

ADM DEFENCE WEEK PREMIUM EDITION

AUSTRALIAN DEFENCE MAGAZINE
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The Spike LR2 has been unconventionally confirmed for the Boxers.

DEFENCE

Spike LR2 confirmed for Boxers

Julian Kerr | Sydney

Israel's Spike LR2 has been officially confirmed as the preferred turret-mounted anti-tank guided missile (ATGM) for army's Boxer combat reconnaissance vehicle (CRV) program, but in a curiously roundabout way.

According to a [20 May report](#) in *Jane's Missiles and Rockets*, Spike, produced by Rafael Advanced Defence Systems, had been selected in preference to MBDA's MMP (Missile Moyenne Portée or medium range missile) for Land 400 Phase 2, for which Rheinmetall's 8x8 Boxer is the chosen platform.

Although the *Jane's* article gave no source for this information, its content was then reported by a number of other publications in Australia and abroad. Subsequently Rafael executive Ido Spitzer referred questions to Defence, Defence sources denied an official announcement was imminent, and MBDA Australia Managing Director Andy Watson said on 29 May that if a government decision had been made, he had not been advised of it.

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Fast forward to Senate Estimates on May 30 and a question from Senator Rex Patrick on whether a decision had been reached on the Land 400 Phase 2 ATGM.

Major General David Cogan, Head of Land Systems Division in the Capability and Sustainment Group (CASG), then disclosed Spike's selection.

"The acquisition strategy for Phase 2 was that subsystems could be presented by the two primes, BAE Systems and Rheinmetall, and in their tender they would then advance their selection," MAJGEN Cogan said.

"Both Rheinmetall and BAE selected Spike, we conducted an independent study to have a look at that and that we were happy with that decision. DSTG (Defence Science and Technology Group) did an independent study, Land Systems looked at it, we made a recommendation to the capability manager, they've accepted the Spike."

He also added that sub-system provider Rafael had tendered to Rheinmetall, with whom Defence was currently in negotiation on Phase 2.

BAE Systems Australia confirmed it had included both the MMP and Spike LR2 in its AMV35 offering. MBDA said it had provided Rheinmetall with MMP data, but had no visibility of whether this had been used in the company's Boxer CRV proposal. Additional data had been provided by MBDA to DSTG.

Watson questioned the report's statement that the Spike LR2's more streamlined integration into the Army's existing Elbit-sourced battle management system (BMS) had been a major factor in the missile's selection.

"It's the missile that integrates with the vehicle's systems that then interfaces with the BMS," he said.

Both the MMP and the Spike LR2 are understood to meet the Land 400 Phase 2 requirement for a missile able to engage main battle tanks at 4,000 metres. Both are also candidates for Project Land 4108 which seeks a 4,000 metre range ATGM as a dismounted direct fire support weapon to replace the in-service Javelin missile.

ADM Comment: Given the importance of the ATGM as the CRV's primary defensive weapon, the important role played by the platform manufacturers in its selection as just one of multiple sub-systems is surprising - even more so considering the information provided to the two platform contenders would necessarily be relatively low-level because of security issues and commercial confidentiality. With the Spike LR2 and the MMP both considered leading contenders for the Land 4108 requirement, it's to be hoped that linkages with the CRV ATGM evaluation are fully and independently utilised.



The Spike ATGM has a range of up to 4000 metres.

RAFAEL

"DST did an independent study, Land Systems looked at it, we made a recommendation to the capability manager, they've accepted the Spike."

ADF CBRNE programs out of step

Katherine Ziesing | Canberra

When *ADM* saw the [tender release](#) for Land 3025 Phase 2, we wondered why the well-established CBRNE (Chemical, Biological, Radiological, Nuclear, and Explosive) program of JP 2110 (which has been running for almost a decade) wasn't managing the project. At first glance, this would be a perfect Smart Buyer opportunity, one would think.

“The Land 2110 Phase 1B approach to market did not communicate the intention for the contract to become a Prime Vendor arrangement”

“Contract negotiations with the preferred tenderer in support of Land 2110 Phase 1B – Chemical, Biological, Radiological and Nuclear Defence are ongoing,” according to a Defence spokesperson in response to questions from *ADM*. “Contract signature is anticipated to occur by the end of Quarter 2 2018, subject to successful negotiations.”

