where he was deployed to Bosnia-Herzegovina, followed by a deployment in Afghanistan.

He is qualified as an Army pilot and aircraft captain on AS-350B Squirrel, S-70A-9 Black Hawk, UH-60L Black Hawk and MRH-90 Taipan helicopters. He was the Commanding Officer of the 6th Aviation Regiment and the Brigade Commander of the 16th Aviation Brigade.

He is currently the inaugural Commander Aviation Command, prior to which in 2020 he was as the Chief of Operations of the NATO Resolute Support Mission, Afghanistan.

During service, Jobson was awarded the Conspicuous Service Cross and the Member of the Order of Australia. For his service as Chief of Operations of the NATO Resolute Support Mission he was awarded the U.S. Legion of Merit (Officer).

As a graduate of the United Kingdom Advanced Command & Staff College, Jobson was awarded the Thales Prize for Best International Student. He is a graduate of the Australian Institute of Company Directors, the Joint Task Force Commanders Course and Harvard Club of Australia Leadership Program.

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