

ADM **DEFENCE WEEK** AUSTRALIAN DEFENCE MAGAZINE SERVING THE BUSINESS OF DEFENCE **PREMIUM EDITION**



A RAAF E-7A Wedgetail arrives in the Middle East.

DEFENCE

Boeing Defence Australia lends support to UK and US

Julian Kerr | Sydney

Boeing Defence Australia (BDA) is playing an important early role in supporting the establishment of the UK's Wedgetail Airborne Early Warning and Control (AEW&C) program, BDA Managing Director Scott Carpendale has disclosed.

Carpendale told media that this activity began shortly after the UK signed a [US\\$1.98 billion contract](#) on 22 March for five Boeing E-7 AEW&C aircraft. Deliveries will take place in the early 2020s.

"Within Australia we have a leading role both in supporting the development of the UK aircraft and aircraft systems and also in making sure the UK Ministry of Defence (MoD) is able to establish a support infrastructure that gives them the same capability as Australia's Wedgetail program," he said.

The work was being undertaken in conjunction with Boeing UK and the UK MoD.

"We have a project team, we have people in

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Williamstown who are building some of the ground segments that will be shipped to the UK, we are undertaking software development in Australia that is part of an integrated software development team with a UK software baseline," Carpendale stated.

Implementation of the \$582.5 million upgrade program for the RAAF's Wedgetail fleet announced in July 2017 was continuing on schedule, he also disclosed.

Under [Project Air 5077 Phase 5A](#), BDA is fitting the six Wedgetails with new combat identification sensors, tactical data links, communications hardware and encryption systems, and mission computing hardware and software upgrades.

The work will be completed in mid-2022.

Carpendale described the upgrades as meeting uniquely-defined Australian requirements, and declined to comment on whether any might be included in the UK AEW&C program.

"But I would agree that some of the capability would certainly appeal to the UK," he added.

"We have people in Williamstown who are building some of the ground segments that will be shipped to the UK"

Comms Export Opportunity

BDA is also seeking export opportunities in both the UK and the US for its \$950 million [Currawong Battlespace Communications System](#), according to Darcy Rawlinson, BDA's Business Development Manager for Deployed Network Communications Systems.

Developed under Project Land 2072 Phase 2B, Currawong is providing a digital strategic communications system linking Army's deployed forces and headquarters, and achieved Initial Operating Capability (IOC) with the ADF in April last year.

Rawlinson said the British Army was seeking a wide area network for its headquarters under Project Trinity, "and Currawong provides a lot of the requirements of that program, so what we'll be offering, probably sometime over the next two years, is something based on the technology in Currawong.

"We do have the ability to modify that where the UK has slightly different requirements; we have our 120-strong team here in Australia and we also have a team in Boeing Defence UK helping us with this as well."

Rawlinson said the US Army was looking to upgrade its Warfighting Information Network Tactical (WIN-T), now more commonly known as the Integrated Tactical Network, and certain elements of Currawong were of interest.

"They're quite keen to take the next stage of doing some formal testing with the system over in their labs so they can understand exactly how it performs. That will probably happen in the next six months," Rawlinson disclosed.

"It will really be about Currawong doing some of the heavy lifting on the networking side, our routing and our network management system. You never have enough bandwidth and someone can be trying to deny that space to you.

"Here our headquarters are constantly moving, so it's really important that the network is very agile and flexible to deal with all that while reducing the complexities that soldiers have to deal with," Rawlinson said.

"It does that for the Australian Army and the US see that as something which can really enhance their network, and something for which it is well-worth continuing their dialogue with us."

MilCIS 2019 highlights

Katherine Ziesing | Canberra

The annual gathering for all things ICT and comms related, MilCIS 2019 has seen the C4I community gather in Canberra for its annual get together, the largest regular conference hosted in the territory, according to ACT Minister for Advanced Technology and Space Industries Mick Gentleman.

Chief Information Officer Steve Pearson opened the proceedings confirming CIO Group's four main priorities:

- Enable ADF operations
- Cyber security
- Stable and sustainable information environment
- User focused

"We need to make sure it works in a deployed environment first," Pearson said, commenting on the change of focus for the group that has met with past criticism of a lack of deployed user focus. "That's been a big change for us."

He also confirmed that Defence needed to 'upgrade and maintain our tools while investing in people in the cyber fight'. "We're working very closely with Head of Information Warfare Major General Marcus Thompson to this end."

He also commented that the joint programs being delivered under ERP and EIM will see 'standardisation and consolidation of hundreds of networks and thousands of applications'.

