

# ADM

AUSTRALIAN DEFENCE MAGAZINE

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## DEFENCE WEEK PREMIUM EDITION



The Hawk has recently completed an extensive capability upgrade program.

NIGEL PITTAWAY

## DST COMPLETES HAWK FATIGUE TEST PROGRAM

Defence Science and Technology Group (DST), in partnership with BAE Systems Australia and BAE Systems UK, has recently validated the Hawk Lead In Fighter Trainer (LIFT) structure for 50,000 flight hours.

**NIGEL PITTAWAY | MELBOURNE**

The work was undertaken at DST's purpose-built H.A. Wills Structures and Materials Test Centre at Fisherman's Bend in Melbourne, which opened in August 2004. The program subjected the test article to a full range of flight loads, simulating fleet usage based on projected operational requirements, and represents five complete lifetime cycles of the RAAF's Hawk Mk.127 airframe.

The Full-Scale Fatigue Test program began in February 2006 with the initial aim of clearing the Hawk for a safe lifetime of 10,000 flight hours and the 50,000 flying hour milestone was reached 14 years later, on

### IN THIS ISSUE

DST completes Hawk fatigue test program	1
Air 555 Peregrine support works remain on schedule	3
Steady progress towards Australian space-based EW capability	4
Little pandemic relief for defence industry in Q3	6
Army regional support craft for Far North Queensland	8
Babcock outlines AIC plan for Land 2097 Phase 4	9
ADF design team wins ICEAA award	11
Forthcoming Events	12

June 5, 2020. The average life of each RAAF Hawk airframe today is around 3,000 flight hours, around one-third of the initially determined life. By August this year, the fleet of 33 aircraft had achieved a total of 122,000 hours of pilot training at RAAF Pearce (79 Sqn) and Williamtown (76 Sqn).

Australia acquired 34 Hawk Mk.127 aircraft, comprising 33 operational jets and a full-scale fatigue article (msn DT025) under Project Air 5367. The test program was required because the Hawk Mk.127 was 600mm longer and 20 per cent heavier than earlier Hawk variants, for which the original equipment manufacturer had complete fatigue

data. The test airframe was built by BAE Systems at Brough in the UK and fitted with 585 individual strain gauges before testing began at Fisherman's Bend.

The Hawk has recently completed an extensive capability upgrade program (Hawk LIFCAP) under Project Air 5438 and is a contender for the Commonwealth's Future Lead In Fighter Trainer System project, Air 6002 Phase 1, which seeks to acquire a LIFT capability for service until at least 2050.

BAE Systems Australia director of Aircraft Sustainment and Training, Andrew Chapman, said that, based on the current Hawk rate of effort, the remaining fatigue life will allow the aircraft to continue in service "well into the late 2040s."

"The Full-Scale Fatigue Test is a hugely important achievement for the Australian Lead-In Fighter program and was made possible by the collaboration of a small dedicated team across many thousands of kilometres," Chapman said. "The 2019 completion of Hawk (LIFCAP) upgrade ensures the aircraft is freshly updated and available for service in the RAAF for many more years."

A Defence spokesperson said that the Commonwealth is currently examining the range of requirements for future LIFT training out to the nominal 2050 date and that the successful completion of the DST and BAE Systems full scale fatigue test provided assurance of the Hawk Mk.127 airframe fatigue over that period.

**"THE AVERAGE LIFE OF EACH  
RAAF HAWK AIRFRAME TODAY IS  
AROUND 3,000 FLIGHT HOURS"**



The Full-Scale Fatigue Test program began in February 2006.

