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ISSUE 47 – SEPTEMBER 2015







- **12** The Big Picture C17 White Ribbon support
- 14 Heads Up News from around the world
- 22 The Inner Sanctum New Sniper column
- **28** Self-steering cargo **30 New ADF Equipment**
- EF88 38 Narco Battles
- Interdiction success
- 42 Great American Heroes Servicemen foil terror attack
- 46 Albatross loves Romeo Navy's new attack helicopter
- 50 NATO's Noble Jump
- **56** Come fly with me On E-7A Wedgetail 001
- 64 National Servicemen's Memorial Band
- 66 O Store
- 66 Frontline Africa
- 70 Not close enough Up for VC but not awarded
- 74 Military Fitness
- 76 Cadet Corner
- 82 Gear Insider

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CONTENTS

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Issue 47 – September 2015







Story page 30

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The only regret I have about this new-look web site is that I didn't do it years earlier!!!!

Both of these are actually destined to be long-running regular features and I have a feeling both will prove very popular. I'm certainly excited by both for their own special reasons.

"The Inner Sanctum" by Jason Semple is an insider's view of the very special world of snipers. Jason, who is currently 'overseas' has many years of knowledge and experience he is willing to pass on to our audience – being sensitive to operationl security, of course.

"Military Equipment" by Lieutenant Colonel Benjamin McLennan is a different type of insider article. Benjamin is heavily involved in rolling out the new EF88 rifle and all the ancilleries that go with it. As such, you can expect to learn a great deal about the modern Australian soldiers' fighting ensemble. I heartily welcome both these gentlemen on board.

Sincerely

Brian Hartigan Managing Editor

EDITORIAL

CONTACT is going 'great guns' – if you'll pardon the pun.

A recent revamp of our web site (which I hope you've checked out www.militarycontact.com) is generating massive interactions and huge statistics, which cannot be captured on Facebook.

For example, a news piece I posted about the new EF88 rifle Defence has just bought, got 186 likes, 33 comments and 64 shares on Facebook - making it, comparatively speaking, a very successful Facebook post. But, the same story on our new-look web site got a whopping 8832 reads and 3349 shares.

Even a 'dry' news story about Defence's new superannuation scheme has been read 6948 times, and shared 322 times.

And another advantage of our web site over Facebook is that all the stories we post on the web site are neatly archived in relevant categories and are fully searchable – unlike Facebook where, even though the posts are still actually there, they are quickly lost under the daily avalanche of humorous cat videos, useless trivia and assorted dross (plus all the lovely family and friends stuff, of course:-)

Our back-of-house statistics have also gone through the roof. Here's a few numbers comparing the months of August 2014 with August 2015 across our web site generally...

	August 2014	August 2015	
Unique Visitors	1986	13,911	
Visits	3146	24,262	
Page Reads	6620	95,725	
Hits	43,949	596,099	
Bandwidth downloaded	24.16 gig	1355.78 gig	

I just want to highlight a couple of features that appear in this issue - namely "The Inner Sanctum" starting on page 22 and "Military Equipment" starting on page 30.

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- B: Legion (142 mm blade. Available in AUS8 & D2 steels. MOLLE compatible Kydex/nylon sheath, G10 handle) \$ 149
- C: Kallima (155 mm blade, Z60 high carbon steel 56-58 HRC ABS Polymer sheath, Elastron-G removable handle construction) \$ 195
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- E: Condor (178 mm blade, Z60 high carbon steel 56-58 HRC, ABS Polymer sheath, Elastron-G handle) \$ 210
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A blunt knife on the field is as good as a weapon that will not shoot straight! The Warthog Multi Edge can fix this problem very quickly and to a professional standard. This unit was designed and manufactured in South Africa and features a clever design that even a novice can use and produce a razor sharp professional quality edge! It works on all kinds of blades from large tactical knives to smaller utility and multi-tool blades. The unit comes complete with a 650 grit diamond plate, a leather strop, and also jigs to use for sharpening knives and many other edged weapons.







Got something to say? E-mail: editor@militarycontact.com

FRIENDLY FIRE

Dear editor. I saw your recent posts about maybe printing CONTACT again – if only for one issue, your 50th

I fully support that idea and I would definately buy at least one, and maybe several copies.

How do I do that and how can I help you to get this excellent magazine back into print?

Dorithy D, via email

Thank you for your kind words and unquestionable support Dorithy. Yes, I did consider an option to print CONTACT again for one more issue, but, sad to say, the support I got for that idea was not encouraging. At least not on Facebook.

But, as you will see in my editorial, I've come to learn that Facebook isn't all it is hyped up to be as a communication tool – though to be honest, I twigged to that a long time ago.

Anyway, while the idea of printing again is definitely on the back burner, it probably isn't quite dead yet. I'll rest on that idea for a few months and, perhaps in the New Year, I might reconsider another tack on that front.

As for how to support CONTACT more generally, well there are several ways.

You can, of course, tell all your friends and

SNAP SHOTS

I would like to congratulate you on a truly great publication, which is not only a very professional-looking product but also proves to be a very engaging read - well done!

Janelle M. via email

I read and enjoy each issue. I am an old Vietnam Veteran who enjoyed the company of many Aussie's crewing C7A Caribous. Best damn fixed wing I ever saw. Drive on and God's speed mate!

Emil M. via email

Thanks for another excellent issue. I loved the story about CPO Bart Couprie and his fundraising for cancer efforts. I have friends and family battling cancer, and we are constantly raising funds to find a cure, so the story warmed the "cockles of my heart".

In regards to a printed copy for Issue #50 – I am happy to receive the email version. Until next time, take care.

Buster D, via email

This page is a great outlet for fans to vent or to praise. Please, let us know what you think of our magazines so we can deliver more of what you want. Feel free to write to editor@militarycontact.com about CONTACT or any on other military subject - Ed

INCOMING

colleagues how good the magazine is and encourage them to sign up for a free subscription (at a). Or, when you get my email telling you there's a new magazine ready to read, you could forward that email to all your contacts (even an 'all-staff message' at work, if you're brave enough) - they can still read it even if they aren't subscribers.

Every time you and your friends read a story in the magazine or on our web site, you are helping us to build the statistics that help us to sell the ads that keep us going. The bigger our audience and the easier we can prove the size of it, the easier it becomes to attract advertisers. And since the magazine is completely FREE to readers, it's obviously the advertisers who actually keep this magazine going.

You could also tell our advertising supporters that 'CONTACT sent me' whenever you make a purchase from them. Or, if you're making a purchase in a shop that looks like it ought to be a CONTACT supporter, ask them, "Do you advertise in CONTACT?" and tell them what they are missing out on if they aren't. Anyway, Dorithy, thank you for being a fan and thank you for keeping the thought of print alive - Ed.