"Technology is coming at us a rate that is impossible to consume," Pearson said. "Our ability to use it effectively is limited to what we apply it to. Doing so many large programs concurrently like Next Gen Desktop, data centre consolidation and the roll out and retirement of major systems concurrently is a challenge in itself. But we are getting towards the end of the infrastructure roll out."

The human face of the technology challenge was addressed by MAGEN Thompson who was blunt in how the speed and breadth of technology is introducing its own challenges.



Aircraftman Brendan Greenwood monitors the Base Radio Communications Device at Williamson Airfield.

DEFENCE



ACT Minister for Advanced Technology and Space Industries Mick Gentleman and ACT Defence Advocate Kate Lundy. *ADM/DAVID JONES*

“None of you can bring me a whole of world comprehensive solution to my concerns”

“Meeting the information challenge that we are all facing means collaboration at every level, setting aside competitive probity when speaking with Defence,”

MAJGEN Thompson said when speaking about how industry interact with each and Defence in this space. “This is an opportunity to have a different kind of conversation to solve the next set of problems before they hit us. I would much rather talk to your pointy heads than your BD people.

“None of you can bring me a whole of world comprehensive solution to my concerns. None of you. And I don’t expect you to. I expect you to work together.”

He asked delegates to consider how best to have the cyber debate in the wider public arena, how do we improve cyber resilience at a national level and what is the role for Defence in these two conversations. He was also very aware of the agile nature of his domain as ‘the digital world is pushing the way in which technology and politics join and mesh’.

Acting Chief Technology Officer in CIOG Justin Keefe confirmed that the group is looking at adopting cloud technologies at an enterprise level ‘within five years’ with a long list of caveats attached. A refreshed strategic directions paper is also in the works to replace the current 2016 to 2020 document, to be supported by an accompanying investment plan.

There was an acknowledgement from both Keefe and MAJGEN Thompson that many of the programs in CIOG are hard to pin a final operational capability point against given the iterative nature of the technology they deliver.

But the user community is clear in their demand for an outcome that sees data accessible, anywhere, any time with a high level of reliability and resilience.

“What we’re aiming for is real time digital collaboration between any node, anywhere to deliver joint effects,” Head of Force Integration Brigadier Kath Toohey told delegates. “The hardest part of this new wave of technology driven operations will be human commanders letting go and trusting AI and big data to make decisions in nanoseconds that they physically cannot.”

PEOPLE ON THE MOVE

Boeing has named Scott Carpendale as vice president and managing director of Boeing Defence Australia. He succeeds Darren Edwards, who passed away on 22 September. Carpendale will be based at BDA's head office in Brisbane.

Northrop Grumman wins tactical data link contract

Northrop Grumman has been awarded a three year contract by the ADF Tactical Data Link Authority (ADFTA) to deliver tactical data link (TDL) systems and training as part of the development of the ADF's Joint Data Network.

ADFTA ensures TDL-functionality to achieve single, joint and combined TDL interoperability for the ADF.

"Northrop Grumman has extensive experience in networking and tactical data links across multi-domain forces, and a robust capability roadmap that will deliver increasingly enhanced data link technology in the years ahead," Chris Deeble, chief executive of Northrop Grumman Australia, said. "The Northrop Grumman engineers that delivered the F-35 Multifunction Advanced Data Link and communications, navigation and identification technologies will now be developing the ADF's future TDL technology."

The technology at the core of Northrop Grumman's advanced multi-TDL system provides connectivity between fourth and fifth generation platforms, as well as future data links and networks. The tech improves the long term value of existing platforms and systems by making certain that they can interoperate with emergent 5th generation capabilities.



Northrop Grumman's tactical data link system connects fourth and fifth-gen platforms.

DEFENCE

Final AWD completes sea trials

The third Air Warfare Destroyer (AWD), NUSHIP *Sydney*, is on track to be delivered to the Navy in February 2020 after completing sea trials.

Sydney is the third and final ship being delivered by the AWD Alliance, which includes Defence, Raytheon Australia, and ASC Shipbuilding supported by Navantia Australia.

Minister for Defence Linda Reynolds said the success of [sea trials](#) represents a significant step towards the ship's delivery.

"*Sydney* will enter into service early next year, and with her sister-ships HMA Ships *Hobart* and *Brisbane*, they will be the most potent warships to date," Minister Reynolds said.

"By using a combination of Australian and globally proven technologies, these highly capable warships are truly world-class and will allow us to work even closer with our allies."

Following sea trials, final production work including the integration of the MH60-R helicopter, will be completed ahead of the ship's provisional acceptance into service in February 2020.