NIGEL PITTAWAY

# AIR 555 PEREGRINE SUPPORT WORKS REMAIN ON SCHEDULE

**Infrastructure works to support RAAF's incoming M-55A Peregrine EW aircraft under Air 555 Phase 1 remain on schedule despite the pandemic, according to Defence.**

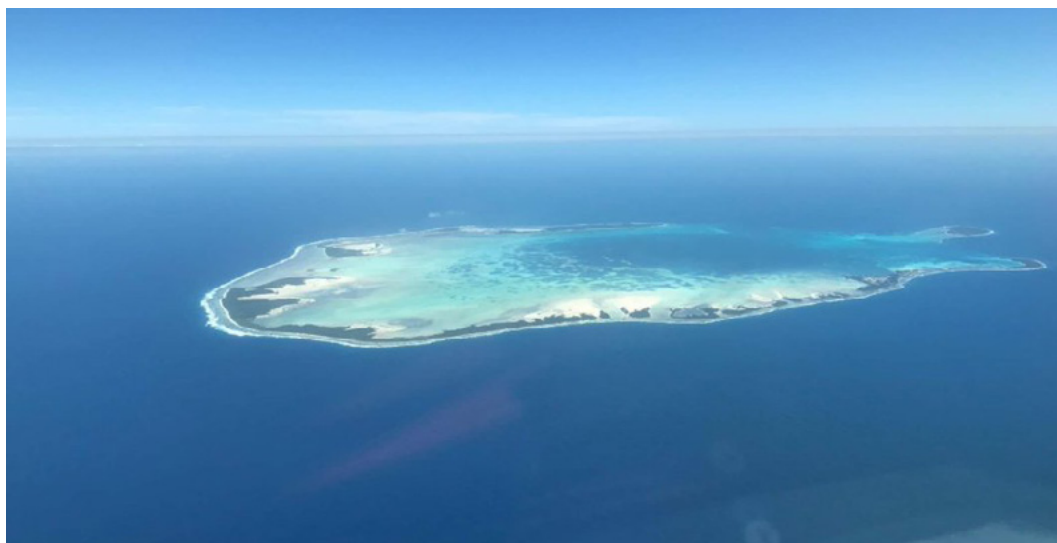
EWEN LEVICK | SYDNEY

The Peregrines will primarily operate out of RAAF Edinburgh in SA with three forward operating bases in Townsville, Darwin and the Cocos (Keeling) Islands. The main operating base at Edinburgh will be integrated into the existing ISR precinct, and the forward operating bases will include data handling, minor aircraft maintenance capabilities, and the storage of self-protection flares. Lendlease has been contracted for the works at RAAF Edinburgh.

In a public hearing of the Parliamentary Standing Committee on Public Works, Brigadier Matt Galton, Director General of Capital Facilities and Infrastructure for Defence, said that the \$290 million project remained on schedule despite pandemic-related border closures and the significant logistics involved in supplying materials to build supporting infrastructure in the Cocos (Keeling) Islands.

"We're yet to approach the market for a head contractor for the works on Cocos (Keeling)," BRIG Galton said. "But when we do, pending the committee's approval of the project, that will be sourced on the open market. So, any builder from across the country will be able to put in a bid for that, and we'll do a value-for-money assessment, and that'll be who gets the job.

"Being 2,700-odd kilometres off mainland Australia, the logistics effort to get there and to support a workforce over there is significant. But the works themselves are certainly not unique or complicated necessarily."



The M-55A Peregrines will fly from the Cocos (Keeling) islands.

@COCOS\_AIRPORT VIA TWITTER

"We'll be expecting them to actually investigate: utilisation of capacity on the island, and to minimise the impost of basically bringing in mainlanders, adding to the power draw and adding to the water use et cetera on the island," Wing Commander Chris Pozzi, Defence's Project Director for Air 555 Phase 1 Facilities Works, added. "The scale of the facilities is not large, and we are seeking to design it in the simplest manner for a rapid in-and-out build."

**"WE ARE SEEKING TO DESIGN IT  
IN THE SIMPLEST MANNER FOR  
A RAPID IN-AND-OUT BUILD"**

The Cocos (Keeling) airport is also being upgraded to support the incoming P-8A Poseidon capability.

According to Brigadier Galton, the pandemic has only strengthened the existing impetus to source local content.

"The more content we can get from within SA, obviously the less chance there is that there would be COVID impacts," BRIG Galton said. "As it stands

now, with the current restrictions that are in place, we see that the schedule that we have now is an achievable one."

Construction is expected to begin next month and finish in December 2024.