PARTING SHO

I have enjoyed reading this magazine, but I am discharging after 43 years service and must make the break altogether. Please unsubscribe me.

Paul L. via email

Hi Paul. You are now unsubscribed. And I just want to say, good luck in your retirement. I fully appreciate you wanting to make a clean break – but I'm sure you'll find that hard (hopefully for all the good memories). From an ex full-time/current reserve Army sergeant who couldn't make a clean break (and, at the risk of sounding American) I say sincerely, "thank you for your service" - Ed.

Thank you, Brian for those kind words. Yes, not having 'Family' (Navy) around 24/7, I will find it difficult to adapt to 'Civvie' jargon and mateship. I will always look forward to ANZAC Day and to catch up with the lads. I must now find myself a hobby to keep my brain active. Take care and good luck with your endeavours. Regards, Paul.



THE BIG PICTURE



WATCH VIDEO

An RAAF C-17A Globemaster III conducts a flight over water near Brisbane, sporting a white-ribbon motif in support of Australia's White Ribbon Day – an ongoing campaign that seeks to change the attitudes and behaviours that lead to and perpetuate men's violence against women.

HEADS UP

DUTCH DOZEN



Thales' Bushmaster production line in Bendigo, Victoria, has started rolling on 12 new vehicles for export to the Netherlands.

The new Bushmasters will complement the 86 vehicles previously purchased by the Dutch between 2006 and 2009 and will be delivered by the middle of next year.

Thales Australia CEO Chris Jenkins said the new export order showed continuing confidence in the Bushmaster, its ability to protect troops in theatre and save lives.

"The new Dutch troopcarrier variants will be fitted with additional composite armour, remote weapon stations and Thales' marketleading SOTAS intercom system," Mr Jenkins said.

"The Dutch order, whose value remains confidential, follows other exports to Japan and Jamaica over the past 18 months."



LOW-VIZ FLIGHT AID Airbus Defence and Space says its Sferion helicopter

pilot aid has proven its capabilities to protect helicopters in restricted visibility conditions such as brown-out, during a series of live flights in Germany.

The company says the system can prevent the most significant causes of non-hostile losses and mission failures, such as controlled flight into terrain, degraded vision and object and wire strike.

"Airbus Defence and Space demonstrated that Sferion in combination with state-of-the-art flight control systems builds the fundamental baseline for further developments of semi-automatic flying in degraded-vision environments," the company said.

"Among the manoeuvres demonstrated were takeoffs, low-level flights over hilly terrain and obstacles such as high-voltage pylons and power lines."

Test pilot Mark Condon, a former chief instructor of an Apache helicopter regiment in the UK, said the remedy for degraded vision hazards was no longer a future prospect.

"With Sferion, the solution for safeguarding helicopter pilots and missions is ready for service today," Mr Condon said.

"SferiAssist combines real-time sensor data with that from a database in order to create a clear, realistic picture of the helicopter's surroundings."

Final sea trials

NUSHIP Adelaide, the second of Australia's two new helicopter landing dock ships, commenced final contractor sea trials on 19 August.

About 200 BAE Systems employees, equipment/system subcontractors, Royal Australian Navy crew members and representatives from the Department of Defence Capability Acquisition and Sustainment Group were on board to support the trials, which were expected to last 10 days

When she returns from sea trials, NUSHIP Adelaide will be prepared for delivery, while the RAN performs various routine alongside exercises as it continues to prepare its crew.

All crew who will serve on NUSHIP Adelaide, and those who now man HMAS Canberra, were trained by BAE Systems at a purpose-built training facility at Mascot, Sydney.

NUSHIP Adelaide will be christened HMAS Adelaide later this year.



Melbourne, prepare to see off NUSHIP Adelaide for her final sea trials

ADF GETS AGL



Mk47 light-weight automatic grenade launcher

The Australian government has signed a multi-million dollar acquisition and support contract for a light-weight automatic grenade launcher capability for the Australian Defence Force.

This contract, between Defence and Australian company Nioa Pty Ltd, has an estimated value of \$47 million, will see the Nioa deliver 200 General Dynamics Mk47 AGLs by Mid 2017.

Minister for Defence Kevin Andrews said that as part of Project Land 40 Phase 2, the acquisition of the new automatic grenade launcher represented a key step in the modernisation of the ADF's lethality and capability.

"Nioa Pty Ltd is based in Brisbane and will oversee the delivery and support of the light-weight

automatic grenade launcher to the ADF." Mr Andrews said. "Nioa currently employs approximately 50 staff, and three new jobs will be created [because of this contract], as well as opportunities for other Australian companies to provide ongoing support and maintenance. "Under this contract more than 200 light-weight automatic grenade launcher systems will be delivered to the ADF from the third quarter of 2016." In addition to being able to fire traditional grenades, the Mk47 can fire smart grenades that can be programmed to air burst after

a set distance. An integrated computerised sight system allows the user to measure then pre-set this distance.



UXO RENDERED SAFE

ADF bomb-disposal experts, under the umbrella of Op Render Safe, completed a request from the Vanuatu government to dispose of unexploded WWII ordnance from two separate locations in the island-nation in August.

A RAAF C-130J with an explosive ordnance disposal team and medical specialists completed the tasks from 24 to 27 August in coordination with members of the Vanuatu Police and Vanuatu Mobile Force.

Acting Chief of Joint Operations Major General Shane Caughey said RAAF's 65 Squadron Explosive Ordnance Disposal (EOD) Flight disposed of 33 remnants of World War II on Santos Island.

"The items included 27 explosive items, six non-explosive and other small-arms remnants,". Major General Caughey said.

"One of the items was a World War II 500-pound bomb, which posed an ongoing safety risk if not removed."

HMAS PERTH ON THE WAGON

HMAS Perth docked at the Australian Marine Complex Common User Facility at Henderson in Western Australia on 11 August 2015 to commence 'Intermediate Maintenance Availability (IMAV) 06'.

The docking was required to conduct maintenance on the ship's underwater fittings and fixtures.

While in the dock, more than 500 individual maintenance tasks

were scheduled to be completed. A team of Anzac Systems Program Office personnel worked closely with contractors from Naval Ship Management Australia and other key industry players for several months preparing the work package and for the docking evolution itself.

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JLTV RACE WINNER

contract to manufacture a Joint Light Tactical Vehicle – JLTV – to replace a large portion of the legacy HMMWV (Hummer) fleet with a light tactical vehicle with 'far superior protection and off-road mobility'.

The project for 17,000 vehicles

years

US Army Major General (retired) and executive vice president of Oshkosh Corporation and president of Oshkosh Defense John M. Urias said, "Our JLTV has been extensively tested and is proven to provide the ballistic protection of a light tank, the underbody protection of an MRAP-class vehicle, and the off-road mobility

FUEL TOPUP

On 13 August 2015 two KC-30 aircraft from RAAF Base Amberley conducted an air-to-air refuelling training sortie using the aircraft's boom fuel dispenser.