That anticipated date of delivery is several months earlier than previously scheduled thanks to a decision to modify the storage of Mk54 torpedoes and AGM-114N Hellfire missiles for the ship's MH-60R naval combat helicopter as part of the construction process rather than after its completion.

The modifications include racks for Hellfire and Mk54 storage, enhanced safety measures and the installation of blowout doors for the magazine. Additional magazine space will enable flight-in-air material to be fitted to the Mk 54 in the magazine rather than the hangar.

"These highly capable warships are truly world-class"



NUSHIP *Sydney* undertaking sea trials.

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MOST READ ONLINE AT WWW.AUSTRALIANDEFENCE.COM.AU

1. [LHDs declare final operational capability](#)
2. [Senate Estimates looks at shipbuilding programs in depth](#)
3. [Airbus offers upgraded Tiger + H145M for Land 4503](#)
4. [Orbital makes first flights in Australia](#)
5. [Airbus goes live with classified LO program](#)

Latest patrol boat gifted to Solomon Islands

The Commonwealth handed over the latest [Guardian-class patrol boat, RSIPV *Gizo*](#), to the Solomon Islands at a ceremony in Henderson, WA.

RSIPV *Gizo* was received by Prime Minister Manasseh Sogavare and Minister of Police, National Security and Correctional Services Anthony Veke.

Minister for Defence Linda Reynolds said the handover of the Patrol Boat reinforced Solomon Islands' position as one of Australia's key partners in the Pacific region.

"Australia and Solomon Islands have worked together over many years in support of our collective regional security goals and values," Minister Reynolds said.

"Our partnership is founded on decades of engagement, further strengthened by the Australian Government's commitment to assist Solomon Islands to build a police outpost and a Patrol Boat berth."

RSIPV *Gizo* is the fifth of 21 Guardian Class patrol boats to be gifted to 12 Pacific Island nations and Timor-Leste under the \$2 billion Pacific Maritime Security Program.



Members of the *Gizo* crew stand at attention whilst the Solomon Island national flag is raised.

DEFENCE

“Our partnership is founded on decades of engagement”

Minister for Defence Industry Melissa Price, who officially handed over the RSIPV *Gizo* to the Solomon Islands, congratulated the delegation on their new capability which is designed and built by Austal.

“The Pacific Maritime Security Program builds on the success of the Pacific Patrol Boat Program and Australia’s commitment to deep engagement with Australia’s neighbours,” Minister Price said.

“We’re very proud of the fact we have delivered five Guardian Class Patrol Boats in less than 12 months, and even prouder of the consistently positive feedback we are receiving from the Pacific Island nations operating them,” Austal CEO David Singleton said.

Twelve Pacific Island nations including Papua New Guinea, Fiji, Micronesia, Tonga, Solomon Islands, Cook Islands, Kiribati, Marshall Islands, Palau, Samoa, Tuvalu, Vanuatu and Timor Leste will receive the vessels through to 2023.

Norwegian F-35s achieve IOC

Norwegian air chief Major General Tonje Skinnarland has declared Norway’s F-35As operational after completing a deployment this month.

The deployment was undertaken to validate that the Norwegians are able to operate the jets away from Norway’s home base of Ørland Main Air Station.

Norway is the third European country to declare IOC, after the UK and Italy.

“I would like to congratulate the Norwegian Armed Forces on declaring Initial Operating Capability (IOC) with the F-35. This is a big day for the entire Armed Forces,” Norway’s Defence Minister Frank Bakke-Jensen said.

Over the last two years, the Norwegian Air Force has conducted intensive operational testing and evaluation (OT&E) in Norwegian conditions such as winter



Norway’s Minister of Defence Frank Bakke-Jensen, Lieutenant Colonel Ståle Nymoen (F-35 squadron chief) and Chief of the Norwegian Air Force Major General Tonje Skinnarland.

NORWEGIAN MINISTRY OF DEFENCE

operations, operations in the northern areas and in cooperation with Norwegian Army, Navy and Special Forces.

To conclude the test period, the Norwegian Armed Forces spent several days transferring aircraft and equipment from Ørland Air Station to Rygge Air Station (close to the capital Oslo). This was the first time the fighter aircraft were operated from a base other than Ørland.

In 2020, Norway's F-35s will deploy to Iceland to conduct air-policing efforts on behalf of NATO. In 2022, the Norwegian Air Force will have built up enough F-35s, pilots and maintainers in-country to let the F-35 take over the "quick reaction alert" mission, which calls for operators to stand on a 24/7 alert and scramble, if needed, to intercept aircraft flying near Norwegian airspace. These F-35s will be ready for air-policing in Evenes, in northern Norway.