The acquisition model around this program has been the source of some contention within industry ever since the [down-select](#) to the Leidos-led team was [announced](#) in July 2017. In essence, the program office was looking for a shopping list of gear and needed an integrator to make sure it all worked together.

“The approach to market and selection of the preferred tenderer for Land 2110 Phase 1B was complete prior to initiation and Gate 0 approval of Land 3025 Phase 2,” the Defence statement continued. “Consequently, the Land 2110 Phase 1B approach to market did not communicate to industry the intention for the support contract to become a Prime Vendor arrangement that could support Land 3025 Phase 2.

“In order to provide industry with a fair opportunity to bid for the Land 3025 Phase 2 requirements, and based on independent probity advice, it was decided to approach the market. The tender for Land 3025 phase 2 has been developed in accordance with the Smart Buyer process.

“The scope of Land 2110 Phase 1B and Land 3025 Ph2 differ considerably. Land



Soldiers of 1st Combat Engineer Regiment take the trainees through Chemical Biological Radiological Nuclear (CBRN) decontamination training during a visit by the Army Indigenous Development Program to Robertson Barracks last year. DEFENCE

2110 Phase 1B provides protection for the ADF conventional forces against exposure to Toxic Industrial Materials and Weaponised CBRN threats. Land 3025 Phase 2 provides specialised and rapidly deployable Counter CBRNE to support Special Operations, deployed ADF and Government agencies,” the Defence statement concluded.

ADM Comment: The moral of the story - Special Forces literally have special in their name. On one hand, Land 3025 Phase 2 will give industry the chance to bid on another CBRNE program. On the other, there is already an established program office that has gone out to market numerous times and already has the ‘lay of the land’ when it comes to this capability set.

Incorporating Indigenous talent in your supply chain

Ewen Levick | Sydney

Last week ADM attended Connect 2018, a major tradeshow hosted by Supply Nation featuring Indigenous-owned small businesses from around Australia, including Defence suppliers and veteran-owned SMEs.

The stalls packed out the conference hall as Indigenous suppliers met with businesses and government representatives.

ADM spoke with Laura Berry, CEO of Supply Nation, about some of the opportunities available to small Indigenous businesses looking to engage with Defence and major industry primes.

“The Connect Tradeshow is the single largest showcase of Indigenous businesses in the country – and with over 1,000 buyers through the doors this year, the opportunities for making contacts and developing relationships is huge,” Berry said.

“This year, we also had the Australian Government Link where five departments, including Defence, spent the day talking with Indigenous business owners about how they could better engage with government buyers.”



Evolve FM winning the Outstanding Impact of the Year award: Luke Carroll, Cath Brokenborough (Lendlease), Steve Mackintosh (Evolve FM), Brooke Boney.

WAYNE QUILLIAM



The Department of the Prime Minister and Cabinet winning the Government Member of the Year category. Luke Carroll, Brett Richards, Natalie Walker, Brooke Boney.

WAYNE QUILLIAM

Senator Nigel Scullion, Minister for Indigenous Affairs, highlighted achievements made under the Indigenous Procurement Policy (IPP).

"The IPP has been a game-changer for the Indigenous business sector," Scullion told *ADM*. "6,850 federal government contracts worth \$1.085 billion have been awarded to over 1,000 Indigenous businesses across the country, compared to just \$6.2 million worth of contracts to around 30 Indigenous businesses in FY 2012-2013.

"Defence has been a leader in the IPP. As the Prime Minister announced in his 2018 *Closing the Gap* speech, Defence has recently awarded a \$213.6 million contract for the Bayinguwa project – which is the Aboriginal name for Garden Island in Sydney – to design the refurbishment of the Garden Island naval base."

Whilst these achievements have certainly increased Indigenous access to business opportunities, there are still challenges to be overcome.

"Indigenous Australians face significant social, health, and demographic challenges that should be, and are, totally unacceptable in our society. The United Nations Human Development Index ranks Australia second in the world – but Indigenous Australians would rank 122nd," Berry told *ADM*.