The sortie was conducted over inland Australia at 26,000 feet and saw a French KC-30 exchange pilot

conduct his first ever air-to-air refuel hookup - on his birthday. To take on fuel, the receiving aircraft must position itself 30 feet directly below the dispensing tanker and hold that position, without using autopilot.

The dispensing aircraft then 'flies' it's boom into the fuel receptacle on the lower aircraft, before discharging up to 4500 litres of jet fuel per minute.

HEADS UP

FUTURE AUSSIE SUB?

Artist's impression. Supplied

A French company has put a face and a name to what could be Australia's future submarine.

DCNS will propose what it says is the world's most advanced conventionally powered submarine – named the Shortfin Barracuda – as its pre-concept design for Australia's requirement.

The submarine takes its name from a fish indigenous to Australia's Great Barrier Reef. The conventionally powered Shortfin Barracuda will be a derivitive of its larger cousin, the French Navy's Barracuda nuclearpowered attack submarine.

Shortfin Barracuda is more than 90m in length and displaces more than 4000 tonnes when dived, a company spokesman said. DCNS is the only company

that designs both nuclear and conventional submarines.

BAE Systems and Saab Australia have teamed up in a bid to maximise Australian industry involvement in their Project Land 400 proposal.

TEAM

LAND400

3AE/PATRIA/SAAB

BAE Systems is a prime contractor pursuing Land 400 Phase 2 – Mounted Combat Reconnaissance Capability, with Patria of Finland, with Saab products inherent in the vehicle design.

A BAE Systems spokesman said joining forces with Saab Australia would allow the BAE Systems-Patria team to substantially exceed the 200 Australian advanced manufacturing jobs and \$100m in supply-chain value already identified for the manufacturing phase of the program, with vehicle sustainment lasting another 30 years.

"Our offer will replicate overseas success for manufacturing and sustaining the Patria Armoured Modular Vehicle (AMV), in Australia," the spokesman said.

<complex-block>

While NUSHIP Adelaide was fininshing her final sea trials down south, HMAS Canberra was begining a sea-series of exercises off the north-Queensland coast.

Photo by Leading Seaman Helen Frank

CANBERRA'S SEA SERIES EXERCISES

The Navy's mightiest ship was photographed off Queensland with five MRH 90 helicopters on deck and with her four landing craft deployed.

Also involved in the exercises will be the Australian Amphibious Landing Force, which is based on the 2nd Battalion, The Royal Australian Regiment (2RAR), from the 3rd Combat Brigade based at Lavarack Barracks, Townsville.

Some of the helicopters involved are from the 5th Aviation Regiment, also from Townsville, who join the ship in concert with the Navy's own embarked MRH-90 flight from 808 Squadron from Nowra, NSW, as well as Royal Australian Air Force assets. The sea series of exercises are scheduled to run from from August through to October this year.

YOUR MEDALS -MANAGE THE RISK

Former Victorian Policeman Arthur Mitchell has hundreds of stories about lost service medals. From families fighting over ownership and even cuttingup the set, to coats with medals attached being misplaced on a 'big day out', and theft during burglaries, to name just a few.

Nowadays Mr Mitchell is head of Medal Services at Military Shop in Canberra and he says the stories of lost original medals can be heartbreaking.

"In one case earlier this year, a 94-year-old greatgrandmother in NSW had her father's Great War and Second World War medals stolen in a break and enter. She and the rest of her family were devastated," he says.

"These were priceless memories shared by all generations of this one family.

"We donated a replica set, but at day's end, the medals earned and worn by her dad are gone."

Arthur says there is little people can do about theft of originals, other than buying a secure safe.

But when it comes to preventing the accidental loss of medals, the safest option is to wear replicas rather than originals.

"Today about 90 per cent of people choose to wear replicas. Apart from the fact that we will not engrave the replicas and we have 'replica' stamped subtly on the medal rim, these replicas are indistinguishable from the originals."

Military Shop handles thousands of orders for replica medals each year – from the Boer War through to Afghanistan – and its team is well versed in interpreting military service records to determine what awards were bestowed.

Mr Mitchell says there has been a big increase in the number of replica sets being ordered to share across families.

"This is a wonderful development. The originals can be passed down intact and other family members can each keep a set as part of their family history.

"We have also noticed that more and more people are having a number of replica medal sets created for special gifts to their children and grandchildren.

"This is a special way in which they can share and pass down their military history to the next generations."

As well as replica medals Military Shop also provides one of Australia's leading medal mounting and refurbishing services. The company places great care in protecting originals entrusted to it for these services. Every medal is treated as a priceless

Advertisement



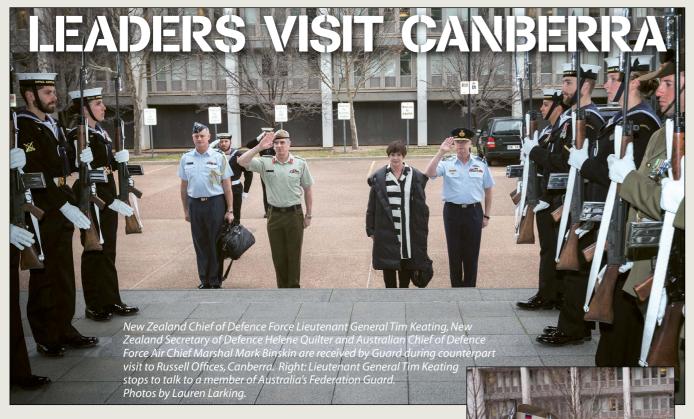
Arthur Mitchell displays just some of the range of replica medals available from Military Shop.

heirloom and security measures see the medals stored in fireproof safes, hand-delivered if additional expertise is needed and tracked while moving about the Military Shop facility.

"We take no chances. These are priceless and irreplaceable. At every stage we have original medals secured in safes or in the hands of trusted people. If the owner insists on posting we insist on using our secure courier. Nothing is worth the risk of losing an original medal."

Military Shop also provides miniatures, ribbon bars (including plastic-coated ribbon bars), clasps and rosettes, as well as custom storage boxes and framing.

NZ HEADS UP



Australia's Defence leaders hosted their New Zealand counterparts in Canberra mid July for their annual Australia-New Zealand Chief Executives' Meeting.

Australian Defence Secretary Dennis Richardson and Chief of Defence Force Air Chief Marshal Mark Binskin met New Zealand Secretary of Defence Helene Quilter and Chief of the New Zealand Defence Force Lieutenant General Tim Keating.

Air Chief Marshal Binskin said the bilateral relationship with New Zealand was one of Australia's most enduring and important Defence partnerships.