## STEADY PROGRESS TOWARDS AUSTRALIAN SPACE- BASED EW CAPABILITY

**SA-based Southern Launch recently announced that it has selected the T-Minus Engineering DART rocket to launch DEWC Systems' prototype payload on a parabolic trajectory into space at the Koonibba Rocket Test Range later this year.**

**EWEN LEVICK | SYDNEY**

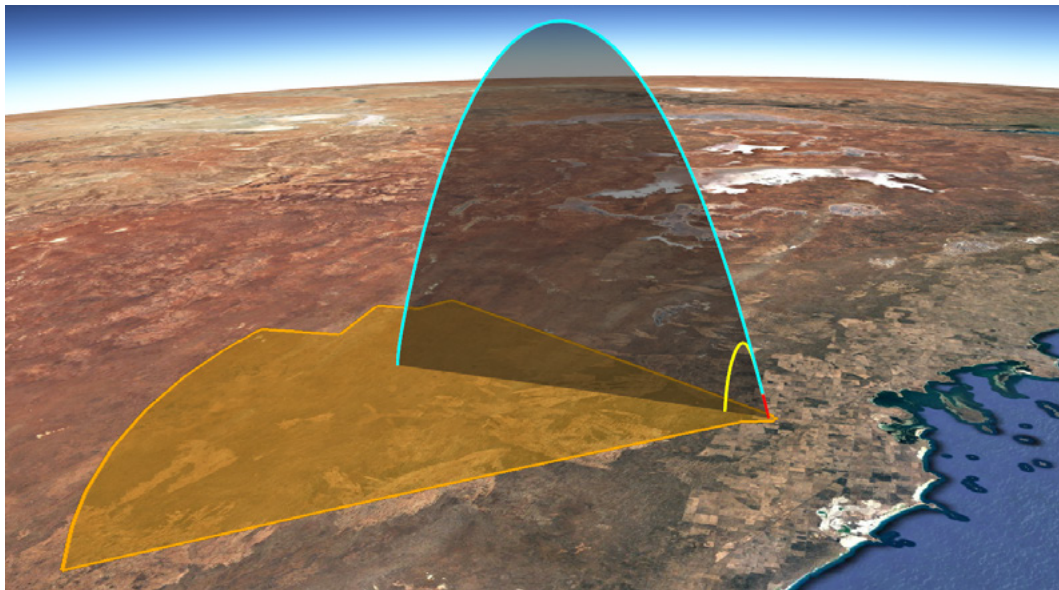
**T**his test launch and descent will only last 30 minutes. Yet DEWC's payload, called the DEWC-SP1, will conduct an important sensing mission as it descends, paving the way for future developments towards a sovereign Australian space-based electronic warfare capability.

This is being pursued under DEWC's Miniaturised Orbital Electronic Warfare Sensor System (MOESS) project, backed by Plan Jericho.

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The test launch and descent will only last 30 minutes. Yet DEWC's payload will pave the way for a sovereign Australian space-based electronic warfare capability.

DEWC

"Plan Jericho are interested in potential future affordable launch systems that could be used by the Australian Defence Organisation to perform a number of Electronic Warfare missions," Ian Spencer, CEO DEWC Systems, said to ADM. "This project will demonstrate small inexpensive sensors that can be rapidly deployed at high speed.

"In future it is anticipated that a series of such sensor suites could be rapidly deployed to quantify and qualify radar performance, create complex congested RF environments and carry Defence related payloads at hypersonic speeds."

**"IT IS ANTICIPATED THAT A SERIES OF SUCH SENSOR SUITES COULD BE RAPIDLY DEPLOYED TO QUANTIFY AND QUALIFY RADAR PERFORMANCE"**

The prototype payload will test the company's ability to optimise software and miniaturise hardware for the complex EW mission profile.

"The payload needs to reach an altitude of 100km in order to pass through the main beam of the selected target radars," Spencer said. "These beams will be measured and the information relayed to the DEWC Ground station via a downlink for further processing and for live transmission via secure network to the RAAF.

"Upon landing the payload will be retrieved to gather locally stored data that could not be transmitted during the flight due to bandwidth limitations. For the purposes of the experiment, the collected data will be compared against the known data set for these radars to find correlation and to deduce the location of these emitters."