One challenge in particular is finding a common understanding of what exactly an Indigenous business is.

Supply Nation, for example, has two tiers – businesses that are at least 50 per cent Indigenous-owned achieve 'recognised' status, whilst those that are majority Indigenous-owned and fulfil strict criteria in internal management achieve 'certified' status.

"Supply Nation is the only organisation to recognise two levels of Indigenous ownership," Berry said. "Registered businesses are 50 per cent or more Aboriginal and/or Torres Strait Islander ownership. This caters for equal partnerships with

non-Indigenous owners. Certified Suppliers are 51 per cent or more Aboriginal and/or Torres Strait Islander owned, managed and controlled.”

“Many organisations prefer to work with Certified Suppliers as the management and control dimensions mean that the Indigenous business owner is making all the decisions about the company.”

The government’s IPP policy, however, only uses the ‘registered’ benchmark. This opens a loophole known as black-cladding, in which suppliers seeking access to contracts through the IPP present as Indigenous-owned, but use legal technicalities to sideline Aboriginal employees from decision-making processes.

“Black cladding – or the use of an Indigenous ‘front person’ to the business – is certainly a big concern in this sector,” Berry said.

“We have extremely strict policies around investigating and auditing any business that we suspect may be ‘black clad’. While all those checks are taking place, we remove the business from the directory. It’s a very big deal to us.”

So how can government and Defence industry know whether their Indigenous engagements are genuine and having a meaningful impact?

One answer is to prioritise engagement with certified suppliers listed in Supply Nation’s directory. Research shows that certified suppliers deliver \$4.41 in social return to their communities for every dollar of revenue. They are also 100 times more likely to employ Indigenous people.

Senator Scullion said the government is working with Supply Nation to strengthen the registration and verification process.

“The definition recognises that in some family businesses just one member of a couple is Indigenous and that private sector investment is critical to support growth of the Indigenous business sector,” he added.

“The record investment in the defence industry provides a unique opportunity for Defence businesses to examine their recruitment and purchasing practices and consider ways to connect with Indigenous businesses and Indigenous job seekers including early engagement pre-tender as part of a supplier diversity plan,” Senator Scullion said.

Berry highlighted the importance of developing face-to-face relationships and forecasting opportunities ahead of time to give small businesses time to prepare.

“Firstly, my advice would be to genuinely consider all the various contracts and actually look to see if there are Indigenous businesses that can deliver. The depth and breadth of the sector is huge, and growing,” Berry said.

“Secondly, I think events like the Connect Tradeshow really do make a difference, because buyers can come along and meet new suppliers to find out everything that they do.

“I’d also love it if large companies could do more work forecasting out the opportunities that are upcoming, and working with Indigenous businesses to help them scale and prepare.”

“The record investment in the defence industry provides a unique opportunity for Defence businesses to consider ways to connect with Indigenous businesses”

Flinders University gains another partner on Future Frigates

A new agreement between BAE Systems Australia and Flinders University will see students and industry working together to develop new ways to provide the ADF with the evolving capability needed to train the future shipbuilding workforce.

BAE Systems is one of three companies bidding to build nine anti-submarine warships for the RAN. The company is proposing an Australian variant of the Type 26 Global Combat Ship currently being manufactured in the UK for the Royal Navy.

Flinders University will receive access to BAE Systems' digital shipbuilding tools, processes and methodologies and turn these into development programs to train the people who will build the Future Frigates and integrate the ships' complex operating systems, if the company is successful in its Sea 5000 bid.

The collaboration will emphasise unmanned underwater vehicles (UUVs), a future technology that could enhance RAN's capability to detect and deter submarines.

"Flinders University welcomes this important connection with BAE Systems," Flinders University Vice-Chancellor Professor Colin Stirling said. "The opportunity to work with leading international partners is aligned with Flinders' strategic priorities and we look forward to working collaboratively on research and training initiatives that are supporting Australia's advanced manufacturing industry, furthering research and contributing to employment and economic growth."