"The Anzac Centenary highlights the strength of our relationship, stretching from World War I to our recent operations in Afghanistan, Timor-Leste, the Solomon Islands and today in the Building Partner Capacity (BPC) mission in Iraq.

"Our efforts to support the people of Vanuatu following Tropical Cyclone Pam in March show the close cooperation between our Defence Forces extends to humanitarian and disaster relief operations in the region, and we are pleased to welcome the New Zealand Defence Force's full participation in Exercise Talisman Sabre for the first time," Air Chief Marshal Binskin said.

Around 620 NZDF personnel, two ships, four aircraft and nearly 50 military vehicles were engaged in Talisman Sabre this year.

Lieutenant General Keating said Australia was New Zealand's most important defence relationship and he welcomed the annual talks.

"Our two defence forces work very closely together on a range of missions and operations all around the world. I talk regularly with my counterpart, Air Chief Marshal Binskin, and the relationship between our two defence forces is in excellent shape at all levels."

Mr Richardson said the two nations had struck a good balance between practical and strategic engagement. "Both Australia and New Zealand

are scheduled to release Defence White Papers this year, providing us with new opportunities to expand our interoperability and to further align our strategic and policy approaches to shared global and regional security issues," Mr Richardson said.

"Today's talks take place as both countries carry out major Defence



reforms, modernise our capabilities, and weigh how to respond to complex strategic challenges."

The New Zealand Secretary of Defence, Helene Quilter, welcomed the discussions with her counterpart, Dennis Richardson.

"It is good that we can engage at the top level with our Australian counterparts on our respective White Papers, and the many other issues of mutual interest in the defence arena." Royal New Zealand Navy frigate HMNZS Te Kaha and tanker HMNZS Endeavour returned to the Devonport Naval Base on 2 August after being deployed since early this year.

Shortly after 9am, as both ships entered Auckland harbour, they were honoured by a Seasprite helicopter flypast and HMNZS Te Kaha fired a gun salute, which was returned from shore. More than 1100 family and friends

waiting on the wharf waved and cheered as the ships tied up.

They were welcomed home by the New Zealand Defence Force Maritime Component Commander Commodore John Campbell.

"The crews have been away from home and family for nearly six months, carrying out a wide range of challenging tasks," Commodore Campbell said.

"Te Kaha left New Zealand in mid-February and played a big part in the NZDF's contribution to the Gallipoli centenary commemorations in April, followed by several weeks operating



in the Western Indian Ocean with the Combined Maritime Forces, focusing on the smuggling of narcotics.

"The searches carried out by her boarding parties during those patrols yielded drugs worth about \$235 million, which were destroyed at sea. "During the final part of her

deployment she participated in Exercise Talisman Sabre in Australia.

"Endeavour has been away since early March and initially worked with the Royal Australian Navy as they prepared ships for deployments.

GAWN GETS BIG UN JOB

Photo by Corporal Amanda McErlich

Chief of Army Major General Dave Gawn has been appointed Head of Mission/Chief of Staff to the United Nations Truce Supervision Organisation (UNTSO).

Chief of Defence Lieutenant General Tim Keating said this was a significant achievement for Major General Gawn and NZDF.

"Major-General Gawn's appointment to this role is testament to his strong leadership. His ability to undertake a significant role on the international stage is an achievement he can be extremely proud of," Lieutenant General Keating said.

Major General Gawn takes over from Major General Michael Finn of Ireland.

UNTSO was the first peacekeeping operation established by the United Nations, with the first military observers arriving in the Middle East in June 1948. Its activities are spread over five host countries – Egypt, Israel, Jordan, Lebanon and Syria.

Twenty-six countries contribute military personnel to the mission, including Australia, Belgium, Canada, Denmark, Finland, Norway, Slovenia, Switzerland and the USA.

Currently eight NZDF personnel are serving with UNTSO. While in the UN role, Major General Gawn will wear a New Zealand Army uniform but will not be a member of the New Zealand Defence Force. ean with the es, focusing otics. ut by her hose patrols ut \$235 oyed at sea. f her ated in n Australia. way since vorked with a s they ments. Family and friends of the crews of HMNZS Te Kaha and HMNZS Endeavour wait for their loved ones to disembark after two separate voyages ended in a dual homecoming. Photo by Corporal Sam Shepherd

"She went on to take part in the annual Five Power Defence Arrangements Exercise Bersama Shield, held off the coasts of Malaysia and Singapore, and was then also involved in Exercise Talisman Sabre.



NZ HEADS UP

FISHERY PATROL

New Zealand Defence Force Offshore Patrol Vessel HMNZS Wellington arrived in Honiara on 19 August after helping New Zealand's South West Pacific neighbours patrol for illegal and unlicensed fishing activity in their waters.

Wellington sailed from New Caledonia five days earlier carrying two senior agents from the Royal Solomon Islands Police Force and two from the Vanuatu Police Force (Maritime) to conduct a combined patrol of the Vanuatu and Solomon Islands' Exclusive Economic Zones.

Commanding Officer HMNZS Wellington Lieutenant Commander Graham MacLean said patrolling those waters helped deter illegal, unreported and unregulated fishing, which helped protect the livelihoods of communities in Pacific-island countries – and NZ.

Wellington's assistance on this patrol was timely for the Vanuatu Police Force after their police patrol boat, which would usually be used for this type of tasking, was destroyed by Cyclone Pam in March this year.



NEW TRUCK FLEET COMPLETE

The last of 194 new Medium Heavy Operational Vehicles (MHOV) was handed over to the New Zealand Defence Force in a ceremony at Trentham Military Camp on 25 June.

Rheinmetall MAN Military Vehicles Australia Pty Ltd won the contract to provide the new logistics support vehicles, which will replace the ageing Unimog and Mercedes fleet.

The 4x4 6 tonne (HX60); 6x6 9 tonne (HX58), and 8x8 15 tonne (HX77) MHOVs are more powerful, offer increased carrying capacity for cargo and



supplies, and are operationally proven. Bolt-on armour kits and weapon mounts are available, offering greater crew protection and self-defence.

The new vehicles are also fully deployable, with all variants able to be transported via HMNZS Canterbury's side ramp. The HX58, HX60 and HX77 variants can also be loaded on and off Canterbury via landing craft, and bulk water vehicles refilled using the ship's internal systems.

Four HX60 models and a HX77 carrying a gapcrossing (bridge) system were deployed to Australia on HMNZS Canterbury for Exercise Talisman Sabre.

Chief of Army Major General Dave Gawn said the MHOVs were a major leap forward in capability for the NZDF.

"Across a range of employment contexts, the MHOV offers us significantly enhanced logistics and movements capability as a land force for the future," Major General Gawn said.