The location of the experiment is also significant. The Koonibba Rocket Test Range extends 145 kilometres from the Indigenous community of Koonibba. Once operational, it will become the largest privately operated rocket test range on the planet.

According to Southern Launch CEO Lloyd Damp, the range will provide valuable new employment opportunities for the local community.

"Right from the inception of the project, the Koonibba Test Range has been developed alongside the indigenous communities within the area," Damp said to ADM. "This

is part of Southern Launch's focus on putting safety to people and the environment at the forefront of space launch activities.

"Southern Launch is employing staff from within the area to operate the road blocks, assist in the setup of the launch site, provide transportation for staff, as well as be a critical component of the team sent out to recover the payload.

"Southern Launch will continue to work with the local communities to build an enduring source of new employment in the area, upskill community members to have more involvement in future space launch events, as well as maximise safety to people and the land."

## LITTLE PANDEMIC RELIEF FOR DEFENCE INDUSTRY IN Q3

**In June, ADM compared the government's intent to release almost \$870 million of estate works to support defence industry through the COVID-19 pandemic against AusTender to find out whether promises made were becoming promises kept.**

**EWEN LEVICK AND KYLIE LEONARD | SYDNEY AND BRISBANE**

**A**t the time, only one of the 91 work packages scheduled for release had resulted in a grant.

However, Defence announced this week that it has updated the Estate Works Program Tender Schedule onto the Defence Estate Quality Management System (DEQMS).

"Similar to what has been issued in the past, this schedule will provide a forward look of anticipated Approach to Market for specific projects," Defence said. "The Estate Works Program outer year budgets are currently being augmented in line with the Department's response to assist in stimulating the economy.

"The net result of this is an expected increase in projects to be released through the Estate Works Program over the coming years."

ADM has now cross-checked the updated schedule against AusTender and found that, at the time of writing, 77 packages have been put to market. These are worth between \$86 million and \$278 million. Yet the number of contracts scheduled for release this calendar quarter has plummeted by 99, representing a dramatic decrease in value of between \$166-\$400 million on previous forecasts just as Australia enters



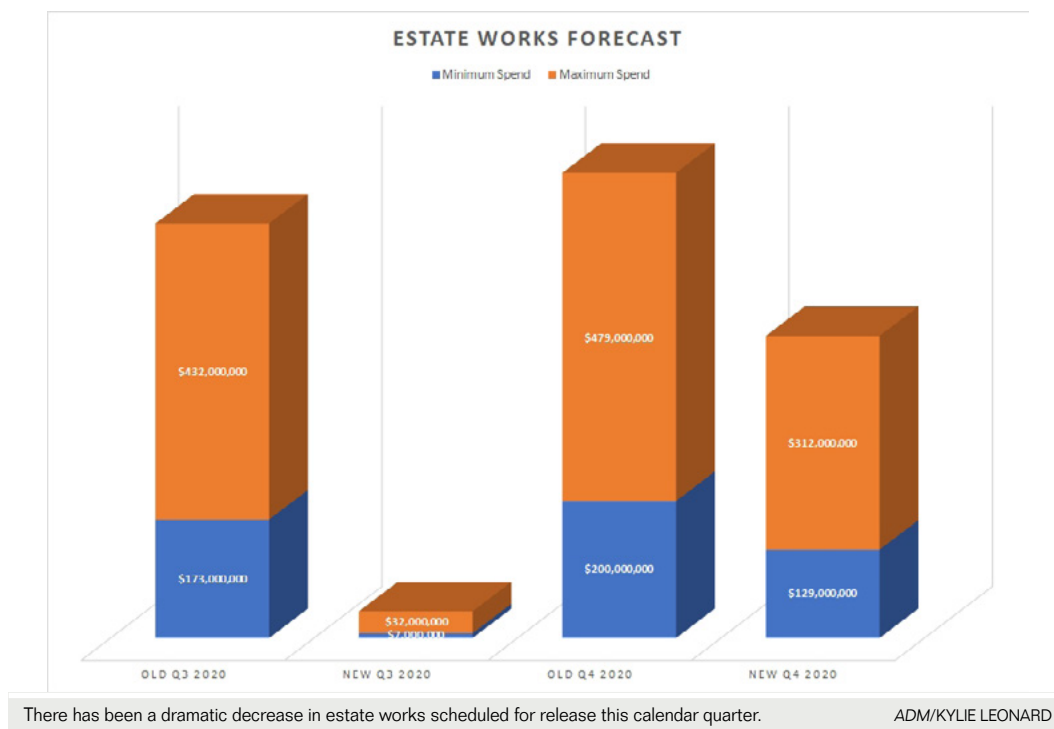
### HEIGHTENED INTELLIGENCE

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IMAGE COURTESY OF GA-ASI.