In the UK, BAE Systems collaborates with Sheffield University's Advanced Manufacturing Research Centre, directly supporting automation and the exchange of advanced manufacturing

"Flinders University will receive access to BAE Systems' digital shipbuilding tools, processes and methodologies and turn these into development programs"



BAE is offering the Type 26 for RAN's Future Frigates.

BAE SYSTEMS

technologies. Through this relationship, Flinders University and Sheffield University will be able to identify areas of mutual interest and share information on successful training applications, research and development.

The first project under this agreement will be focused on advanced manufacturing components for the Joint Strike Fighter, which will help to inform future applications on other defence programs.

"Complex defence projects rely on highly skilled people and world class innovation," BAE Systems Australia Chief Executive Gabby Costigan said. "I am delighted that we can bring our capabilities and global expertise to the table so that we can work more closely with one of Australia's leading academic institutions to nurture a highly skilled workforce that is ready to deliver the high-tech, complex programs our Defence Forces require."

The collaboration between BAE Systems and Flinders University will contribute to the aims of the Naval Shipbuilding College, which is charged with working with industry and academic institutions to up-skill a local workforce.

The university has also [partnered](#) with Navantia ahead of the Sea 5000 decision.

A light solution for biofouling

Light could hold the key to reducing operational costs for Defence and protect ships and the environment from marine pest invaders.

Defence Science and Technology Group (DSTG) and the Australian Institute of Marine Science (AIMS) are researching a novel approach of using ultra-violet (UV) light to protect particular sensitive areas on a ship's hull from biofouling, in a cooperative arrangement announced by Minister for Defence Industry Christopher Pyne.

Biofouling is the accumulation of marine life on a ship's hull.

"Biofouling increases drag, can block water inlets and degrade

"Researchers have found colonising organisms absorb UV light and are unable to replicate"



Tropical waters, such as those off East Timor, are a challenge for anti-biofouling technology.

DEFENCE

sensors, and adds significantly to operational costs," Minister Pyne said. "It can also lead to the introduction of marine pests into new areas."

Many different anti-biofouling technologies are used, but most are designed for temperate climates and do not perform well in Australia's tropical waters. Some can pollute the environment or have limited effect when the ship is stationary.

The five-year research project will experiment with a number of advanced bio-fouling technologies including the use of UV light. One aim is to develop a camera housing that emits UV light from the surface. Researchers have found colonising organisms absorb UV light and are unable to replicate.

A team of Defence and AIMS scientists are now testing the technology in tropical waters at the AIMS research station near Townsville. Initial results show the test surfaces are free from fouling for prolonged periods, regardless of location or circumstances.

"The results look promising and will have wide ranging benefits for Defence, commercial shipping and the environment," Minister Pyne said.

Latest Austal LCS commissioned by US Navy

"The future USS *Manchester* is an example of the increased capability that comes from a true partnership with industry"

The US Navy has commissioned Austal's newest Independence-variant littoral combat ship (LCS), the future USS *Manchester*.

Admiral William Moran, Vice Chief of Naval Operations, delivered the ceremony's principal address. Ship's sponsor Senator Jeanne Shaheen, as per US Navy tradition, gave the order to "man our ship and bring her to life!"

"The future USS *Manchester* is a modern marvel and an example of the increased capability that comes from a true partnership with industry," Secretary of the Navy Richard Spencer said.



The future USS *Manchester* (LCS 14) successfully completed acceptance trials on December 15.

US NAVY/AUSTAL

The LCS-class consists of the Independence and Freedom variants, designed and built by two industry teams. The future USS *Manchester*, designated LCS 14, is the 12th littoral combat ship to enter the fleet and the seventh of the Independence-variant design. The Independence-variant team is led by Austal USA, a subsidiary of the Australian parent company (for LCS 6 and follow-on even-numbered ships).

The Freedom-variant team is led by Lockheed Martin (for the odd-numbered ships).

Twenty-nine LCS ships have been awarded to date: 13 have been delivered to the Navy, another 13 are in various stages of construction and testing, and three are in pre-production states.