Three Royal New Zealand Air Force pilots and two helicopter crewmen graduated their Helicopter Basic Course after six months of challenging training at RNZAF Base

New helicopter crewmen Corporal Edward Garvey and Corporal Aeron Mellish. Photo by Corporal Brad Hanso

NEW

HELICOPTER CREWMEN

Ohakea on 14 August. The course involved a combination of ground school training where the students learnt the theory about the aircraft, engine and avionics; as well as intense flying training covering the skills needed to fly in confined areas, winching and carrying underslung loads.

The training was undertaken in the Air Force's A109 helicopters and the A109 helicopter simulator. While most of the flying training occurred close to Base Ohakea, the students also operated in the Ruahine Ranges to gain competency in mountain flying. Waiouru military training area was used for navigation and formation flying training.

The two crewmen will now commence conversion training on NH90 in order to become fully operational.

Two of the pilots will also commence conversion training to fly the NH90 while the other pilot will remain on the A109.

Prior to undertaking the Helicopter Basic Course the three pilots completed both their Wings and Advanced Wings flying training.





THE INNER SANCTUM AN AUSTRALIAN POLICE SNIPER

BY JASON SEMPLE

I AM CONVINCED THAT THINGS HAPPEN FOR A REASON - PEOPLE WE MEET, CHOICES WE MAKE AND THE EXPERIENCES WE HAVE IN LIFE. SOME THINGS I HAVE EXPERIENCED, BOTH OPERATIONALLY AND PERSONALLY, I LOOK BACK AND FEEL I WAS UNKNOWINGLY PREPARING MYSELF FOR THE WHOLE TIME. t's 10.45pm on the 27th of February 1998. It's a warm evening and looks like rain. But I am not worried about the weather. I am worried about the two stab wounds I have in my chest and abdomen. Even though I am pressing my hands on the wounds, I can feel a river of blood escaping. My only other first aid option is to try and keep calm and not panic, but that's hard work!

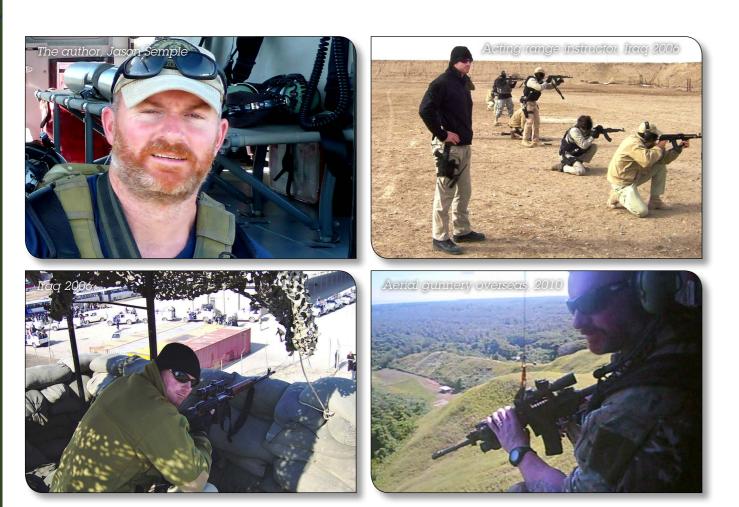
I am in Ultimo, Sydney. I've been in the NSW Police Force (or Service back then) for exactly two weeks and I am lying in the gutter completely sure of my impending death.

A courageous police officer, Pete Forsyth, is lying on top of me, but he has already died from his wounds. He suffered two fatal stab wounds to his heart, but before succumbing, he was in the process of giving me first aid. He was a proper hero to the very end.

Unfortunately Pete would not be the last mate lost in the line of duty, with four more killed in the years to come.

Against all odds, I survived. "Never give up" as they say.

From that night onwards I promised myself I would take every opportunity to improve myself in life and take on every challenge I could. I had to make it count. I owed it to Pete, to myself and to those who worked so hard to save my life.





The result, 17 years later, is a life spent in Specialist Police Tactical Operations in two Australian police organisations – the NSW Tactical Operations Unit (TOU) and the AFP's Operational Response Group (ORG). Between the TOU and AFP I enjoyed a period of private contracting for companies representing the US DoD and am currently employed as a specialist advisor/mentor in the Middle East.

In this article and others to follow I will try to articulate a little about me, and share what has driven me to where I am today. I look forward to sharing my experiences and the inner sanctum of the group of specialists I worked with who push themselves in everything they do.

The road I have travelled has been one I would not trade for any other. I have met some of the finest men and women in policing and military circles, as well as certain other agencies closely aligned – men and women who decided their calling was to protect their countrymen, both domestically and abroad. Brave men and women, some of whom paid the ultimate price for their life choice.

During my professional life I was lucky to have met and worked with such a broad cross-section of brave people from all over, each having an impact on who I am today. They are Australians, Ame Islan with aim secu W etho thos and aga othe diffe Bere To I In shan of C W my field Bu grou

Americans, Emiratis, Pommies, Philippinos, Solomon Islanders, Timorese, Iraqis, Afghanis, Somalis – all with different cultural beliefs and values, but all aiming at the same collective goal of peace and security.

Whether you serve in the military or police the ethos is very much the same. You want to protect those who cannot protect themselves, domestically and overseas. You want to bring justice or penalty against individuals who prey on those who prey on others. The methods and delivery of this intent may differ, but the endgame is a shared one. The Green Beret motto sums it up nicely. 'De Oppresso Liber' – 'To Liberate from Oppression'.

In this article I hope to connect with you and share the commonality I have with you as a reader of CONTACT magazine.

Why write articles for this magazine? What are my motives for reaching out to you as a reader? Over a number of articles I hope to accurately and informatively share the world of police tactical group snipers, and touch on topics related to this field of endeavor.

But I want to make one thing clear – I am not special and I do not write these articles to beat my chest. I write to share with you the work of some talented and dedicated people who have been working to keep all our families safe from harm. I am merely one of these guys and would have been ineffective without my team by my side.

I would like to respectfully show how much the sniping skillset has evolved, especially over the preceding 10 years. There has been a quantum leap in sniping like never before in history. The leaps we have seen in ballistic software, our understanding of the contributing factors of internal and external ballistics and the equipment at hand is remarkable.

A good sniper now is literally a ballistician and physics guru. We know exponentially more now than we did even in the early millennium. It's my goal to share some insights on that progression.

This quantum leap came about with technology and also due to the fact that sniping is a brotherhood where we as specialists coexist and share our knowledge with other snipers to progress the skillset as a whole. The level of acceptance and camaraderie between snipers from different military, police and other agencies creates a powerful synergy. I intend to share some of this synergy.

In my next article I will examine the evolution of PTG sniping that I was exposed to during my tenure in the two separate police tactical teams and some of the key people who allowed us to progress to the levels we did.

For now I'll explain a little about the two PTG units I worked for and the type of work these units conduct on a daily basis, to give you some background on my training and experience.