**L3HARRIS**



### “THE UPDATE SHOWS THERE IS STILL TIME FOR DEFENCE TO ACHIEVE THE MINISTER’S PROMISE”

an economic recession. This is represented by ‘New Q3 2020’ in the chart above.

There have been other notable changes. The Estate Works Program Tender Schedule now forecasts work packages by the calendar quarter instead of by the month, as in the previous iteration. The updated document shows that a further 73 packages are scheduled for release in the next

three business quarters, which are worth between \$210 million and \$503 million.

“In the current environment, Defence strongly recognises the importance of this information to enable Defence Industry to plan and manage their workforce and resources,” Defence said.

**ADM Comment:** Whilst the available work packages planned for this quarter have dropped significantly, the total shortfall in the forecast over the promised three years amounts to 83 work packages worth a minimum of \$89 million. With seven quarters remaining, the update shows there is still time for Defence to achieve the Minister’s promise – even if the pace of work has slowed dramatically when industry arguably needs it most.

### PEOPLE ON THE MOVE

Member for Paterson Meryl Swanson has been appointed to the role of Shadow Assistant Minister for Defence. Swanson appointed to the role by Labor leader Anthony Albanese at a special caucus meeting this week.

David Ledger has moved into a new role as Head of Industry Engagement and Strategic Events at Saab Australia. Megan Cree is now Manager Strategic Communication and Marketing and Hayley McDonald has become Senior Communications and Marketing Advisor.

# ARMY REGIONAL SUPPORT CRAFT FOR FAR NORTH QUEENSLAND

**The government has announced that it will acquire an Australian made 12.5 metre regional support craft to boost border protection in Far North Queensland.**

The regional support craft, which will be located at Thursday Island, will also provide marine support to whole of government operations.

"The craft will be operated by Army's 51st Far North Queensland Regiment, enabling them to perform tasks including search and rescue, recovery and casualty evacuation operations," Minister for Defence Linda Reynolds said. "It will also support community engagement in the Torres Straits and allow reconnaissance and surveillance in the north and north-east of Australia.

"Defence has a long-standing presence in the Torres Strait and this new capability will ensure our waters continue to remain safe."

Local Thursday Island company Rebel Marine is being brought in to improve the infrastructure at the wharfage and accompanying mooring facilities to accommodate the new vessel.

"The craft and wharf upgrades are a great opportunity for local industry to support Defence operations in far north Queensland," Minister for Defence Industry Melissa Price said.

Federal Leichhardt MP Warren Entsch said he had been advocating for a permanent vessel in the Torres Strait.

"Rebel Marine already provide engineering and waterfront services for the Queensland Water Police and a variety of commercial vessels. This additional opportunity is excellent news for Thursday Island," Entsch said.

The support arrangement with Rebel Marine for waterfront services is still under development and, according to Defence, is expected to be in place by October 2020 when the craft is scheduled to be delivered.

## "THE CRAFT AND WHARF UPGRADES ARE A GREAT OPPORTUNITY"



Far North Queensland Regiment soldiers conducting water-borne and surveillance training off Thursday Island.

DEFENCE



# BABCOCK OUTLINES AIC PLAN FOR LAND 2097 PHASE 4

**Babcock has outlined its Australian Industry Capability (AIC) plan for the Special Forces helicopter requirement under Land 2097 Phase 4, should the company secure the contract.**

The company is bidding the Bell 429 Global Ranger. Bell is also partnered with Hawker Pacific in a separate bid, and the third bidder is Airbus with the H145M helicopter.