Nine nations have F-35s operating from a base [on their home soil](#) and eight air services have declared IOC.

Australia is due to declare IOC for its F-35s at the end of 2020.

**"This is a big day
for the entire
Armed Forces"**

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Forthcoming Events

ADM EVENTS

More detail on **ADM** Events can be found on our dedicated website:

- [ADM 2020 Congress](#) – 19 February 2020

NSW Defence Innovation Network's Regional Road Show

Date: Various

Location: Various

Website: defenceinnovationnetwork.com/din-regional-road-show-2019-20

NSW Defence Innovation Network and AIDN will be undertaking a series of small business focused regional forums across NSW. Register to attend and hear about the programs, grants, opportunities and services the NSW Defence Innovation Network (DIN) provides to the small business community across NSW. We encourage small businesses to engage with us and participate in opportunities across our networks, including DIN's seven partner universities, as well as with other state and federal agencies.

Defence Ready Seminar – Defence Business Development 101

Date: 18 November 2019

Location: University of Newcastle

Website: www.eventbrite.com.au

A one-day seminar that provides valuable information to help aspiring businesses prepare for their entry to the Defence market by engaging a thoughtful strategy, identifying tenders, following a logical response process, and making the best use of trade shows. There will also be the opportunity to meet with experienced regional Industry network leads for a tailored one-on-one consultation following the seminar from either Hunternet or AIDN NSW.

SubSTEC 5 Conference

Date 18-21 November

Location Esplanade Hotel, Fremantle

Website www.submarineinstitute.com

The 5th Submarine Science, Technology and Engineering Conference (SubSTEC 5) will be held at the Esplanade Hotel, Fremantle, WA 18th-21st November 2019. The theme of the Conference will be: 'Innovation and Investment in the Sub-Sea Environment'. SubSTEC5 will be held with the support of the Institute of Marine Engineering, Science and Technology (IMarEST).

World Engineers Convention

Date 20-22 Nov 2019

Location Melbourne Convention and Exhibition Centre

Website www.wec2019.org.au

World Engineers Convention (WEC) 2019 is the peak international convention for engineers worldwide. Students will have the opportunity to meet and interact with engineering leaders who have helped influence and change the face of engineering.

Defence Seaworthiness Symposium

Date 21-22 November

Location ADFA, Canberra

Website www.defence.gov.au/seaworthiness/Contact_Symposium.asp

The Office of the Defence Seaworthiness Regulator is hosting the inaugural Defence Seaworthiness Symposium in Canberra 21-22 November 2019. The theme of the symposium is 'Reforming to Transform – Seaworthiness as a Defence wide priority'. Day 1 will consist of an address from VADM Michael Noonan and presentations from Capability Managers and their representatives as well as an informative panel discussion. Day 2 will consist of 2 concurrent workshops facilitated by staff from the Office of the Defence Seaworthiness Regulator. Places are strictly limited.

Corrosion and Prevention 2019

Date 24-27 November 2019

Location Crown Promenade, Melbourne

Website conference.corrosion.com.au

The annual ACA conference is a premium networking event and a source for the latest information about corrosion mitigation. The conference has a rich program of keynote presentations and technical papers under a range of industry 'tracks'. Corrosion and Prevention 2019 will feature an integrated exhibition, showcasing products and services of the corrosion mitigation industry.

Women in Corrosion Breakfast 2019

Date 26 Nov 2019

Location Crown Promenade, Melbourne

Website conference.corrosion.com.au/sessions/women-in-corrosion-breakfast

The ACA is hosting its first ever 'Women in Corrosion' breakfast event during the Corrosion & Prevention Conference, at Crown in Melbourne this November. This breakfast event will take the format of a relaxed panel discussion with six superstar women in corrosion.

Space Systems Breakfast Seminar

Date: 28 November 2019

Location: Lot Fourteen, Adelaide

Website: au.mathworks.com

Join us for a breakfast seminar to hear about trends in the rapidly evolving global space industry, and learn how engineers use MATLAB and Simulink for satellite and space mission modelling, satellite communications system design and satellite data analysis including deep learning. MATLAB and Simulink technical experts will provide demonstrations, best practices, programming tips and insights.

The 26th Session of the Asia – Pacific Regional Space Agency Forum

Date: 26 – 29 November 2019

Location: Nagoya, Japan

Website: www.aprsaf.org/annual_meetings/aprsaf26/meeting_details.php

The 26th Session of the Asia-Pacific Regional Space Agency Forum (APRSAF-26) will be held in Nagoya, Japan from 26-29 November 2019.