Even though I did many deployments overseas with the AFP, the backbone of my tactical experience came from the constant high-risk policing with the Tactical Operations Unit, State Protection Group, NSW Police.

The State Protection Group was established in 1991 to deal with a wide range of extraordinary policing responses to situations, which are beyond the scope, or capacity, of police generally.

SPG directly support operational police in highrisk incidents such as sieges with a specialist tactical, negotiation, intelligence and commandsupport service.

The command also provides support with rescue and bomb-disposal operations, operations requiring the services of the Dog Unit. The SPG is also responsible for the delivery and maintenance of the Police Service firearms capability through the Police Armory.

The core responsibilities I had as an operator in the TOU SPG were; provide a police tactical group counter-terrorist-response capability in accordance with the Australian National Anti-Terrorist Plan; conduct site appreciation/surveys and tactical reconnaissance: daily domestic duties including providing a 24-hour response capability to the New South Wales Police, in resolving high-risk incidents across the State; hostage rescue; arrest of armed and dangerous offenders; protection of undercover agents/intelligence-agency personnel; witness protection and escort; high-risk vehicle intercepts; VIP protection/escorts, counter-assault and counter-sniper team; suicide intervention; high-risk search-warrant assist; escort of high-risk prisoners; siege resolution; operational support for major law-enforcement operations; navigation and specialised rural operations; hostage survival and evacuation plans; sniper/counter-sniper duties including hostage reception duties; and, remotearea first-aid and casualty evacuation.

As you can see there was a high expectation on our members to have high levels of skills in a number or areas. The unit was involved in hundreds of operations per year, which provided its members with a rich pool of experiences.

To enable myself and my fellow operators to do the work expected of us, we were given extensive training in a number of skills and tactics.

Listed below are many of the qualifications I gained in the past 15 years, provided by both







Rob Maylor, Mike Brookes-Jones, the author Jason Semple and Daniel Keighran VC, in 2015.

the TOU and ORG: Command and Control Course C3 Australian Federal Police; Diploma of Policing (Charles Sturt University); OST Instructors' Course/ Special Weapons Instructor course; Instructor Rural Surveillance Program Philippines (jungle warfare and operations management); Combat Tracking/Tactical Tracker Course level 1 and 2; senior sniper/counter-sniper instructor; breaching instructor; explosives user/shot firer qualification/ diploma (commercial licence); Image Capture and Transfer Instructor courses; international deployment/pre-deployment training; remotearea first aid; Early Trauma Management Course; AFP Operational Safety Trainer Instructors' Course/ special weapons instructor; Federal Agent Lateral Program; NSW High Risk Police Driving Course; Certificate IV in Workplace Training and Assessment/Train Small Groups; National Counter-Terrorist Committee Skills Enhancement Course, sniper, sniper team leader; firearms trainer; Helicopter Operations and Insertion Course; airborne rappelling, fast roping and winch rescue; Senior First Aid (Level 2) St John Ambulance Australia; Certificate in Laser Safety, Laser Safety Officer class 2; Blaser Long-Range Sniper Course; Aerial Gunnery Course; HUET (helicopter underwater escape training); SE400 CBR Course

(chemical, biological, radiation); Water Operations Counter-Terrorist Course; Aircraft Operations Counter-Terrorist Course; Method of Entry Course mechanical, manual and dynamic; NSWP Tactical Operations Operators Course CT; and, National Counter-Terrorist Committee Explosive Breaching Course. After a number of years with the TOU, I resigned and undertook private contracting work in Iraq training Iraqi Special Police Commando's in north Baghdad until returning to Australia in early 2007. I returned to undertake duties with the AFP and its new tactical unit. There I would ultimately be responsible for building its sniper team alongside an ex-SAS member who had also come on board. In 2006 the Australian Federal Police formed a tactical group that could provide assistance both domestically and internationally to AFP operations and the protection of government assets and personnel abroad. It was initially made up of current and ex members of nearly every police tactical team across Australia, bringing with them an awesome cross-section of skills and experience. This group was called the Operational Response Group, and was placed at the disposal of National AFP investigational teams and the International Deployment Group (IDG).

The Operational Response Group was AFP's permanent specialist tactical and stability policing capability, able to rapidly respond to civil disorder and international crisis, both nationally and internationally, within 24 hours.

The Operational Response Group was defined as a police tactical group within the National Counter-Terrorism Committee arrangements, providing the Commonwealth of Australia an offshore specialist and tactical policing response capability.

The unit provided similar capabilities to the AFP's Specialist Response and Security Team but focused on national and international deployments outside of the Australian Capital Territory, where the SRS had responsibility.

The ORG was created to enhance the operational policing capabilities of the AFP's International Deployment Group (IDG) operating predominantly in the Pacific region.

ORG provided the AFP with a specialist tactical policing capability which included; effect highrisk searches, search warrants and arrests; support to public-order policing; remote rural patrols; protection of people in high-risk situations; support to the security of members deployed to missions such as RAMSI; advanced training in specialist weaponry and less-lethal capabilities;

rapid response for containment of civil disorder and restoration of order; tactical negotiations, communications and marine-operations support; remote and covert surveillance; prison-riot response; and, major civil-disorder interventions, and capacity building in other specialist police units overseas (such as Solomon Islands and Philippines).

My role in the ORG was as a senior sniper in the Marksman Reconnaissance Team (MRT). As I said earlier, myself and another federal agent (ex-SAS) were tasked with building this team from scratch.

We built it all right, with some exceptional men and the best weapons and equipment money could buy.

The AFP allowed us to create a sniper team that was cutting edge and extremely well trained. I will always be grateful for the support and foresight of certain senior AFP officers who allowed us to get on with creating something unique. I will also be grateful to have worked with teammates who were genuine innovators and guys I will always respect and admire.