MOST READ ONLINE AT WWW.AUSTRALIANDEFENCE.COM.AU



1. [Boeing showcases latest comms capability](#)
2. [The Future Frigate decision: ASPI](#)
3. [New shipbuilding venture enters Australian market](#)
4. [F-35 sees first combat action](#)
5. [Nano UAS rolled out to Army](#)

Indigenous Digital Voice Recording system heads overseas

Sonartech has recently shipped the second Digital Voice Recording System (DVRS) overseas — albeit temporarily, as these systems will return as part of the communications systems installed in NUSHIPS *Supply* and *Stalwart*.

The two systems were supplied to Portuguese company EID for inclusion in the new Auxiliary Oiler Replenishment (AOR) ships the RAN will receive under Sea 1654.

Sonartech's DVRS was developed collaboratively with the RAN through a Navy Minor Project, after Defence had determined that no commercial or military Off the Shelf (OTS) product met Navy's functional and technical requirements.

The indigenous system, which records an assortment of voice communications from bridge conversation through to radio communications was designed, manufactured and tested in Australia. According to Sonartech, the DVRS is an example of Australian ingenuity and proof of the ability for Australian industry to meet the needs of the ADF.

The DVRS was designed, developed and manufactured in Australia to meet the specific requirements of the RAN. The requirements were developed following a Board of Inquiry, which had concluded that a suitable data recorder capable of recording command decisions can play an important role in enhancing safety at sea.



A 3D rendering of NUSHIP *Supply*, the first AOR to be delivered under Sea 1654.

NAVANTIA AUSTRALIA

The design makes the DVRS suitable for both retrofit and new construction, providing the capability to record both secure and non-secure radio channels, internal communication circuits and open microphones for a period in excess of 31 days. With anti-tamper features and specific power supply it is a valuable tool in providing accurate event reconstruction for incident investigation or to support training.

The system is currently in service in 19 fleet units across five classes of ship, including the Collins-class submarine.

"This demonstrates the potential that exists in Australia to deliver products and capability to the ADF," managing director Mark Baker said.

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PUBLISHED BY

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Forthcoming Events

ADM EVENTS

More detail on **ADM** Events can be found on our dedicated website: admevents.com.au

- [ADM Women in Defence Awards](#) – 27 July 2018
- [ADM STEM in Defence Summit](#) – 21 August 2018
- [ADM Defence Estate & Base Services Summit](#) – 19 September 2018
- [ADM Defence in Northern Australia Summit](#) – 10-11 October 2018

ASDEFCON TD/IP Roadshow

Location Sydney, Melbourne, Newcastle, Cairns, Brisbane, Adelaide, Perth, Darwin

Date 2 May – 5 July 2018

Register procurement.ASDEFCON@defence.gov.au

Following the official launch of the new ASDEFCON Technical Data/ Intellectual Property (TD/IP) framework on 11 April, roadshows have been scheduled around the country from May to July 2018. The roadshow is open for both Defence and industry personnel to attend. Each roadshow will comprise a general overview of the new framework and interactive sessions.

ADSTC Synthetic Environment Working Group

Date 5 June 2018

Location Bradman Room, Manuka Oval, Canberra

Website ADSTC.simsupportpanel@defence.gov.au

The next Department of Defence, Australian Defence Simulation and Training Centre (ADSTC) Synthetic Environment Working Group (SEWG) will be held on 5 June 2018 in the Bradman Room, Manuka Oval, Canberra. The SEWG is aimed to be flexible for the needs and professional development of all members. The SEWG Agenda is still under construction, but is expected to include: SEWG Co-Chairs' updates; Speed Marketing from Industry; Short Defence updates; Modelling and Simulation (M&S) Capability Innovation Scenarios; and Innovation and Emerging Technology Interactive Sessions.

Defence Synthetic Environment Working Group

Date 5 June 2018

Location Canberra

Website ADSTC.simsupportpanel@defence.gov.au

SEWG is an interactive working group exploring innovative uses of modelling and simulation (M&S) and investigate the future for emerging M&S technologies. The group represents an opportunity to explore how to integrate the M&S industry as part of the ninth fundamental input to capability. At this year's SEWG the group are keen to provide more opportunity for industry members to present. They have

included as part of the agenda an item titled 'Speed Marketing'. Approximately an hour will be broken into between five and 10 minute segments where industry members can provide an update on their company, new innovations, their future direction, or any other topic which they feel would be of benefit to other SEWG members.

