INTEGRATING AIRBORNE ELECTRONIC ATTACK INTO THE AUSTRALIAN DEFENCE FORCE

*Future conflicts will not be won simply by using the EM spectrum and cyberspace; they will be won within the EM spectrum and cyberspace. This will require changes to our operating concepts, military systems and, most importantly, a new way of thinking.*


At 1332 Pacific Standard Time on 24 January 2017, two EA-18G Growlers of No 6 Squadron RAAF roared into the air from Naval Air Station Whidbey Island. These first flights marked the Growler Airborne Electronic Attack (AEA) transition from acquisition to in-service. The RAAF has become the only operator of Growler outside of the United States Navy, the result of a dedicated, collaborative effort from both sides of the Pacific. The exceptional level of integration between the two services was showcased during the Australian International Air Show in March 2017 with the US Commander Electronic Attack Wing Pacific flying on board one of the RAAF Growlers.

The initial cadre of Australian aircrew commenced training with the US Navy in 2013. They flew in various operational and instructional roles embedded within US Navy squadrons to maximise experience. The aircrew transitioned back from this secondment at the same time as No 6 Squadron’s switch from being a Super Hornet squadron to a Growler squadron in December 2016. The squadron, however, will continue to operate from Whidbey Island until June 2017. The US basing is required to complete acceptance of all twelve Growlers and to conduct initial operational test and evaluation. The test activities will conclude with a deployment to Naval Air Weapons Station China Lake for advanced electronic warfare and weapons testing. Once back in Australia, the focus will be on integrating the Growler capability into Air Force and the wider Defence. This level of electronic attack and electronic warfare capability will, as Admiral Greenert observed, be a transformational activity to the way the ADF conducts training and operations.

From purely a platform perspective, Growler is ready to be unleashed. The aircraft is 90 per cent common with the F/A-18F model, demanding expansion, but not wholesale change to support services. Despite the airframe similarities, the unique electronic attack role provides several challenges for Air Force. The Growler is not a fighter aircraft and although the aircrew require similar core skills, No 6 Squadron will not operate in any way like an existing fighter unit. Instead, concurrent, small deployments in support of the joint force will be the norm. Growler is also not a traditional intelligence, surveillance and reconnaissance (ISR) platform; it delivers the capability to influence the electromagnetic spectrum rather than just monitor it. Successfully integrating this capability into the ADF will be the challenge for declaring Initial Operating Capability (IOC) in July 2018.

Some elements of the capability will require significant change and introduction of the support base. Training Growler aircrew for current and future threats is a case in point. The electronic attack project includes resources to introduce force-level electronic warfare training at Delamere Air Weapons Range. This will be delivered in the form of the Mobile Threat Training Emitter System; emitters designed to provide electronic warfare training for other ADF aircraft as well as targets for Growler. The
infrastructure, security procedures and information flow at Delamere is shaping future RAAF range management. Delamere is providing the ‘live’ starting point for the Air Warfare Centre’s endeavour to deliver a robust live, virtual and constructive (LVC) training environment. The training complexity in high-threat scenarios and the integrated nature of mission sets steer Growler toward this future of this level of simulation and training. Additionally, a distributed mission training system is required to ensure the electronic attack capability becomes a normal part of exercises and operations. It is to ensure Australian forces achieve their objectives in the congested and increasingly contested electromagnetic spectrum.

Like the F-35, the EA-18G is the sharp end of allied intelligence and operational data and analysis. It fuses this intelligence with data from on-board sensors and other capabilities in order to provide enhanced understanding of the battlespace, which in turn, enhances the capabilities of the joint force. The wider Australian intelligence community is key to the production and management of this intelligence data. Significant success has already been achieved through the commitment and support between Australian agencies and the US Navy in particular, but a lot of work remains for Defence and industry to develop the systems and architecture required to counter complex future threats. The Growler project is already contributing a number of personnel to intelligence agencies in order to drive production of the data that is required.

Growler is the first ‘cab off the rank’ of several major systems coming for the ADF that will operate in and affect the electromagnetic spectrum. EA-18G is therefore both the champion and test case for groundbreaking reform across the operational level of command. Growler is a true joint force capability, with the ability to both support and affect activities across the spectrum of operations.

Growler will require an unprecedented level of integration into operational planning and execution across the joint force. Integration will require the use of innovative new planning and execution tools to support revised operational processes. Industry will have a significant role to play in helping to define and develop these integration tools. The Growler project is at the vanguard of significant change to define new requirements, mission planning tools and processes, particularly those of joint electromagnetic spectrum operations. This year the Growler project is providing establishment to the Air Operations Centre in order to create and develop the Air Force Electromagnetic Spectrum Operations Cell; force-level electronic warfare is about to be realised as a new capability.

Growler is a catalyst for change in force training and electronic warfare command and control throughout the ADF. The transformation will extend well into the next decade as the airborne electronic attack capability matures and fighting in the electromagnetic spectrum becomes part and parcel of normal operations. The challenge for Air Force will be to ensure that when Growler strikes, it will do so as a controlled, coordinated and precise effect in the battlespace.

**Key Points**

- Growler is now part of the RAAF inventory with IOC scheduled for July 2018.
- As the only operator of the EA-18G outside of the US Navy, Australia is now able to deliver a force-level EW capability to influence the electromagnetic spectrum.
- The Growler capability requires change throughout Defence in training and EW command and control systems.