2020

AIDN National Defence Industry Gala Dinner 2020

Date 19 February 2020

Location QT Hotel Ballroom

Website consec.eventsair.com/aidn-2020/dinner/Site/Register

AIDN National invite you to attend a defence industry gala event not to be missed. The dinner will include pre dinner drinks and canapes on arrival followed by a gourmet two course dinner served with premium beverages. Guests will enjoy an evening of networking, socialising and fun which includes a VIP guest speaker, presentation of the AIDN National Young Achiever Award and Silent Auction with all proceeds donated to Legacy

Certificate IV in Responding to Organisational Complexity | Adelaide

Date 19-21 February, 2020

Location to be confirmed

Website iccpm.com/events/certificate-iv-adelaide-2020

Developed and offered exclusively by ICCPM (RTO number 41394), the Certificate IV in Responding to Organisational Complexity helps project leaders develop the skills and attributes they need to respond to complexity, as defined in the Complex Project Manager Competency Standards. This is a highly interactive course which introduces project leaders to useful tools and methodologies with a strong focus on the practical application of concepts to real-world situations.

Certificate IV in Responding to Organisational Complexity | Canberra

Date 24-26 March, 2020

Location to be confirmed

Website iccpm.com/events/certificate-iv-canberra-2020

Developed and offered exclusively by ICCPM (RTO number 41394), the Certificate IV in Responding to Organisational Complexity helps project leaders develop the skills and attributes they need to respond to complexity, as defined in the Complex Project Manager Competency Standards. This is a highly interactive course which introduces project leaders to useful tools and methodologies with a strong focus on the practical application of concepts to real-world situations.

Asia-Pacific Security Innovation Summit

Date 16-17 April, 2020

Location Queenstown, NZ

Website www.apsisummit.com/page/apsi-summit-2020

The theme of this year's APSI summit, to be held in Queenstown on the South Island, is Strengthening Security Resiliency Through Partnerships and Alliances.

AusCERT 2020

Date: 02-05 June 2020

Location: The Star, Gold Coast

Website: www.auscert.org.au/giveaway

The AusCERT Conference is the oldest information security conference in Australia. Each year, we attract in the vicinity of 800 participants and approximately 50 sponsors. AusCERT is hosting more than 50 speakers at AusCERT2020, as well as an array of tutorials, workshops, networking events & much more.

Rotortech 2020

Date 16-18 June 2020

Location Royal International Convention Centre, Brisbane

Website www.rotortech.com.au

RotorTech 2020 is the region's premier helicopter and unmanned flight systems showcase and forum, bringing together operators, manufacturers, suppliers, regulators and government across the Indo-Asia-Pacific. With a comprehensive three-day free industry conference program, RotorTech 2020 will also feature manufacturers technical workshops and an industry exhibition showcasing more than 100 helicopter and unmanned flight related companies.

43rd COSPAR Scientific Assembly

Date 15 – 22 August 2020

Location International Convention Centre Sydney

Website www.cospar2020.org

The Australian space research community enthusiastically extends the invitation to you, to meet with us for COSPAR 2020, and in so doing to forge the friendships and opportunities that will connect space research for global impact. The

2020 Assembly will combine the latest in space research findings with activities designed to enrich the global space research community – including helping equip our future leaders, and workshoping with space industry – and inspire the next generation of scientists and engineers.

Project and Program Management Symposium 2020

Date 25-26 August 2020

Location Canberra Rex Hotel

Website www.pgcsymposium.org.au

PGCS 2020 is designed to help project and program managers, and their sponsors and senior managers, develop the skills and understanding needed to deliver projects success in the next decade. Now in its 8th year, PGCS 2020 will focus on ways to build the foundations needed to create project and program success.

Land Forces 2020

Date 01-03 September 2020

Location Brisbane Convention Centre

Website www.landforces.com.au

The biennial LAND FORCES exposition is an international industry event to showcase equipment, technology and services for the armies of Australia and the Indo-Asia-Pacific. The Land Forces 2020 team is now setting about ensuring the event will achieve its goals of providing an effective platform for the exchange of ideas on key land forces issues and of taking Australian industry to the world

2021

Avalon 2021

Date 23 – 28 February 2021

Location Avalon Airport

The Australian International Airshow and Aerospace & Defence Exposition is one of Asia-Pacific's most prestigious aviation and aerospace events and the most comprehensive aviation, aerospace and defence exposition in the southern hemisphere. Avalon hosts multiple concurrent conferences and expo streams, across the spectrum of Defence, Airlines, Business and General Aviation, Sport and Recreational Aviation, Airports, MRO, Space, Unmanned Systems, Air Safety and Ground Equipment.