PASA MRO for Procurement Conference

Date 5-6 June 2018

Location Stamford Plaza, Brisbane

Website <https://procurementandsupply.com/events/pasa-mro/>

This two-day special event will give your organisation the insight to gain greater control of your MRO and spare parts inventory spend, address your key issues with MRO and spare parts inventory management and unlock the significant hidden costs-savings associated with MRO procurement. The conference examines issues such as who should own and control MRO and spare parts, why most companies underestimate its importance, and how to develop a good MRO strategy that can improve your bottom line.

Building Australia's Strategy for Space: ASPI

Date 13-15 June 2018

Location QT Hotel Canberra

Website www.ivvy.com.au

The conference will bring together distinguished international and Australian experts for two days of debate on Australia's long-term strategic plan to grow its burgeoning space industry.

IFRS Next

Location Canberra

Date 28 June 2018

Register <https://www.regionalsecurity.org.au/event-2861870>

Future strategic leaders will deliver six-minute presentations about a topic they're passionate about and they also feel is of importance to Australia's national security. Expect innovative thinking and insights, even some controversy. It runs for one hour in the arthouse-style setting of Palace Electric Theatre, and is followed by a networking event. It is your chance to engage in conversation with Australia's future security leaders.

Defence + Industry Conference and Gala Awards 2018

Date 1 August 2018

Location Canberra

Website CASG

The annual CASG and Defence Industry gathering in Canberra to discuss policy and programs with a range of speakers gathering to discuss the way forward. A Gala Awards night will take place on the evening preceding the event, where ADM's Essington Lewis Awards will be presented, recognising excellence in collaboration.

Project and program management symposium

Date 14-15 August

Location UNSW @ ADFA, Canberra

Register www.pgcsymposium.org.au

The annual Project and Program Management Symposium provides a forum that brings together project management people to share knowledge and improve the governance and controls skill sets available to deliver successful project outcomes for the nation. A highlight of the symposium is its access to thought leaders from the USA and Europe. Each year, selected speakers from overseas are brought to the symposium to share knowledge and provide an international perspective on project and portfolio management.

Hunter Valley Defence Conference 2018

Date 30-31 August 2018

Location Crowne Plaza Hunter Valley

Website HunterNet

The 2018 Defence Conference will focus on driving collaboration and engagement between Defence Primes, the region's SME's, academia and Defence. A highlight of the conference will be the spectacular low flying aerial show from Matt Hall Racing, followed by a gala dinner.

Land Forces 2018

Date 4-6 September 2018

Location Adelaide

Website www.landforces.com.au

Presented in collaboration with the Australian Army, LAND FORCES 2018 is an international industry exposition to showcase equipment, technology and services for the armies of Australia and the Indo-Asia-Pacific.

SIA Biennial Conference

Date 7-8 November 2018

Location Canberra Rex Hotel

Website www.submarineinstitute.com/sia-conferences

Join submarine professionals and key decision makers as the ninth in the Biennial series of conferences run by the Submarine Institute of Australia returns to Canberra to explore the issues and opportunities emerging from the decision to extend the lives of the Collins class submarines.

MilCIS 2018

Date 13-15 November 2018

Location Canberra

Website www.milcis.com.au

In November each year, the Defence Chief Information Officer Group (CIOG) partners with the UNSW Canberra and the Institute of Electronic and Electrical Engineers (IEEE) to present MilCIS.

TEAM DEFENCE AUSTRALIA EVENTS

- **Eurosatory 2018** – 11-15 June 2018, Paris, France
- **Euronaval 2018** – 23-26 October 2018, Paris, France
- **AUSA 2018** – 8-10 October 2018, Washington DC, US
- **Indo Defence 2018** – 7-10 November 2018, Jakarta, Indonesia

For more information go to the business.gov.au TDA webpage [here](#). TDA EOIs will open a few months prior to the event – to keep up to date [register](#) for the CDIC newsletter.