The company says that 95 per cent of the helicopters' maintenance, repair and overhaul (MRO) will be undertaken in Australia, which it expects to generate \$326.6 million in economic benefits and 178 new jobs.

The AIC plan comprises 12 Australian SMEs in addition to educational institutions and community organisations. The SMEs include Airspeed Composites, Bend-Tech, Craig International Ballistics, Eagle Copters Australasia, FlightSafety International, HeliMods, L3Harris Technologies, Logistic Engineering Services, MMC Learning and Development (MMCLD), Omni Executive, Praxis Aerospace and Virtual Simulation Systems.

**"SUPPORTING AIC IS EMBEDDED IN OUR APPROACH TO CURRENT AND FUTURE BUSINESS"**

Chief Executive Officer David Ruff said the AIC commitment was integral to Babcock Australasia's strategic focus of building Australia's defence capability and capacity.

"Supporting AIC is embedded in our approach to current and future business and fully aligns with the Australian Department of Defence's AIC program," he said. "We recognise the importance of supporting Australian innovation and developing and enhancing local skills, knowledge, systems, technology and infrastructure to meet Australia's defence capability goals, create jobs and support economic growth.

"The plan for acquisition is supported by an integrated capability model, Babcock's Australian Industry Development Office (AIDO), which enables major suppliers and SMEs alike to maximise their current capability and grow that capability for future resilience."

Under the AIC plan, Eagle Copters Australasia will receive the aircraft, re-assemble, and provide ongoing maintenance, repair, and overhaul (MRO) on the helicopter and communications system in Australia.

L3Harris Technologies will transfer training technologies to Babcock Australasia

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# Strategic Vision 2020



A Bell 429 operated by Navy on lease from Raytheon at Avalon 2019.

NIGEL PITTAWAY

and Cobham Aviation Services in Australia to enable support during acquisition and ongoing training for installation and line maintenance of the EO/IR (Electro-Optical/Infra-Red) turrets.

In addition, Craig International Ballistics will design the armour concept for the Bell 429 helicopter, including 2D and 3D renders; Virtual Simulation Systems will develop the crew training device; Praxis Aerospace will provide the required certification for Electromagnetic Environmental Effects (E3) systems safety, human factors and airworthiness; MMC Learning and Development will provide training products and services; and HeliMods will be the Approved Defence Organisation under Civil Aviation Safety Regulations and will carry out modifications in Australia.

#### MOST READ ONLINE AT [WWW.AUSTRALIANDEFENCE.COM.AU](http://WWW.AUSTRALIANDEFENCE.COM.AU)



1. [Earthquakes hit Land 400](#)
2. [Companies line up for potential Hawk replacement opportunity](#)
3. [NUSHIP Supply commences sea trials](#)
4. [Sovereign comms collective launched in C4 Edge](#)
5. [5. Canberra looks to build Australian military satellite communication constellation](#)

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# ADF DESIGN TEAM WINS ICEAA AWARD

The ADF Design Team has been announced as the winner of the 2020 International Cost Estimating and Analysis Association (ICEAA) Team Achievement Award.

The awards recognise the 'the outstanding contributions of members to improve cost estimating and analysis in government, industry, and academia.'

Excerpts of the team's citation are as follows:

"The accomplishments of the ADF Design team demonstrate an impressive convergence of talented individuals and powerful predictive analytic cost solutions, tempered by significant amounts of determination and grit.

"The synergy necessary in a team to deliver close to 200 researched and vetted whole life cost estimates with limited time, resources, and data is commendable. This speaks to an international team that coalesced quickly and efficiently. This effort included re-prioritization of existing projects and the programming of new projects into Australia's Defence acquisition budget for the procurement of all future missions and enabling capabilities.

"This effort demonstrates an outstanding accomplishment within the cost estimating and analysis field worthy of recognition. This teams accomplishments in the twelve month framework were recently announced as part of the 2020 Force Structure Plan.

"The fact that this process has been institutionalized with documented processes, effective deployment of these processes and tools, and adequate training across the entire team means that this project not only benefitted the organization in the short term, but promises to continue to benefit the organization as it is applied to future challenges.