If we didn't know a skill, we would hunt down the most proficient expert and get them to come and train us. Guys like Glen Roberts of WA TRG in long-range shooting, expert tactical trackers like David Scott Donelan and a host of other renowned



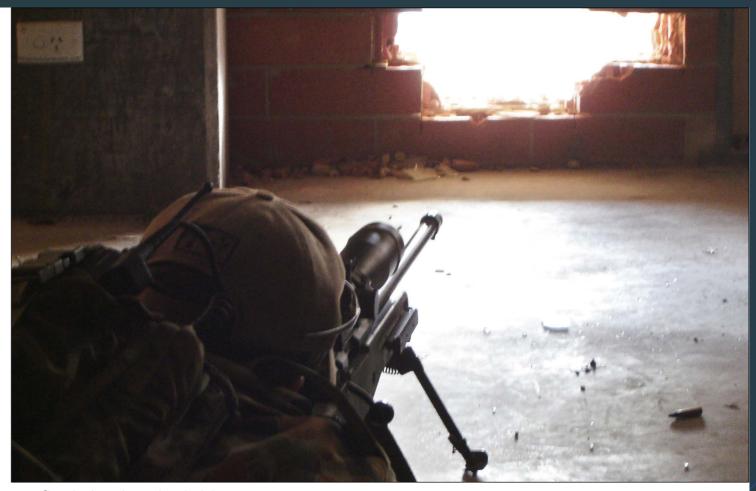


Jason Semple is a firearms trainer on the following weapons:

- Beretta 92F
- Sig Sauer 226
- H&K USP •
- **Glock** pistols

He is also a specialist weapons instructor on the following weapons:

- M4/M16
- Glock 17, 19, 22, 26 pistols,
- Remington 870P shotgun
- 40mm grenade launcher
- Accuracy International .308 and .50
- Remington 700
- Blaser .308/.338
- H&K MP5/SD6/KA1 machine gun
- Knights Armament SR25/M110.308
- AMD
- AK-47
- RPK
- РКМ
- Minimi
- Maximi
- Mag58



Counter-terrorism sniper training.

experts in their fields. I will talk further about these guys in future articles.

Our expanded roles required the use of all the skillsets we had developed over our careers. We had an excellent and valued relationship with Australian Special Forces both from the east and west of Australia. We would not have many of the skills without that help from our military brothers and we will always be grateful and in their debt. I am hoping these guys knew we were there to protect their families, while they deployed overseas to ultimately protect us all.

Our domestic and overseas work required a new level of tactical application. Fast roping/rappelling into jungle locations, swim-up assaults through crocodile- and shark-infested waters, horrendous jungle stomps, long-term jungle observation posts, continuous close-target reconnaissance tasks in hostile and inhospitable environments.

We often found ourselves coming out of jungle operations and rolling straight into urban counterterrorist and major criminal operations in Australia's capital cities. This required experienced members to make these transitions quickly and effectively. It also required a level of maturity, as you could be sneaking into a village under NVGs one day, and 48 hrs later you were in the Melbourne CBD on another, highly visible task.

During later articles I will describe what it was like and some of the ordeals we faced during these operations. I will be restricted on some information due to the Commonwealth Secrecy Act, but I will be able to explain some skills and personal experiences.

I will also write articles on the latest weapons, equipment, ammunition and specific sniper training. I will provide expert testimonials by fellow Australians in the industry and also American and British Special Forces I have worked with.

I will do my best to accurately portray the work and the type of men who actually conducted the operations. I will try to capture the human side as well, - the humor, the personal sacrifice, and the pain that came with both arduous activities and the injuries we sustained on the job.

I look forward to sharing all this with you as the reader and for you to get an insight into our world.

CONTACT is extremely excited to have Jason Semple on board for what promises to be a very enlightening series of articles over the next several issues.

SMART CARGO DROPS

The next step in airdrop capability for the ADF made its mark at Woomera Test Range in South Australia in July when the Joint Precision Airdrop System – JPADS – was the focus of an Air Force/Army capability demo.

By combining existing airdrop practice with GPS technology, JPADS allows accurate delivery of payloads to a drop zone using steerable parachutes.

This allows the delivery aircraft to drop its cargo several kilometres away from the DZ from altitudes up to 25,000 feet - well outside the range of ground-based weapons.

The Woomera trial was conducted by Air Movements Training and Development Unit (AMTDU), a joint Air Force and Army unit from RAAF Base Richmond.

Test Director AMTDU Flight Lieutenant Justin Della Bosca said the point of impact for the JPADS payload was programmed into the guidance unit by the aircrew during the mission-planning phase.

"The JPADS capability enables precision resupply to ground forces from high altitudes and from long stand-off distance," Flight Lieutenant Della Bosca said.

"This reduces the aircraft's exposure to ground-based threats as well as enabling an aircraft to launch re-supply to multiple drop zones from a single release point."

A more basic JPADS system had previously been trialled at Woomera in 2008 using C-130H and C-130J.

In February 2014, a RAAF C-17A successfully conducted a trial JPADS drop using the latest available technology.



The recent trial at Woomera used a C-130J Hercules, and represented AMTDU's next step in building $\boldsymbol{\alpha}$ sustainable JPADS capability for the ADF.

JPADS kits can accommodate one tonne of any payload type that will fit into a standard container delivery system.

Following ground and airborne trials with the JPADS load, the first trial drop was conducted on 30 July.

Flying at an altitude of 20,000 feet with the C-130J's ramp open required the crew to be on oxygen masks for the mission.

Flight Lieutenant Della Bosca said the aircraft released an 800kg load approximately 18.5km from the planned impact point and it landed within 25m of the planned target, and within six seconds of its predicted arrival time.

AMTDU will make a number of recommendations from lessons learnt during the evaluation, allowing for a limited JPADS training capability on the C-130J.

The next goal is to roll out JPADS on C-27J Spartan, and use JPADS in support of operations.

Sergeant Mark Ferrer, a rigger supervisor with AMTDU, said the JPADS kit was reusable.

"The complete system consists of a canopy, pilot chute and autonomous guidance unit," he said.

"Recovery of the system requires a drop zone team of four personnel to lift and remove it, and to re-use the system, three qualified parachute riggers and one checker need to re-service the kit, which includes inspection and repair of damage, if required."

AMTDU project officer WO1 Anthony Eddie said JPADS would take Australian Army Air Dispatch into a new and exciting era of guided cargo airdrop.

"Being able to airdrop one tonne of cargo from an aeroplane at 25,000 feet is remarkable," WO1 Eddie said.

"To do that, and have the cargo land within 25m of any designated location, is excellent."

LEFT: Airmen from 62nd Airlift Wing, USAF, observe a trial Joint Precision Airdrop System – JPADS – airdrop during routine training. The trial drop, at Yakima Training Center, Washington, on 8 March 2012, included two bundles equalling 2900 pounds, which were dropped from 5700 feet. The first bundle landed within sixty feet of its designated target. The second landed within 25 feet. US Air Force photo by Airman 1st Class Leah Young.

BELOW: Aircrew observe a conventional resupply parachute drop in Afghanistan. JPADS will make such drops more accurate and far less danaerous for aircrew.

US Air Force photo by Captain Teresa Sullivan.





Contact: Ken Cocks at **Medals, Mementos & More**

Visit: 46 Coromandel Parade, Blackwood, SA 5051 Mail: PO Box 375, Blackwood, SA 5051 Phone: (08) 8278 8530 or 0411 415 817 *Email*: medalsandmore@bigpond.com Web: www.medalsmementos.com

Now 72, Ken Cocks has finally decided to retire - and sell his very profitable business **A business opportunity YOU** could be proud of!

The Cocks family of Blackwood, South Australia, have a medalmounting business they would like to sell.