"Not only did this team facilitate near real time support for decision makers as conditions and plans changed, it also empowered the decision makers to be directly involved in the process."

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# FORTHCOMING EVENTS

## ADM EVENTS

More detail on ADM Events can be found on our [dedicated website](#).

- [ADM Women in Defence Awards](#) – 23 October 2020 | Online
- [Northern Australia Defence Summit](#) – 28 October 2020 | Online
- [ADM Space Summit](#) – 2 December 2020, Hyatt Hotel | Canberra
- [ADM Congress](#) – 3 February 2021, Hyatt Hotel | Canberra
- [ADM Defence Estate](#) – 23 February 2021, Hotel Realm | Canberra

## VIRTUAL DEFENCE SYNTHETIC ENVIRONMENT WORKING GROUP

**DATE** 18 August 2020

**LOCATION** Online

**WEBSITE** <https://www.govteams.gov.au/getting-started>

Due to the ongoing COVID-19 pandemic, the Virtual SEWG will be held as an online event using the GovTEAMS platform. The SEWG will be held on Tuesday, 18 August 2020 commencing at 1pm and finishing at approximately 4 pm. Participants attending the SEWG will require a GovTEAMS account and be a member of the GovTEAMS SEWG Community.

## 2020 INTERNATIONAL ROUNDTABLE WORKSHOP – BRISBANE

**DATE** 27 August 2020

**LOCATION** QUT Brisbane, Gardens Point Campus, Brisbane City

**WEBSITE** <https://iccpm.com/events/2020-rts-brisbane/>

The International Centre for Complex Project Management (ICCPM) invites project leaders to participate in the 2020 International Roundtable Series. Workshops will be held in key Australian locations and internationally.

## AUSCERT 2020

**DATE:** 15-18 September

**LOCATION:** The Star, Gold Coast

**WEBSITE:** [www.auscert.org.au/giveaway](http://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.



## **2020 ANI GOLDRICK SEMINAR – REMOTE AND AUTONOMOUS SYSTEMS AT SEA**

**DATE** 13 and 14 October 2020  
**LOCATION** Adams Auditorium, Australian Defence Force Academy  
**WEBSITE** [navalinstitute.com.au/latest-ani-events-and-archive/](https://navalinstitute.com.au/latest-ani-events-and-archive/)

The 2020 ANI Goldrick Seminar will discuss a wide range of issues around Remote and Autonomous Systems at Sea. It will comprise six sessions over 1.5 days covering an overview of Remote and Autonomous Systems at Sea (RAS); RAS in the Littoral Domain; RAS in the Maritime Air Domain; RAS in the Undersea Domain; Measuring Effective, and Legal and Ethical Considerations.

## **4TH ANNUAL SYSTEMS MODELLING CONFERENCE 2020**

**DATE** 27 October 2020  
**LOCATION** Online  
**WEBSITE** <https://www.unsw.adfa.edu.au/conferences/SMC-2020>

The Capability Systems Centre runs one-day conference on the use of whole-systems approach to design and manage complex problem in socio-technical and socio-ecological systems. The daylong virtual conference on October 27th will feature showcases on the use of systems thinking and systems modelling in a wide range of areas. The event provides a platform for researchers and practitioners to communicate about scientific and practical aspects of real-world problems, receive feedback, and share learning lessons.

## **10TH BIENNIAL SIA CONFERENCE 2020**

**DATE:** 17-18 November 2020  
**LOCATION** Hotel Realm, Canberra and online  
**WEBSITE** <https://www.submarineinstitute.com/sia-conferences>

The 10th Biennial SIA Conference will be held 17-18 November 2020 at the Hotel Realm, Canberra. This year's theme is 'Submarine Build and Sustainment Programs: The Strategic Nature of Reliable, Sovereign Supply Chains'. The Call for Presentations is available on the website.

## 2021

**43RD COSPAR SCIENTIFIC ASSEMBLY**

**DATE** 28 Jan-4 Feb 2021  
**LOCATION** International Convention Centre Sydney  
**WEBSITE** [www.cospar2020.org](http://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 workshopping with space industry – and inspire the next generation of scientists and engineers.

**LOCATE21**

**DATE** 30 March – 1 April 2021 (rescheduled dates)  
**LOCATION** Brisbane Convention and Exhibition Centre  
**WEBSITE** <https://www.locateconference.com/2021/>

Due to COVID-19, Locate20 has been rescheduled for Locate21 happening in Brisbane March 30 – 1 April 2021. The event will focus on how geospatial technologies are intersecting with business, Government and defence to address national challenges. It's Australia's premier spatial conference with the inclusion of over 50 inspiring thought-leaders including speakers from government, academia, the defence force, technology, mining, natural resources and more. We believe this conference is of interest to defence personnel.

**LAND FORCES 2021**

**DATE** June 1-3 2021  
**LOCATION** Brisbane Convention Centre  
**WEBSITE** [www.landforces.com.au](http://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.

## **ROTORTECH 2021**

**DATE** 15-17 June 2021  
**LOCATION** Royal International Convention Centre, Brisbane  
**WEBSITE** [www.rotortech.com.au](http://www.rotortech.com.au)

The new dates for Rotortech will be Tuesday 15 June to Thursday 17 June 2021. The venue, the Royal International Convention Centre in Brisbane, is unchanged. Rotortech is the region's premier helicopter and unmanned flight systems showcase and forum, featuring more than 100 participating companies and key speakers from industry and government. We believe that deferring Rotortech to its new June 2021 dates will achieve this goal by moving the event to a time where the COVID situation will have improved and the current uncertainties will have passed.

## **PROJECT AND PROGRAM MANAGEMENT SYMPOSIUM**

**DATE** 10 – 12 August 2021 (rescheduled dates)  
**LOCATION** Canberra Rex Hotel  
**WEBSITE** <https://www.pgcsymposium.org.au>

Foresight is more valuable than hindsight! 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. Creating the organisational capability needed to underpin the consistent delivery of successful projects in the 2020's starts at the top. Now in its 8th year, PGCS 2020 will focus on ways to build the foundations needed to create project and program success

## **AVALON 2021**

**DATE** 23-28 November 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.

2022

**PACIFIC 2020 BECOMES INDO PACIFIC 2022**

**DATE** May 2022  
**LOCATION** Sydney Convention Centre  
**WEBSITE** [www.pacificexpo.com.au](http://www.pacificexpo.com.au)

Reflecting the increasing importance of the Indo Pacific region to the entire world, the PACIFIC International Maritime Exposition will become the INDO PACIFIC International Maritime Exposition from 2022. Initially, there will be a new timing. Instead of the previously planned PACIFIC dates in August 2021, INDO PACIFIC will now, in the wake of COVID 19, initially be held during May 2022.

**VARIOUS DATES****NSW DEFENCE INNOVATION NETWORK'S REGIONAL ROAD SHOW**

**DATE:** Various  
**LOCATION:** Various  
**WEBSITE:** [defenceinnovationnetwork.com/din-regional-road-show-2019-20](http://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.

**ICCPM ONLINE WORKSHOPS**

**DATE** Various  
**LOCATION** Online  
**WEBSITE** [www.iccpm.com/online-workshop-webinars](http://www.iccpm.com/online-workshop-webinars)

Designed to support project teams who are experiencing new challenges due to COVID-19 concerns – Learn how to mitigate new risk levels, effectively deploy virtual teams, manage messy problems and more. ICCPM Online Workshops and Webinars provide you with an easily accessible and engaging option to continue your training from anywhere in the world. These options provide you and your team with a conducive learning environment to support your complex project success.



## **ICCPM ROUNDTABLE WORKSHOPS**

**DATE** Various  
**LOCATION** Various  
**WEBSITE** <https://iccpm.com/2020-rs/>

ICCPM, with Series Partner QUTeX, is pleased to confirm the upcoming Workshops for the 2020 International Roundtable Series Harnessing Emergence in Complex Projects: Risk, Uncertainty and Opportunity. The International Roundtable Series is an exciting Thought Leadership initiative where senior practitioners and leading academics come together and discuss the Series Theme to produce new insights and practical steps to improve complex project success. Registrations for in-person workshops are strictly limited to comply with COVID-19 venue safety guidelines. Please refer to each event page for more details.