"We came into the business knowing very little about medals and, while it was a steep learning curve, it did not take us long to get a handle on it," Ken

says. "We meet some wonderful people and hear some amazing stories. Our customers range from very old WWII people to currentserving personnel.

"We mount original and replica medals and we also prepare heritage military frames when people want to honour a relative or to showcase their own service."

Ken feels now is a great time to buy this business, what with the 100th anniversary of Gallipoli fresh in our memories and loads more milestones ahead over the next four years.

But the business is well established and solidly grounded regardless.

"During the almost eight years we have had this business we have built an excellent reputation and a very solid client base," Ken says.

"For anyone buying the business, if they continue quality service to our clients, they cannot fail to succeed.

"Our turnover for 2014 was more than \$190,000 with a trading profit of nearly \$90,000."

So, if the business is going so well, why is Ken selling?

because, at nearly 72 years of age, it is time to properly retire.

Fínd, líke, share at 📑 У

7 to 10-day turnaround on all work. Expect delays for foreign or rare medals and ribbons.

"We want to sell the business

"But we would be more than happy to spend time with any new owner to get them 'up to speed' in the business - especially in the lead up to their first Anzac Day, as the three months prior can be exceptionally busy.

"After that, our son, Craig, has offered to help as a subcontractor to the business if the new owner needs a hand."

Ken is confident he has a, "lovely business that would be ideal for a serving member retiring early".

"We have about \$60,000 to \$70,000 worth of stock on hand and we're asking \$225,000 for the business but that price is negotiable.

Contact Ken Cocks on (08) 8278 8530 or 0411 415 817 for more information.

MILITARYEQUIPMENT

BY LIEUTENANT COLONEL BENJAMIN MCLENNAN PHOTOS BY LANCE CORPORAL M.D. SCHEIMER, ADF & THALES

ADF GETS NEW RIFLE

STEYR MANNLICHER AUSTRIA

There are few things more precious and personal to a soldier than their rifle. They need it to function reliably, be easy to maintain, be accurate,

prove lethal in combat, never be more

than an arms-length away and, well, just feel 'right'. For almost a whole generation of Australian soldiers, the F88 Steyr has been the rifle employed by the Australian warfighter. Before its introduction into service, this space-age-looking weapon of plastic, metal, bull-pup configuration, fixed telescopic sight and enigmatic colour scheme was limited to the stuff of Hollywood blockbusters. Since its roll out, it has been issued, carried and employed operationally by Australian soldiers across the world.

It would be fair to say the F88 has proven to be a functional, reliable, accurate and lethal rifle for the Australian soldier.

It has been demonstrably more accurate than its predecessor, the venerable 7.62mm Self Loading Rifle. Furthermore, it is lighter, easier to maintain and, well, 'feels much better' than its forebear. Finally, it has been employed both effectively and expertly in combat operations.

This is not to say the F88 did not have areas for improvement - both perceived and actual. After all, there is no such thing as a 'perfect' weapon. Each and every rifle possesses comparative advantages and trade-offs.

Many of the F88's perceived and actual areas for improvement emerged in the 'noughties' when operational realities and evolutions in weapon and target acquisition ancillary design progressively made the F88 feel heavier, less balanced and, by virtue of its fixed 1.5-power telescopic site, less accurate (arguably, this same trend affected most, if not all, assault rifles). Overall, the F88 eventually started to feel less 'right'.

This feeling was compounded by Special Operations Command (SOCOMD) migrating to the M4 assault rifle. The take-up of the M4 by SOCOMD fuelled an unsubstantiated assumption that the F88 was inferior to the M4 in terms of function, performance, accuracy, reliability and lethality. In many cases, this assumption was exacerbated by the natural allure of all things 'special forces'. For many, assumption both invariably and erroneously became fact over time.

Of course, the F88 remained as accurate and lethal as ever. Moreover, its reliability never faltered. Over the past 15 years, Army, in cooperation with industry, attempted to address its perceived and actual areas for improvement by introducing successive upgrades. First came the grenade launcher attachment and

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ENHANCED F88

a STANAG rail system. Then the SA2 arrived. These upgrades were matched by the rollout of a range of target-acquisition ancillaries from the night aiming device to the ELCAN 4x sight and the TA31 ACOG.

However, the desire to pursue a number of improvements to the F88 endured.

Consequently, around 2010, Army embarked on a journey to once again deliver a leading, highly reliable, readily maintainable, exceedingly accurate and lethal rifle to the Australian soldier.

Critically, Army also intended to deliver a rifle that had the potential to evolve rapidly over its life span. That is, deliver a weapon that was 'future proofed' against the type of operational and commercial developments that exposed real and perceived areas for improvements in the F88 throughout the 'noughties'. Five years later and - voila! The Enhanced F88 (EF88) is being introduced to the Australian Army.

What is Army's intent with the EF88? In short, deliver a rifle in which Australian soldiers have absolute confidence; a weapon they know is highly reliable, easily maintained, devastatingly lethal, light and modular, can readily evolve and, yes, feels 'right'. Initial issue of the EF88 commenced in June 2015 with the provision of 700 weapons to the 1st Battalion, Royal Australian Regiment (1RAR). During the period 2016 to 2019, some 30,000 EF88s will be issued to Army's Combat Brigades, Support Brigades, 1st Division, 2nd Division's Multi-Role Battlegroup and Security Force units in Air Force.

New EQUIPERI

Weapon	Length	Weight unloaded/loaded	Barrel length
F88	790mm	3.6kg/4.1kg	508mm
F88SA1	790mm	4.3kg/4.8kg	508mm
F88SA1 Carbine	690mm	3.3kg/3.8kg	407mm
F88SA2	790mm	4.4kg/4.9kg	508mm
F88SA2 with GLA	790mm	5.1kg	508mm
EF88 20"	802mm	3.39kg/3.89kg	508mm
EF88 20" with GLA	802mm	4.34kg/4.84kg	508mm
EF88 16"	700mm	3.25kg/3.75kg	407mm
M4A1 Carbine	760-840mm	2.91kg/3.51kg	368mm
M4A1 Carbine with GLA		5.1kg	

Source: LWP-G 7-4-12, 5.56 mm F88 Austeyr Family of Weapons, 2010; LWP-G 7-4-17, M4A1 Modular Weapon System, 2014; Thalesgroup.com; TheRogueAdventurer.com

The Old Gun Cabinet



FIND F90 / EF88 RANGE-DEMO VIDEO As the EF88 is rolled-out, the F88SA1 will be retired. Those units from Forces Command, 1st and 2nd Divisions not receiving the

EF88 will continue to employ the F88SA2.

WHAT ABOUT THE FACTS

It is all well and good to claim the EF88 is a considerable improvement over its predecessors.

It is an even bolder claim to allege it is equal to or better than other commercially available rifles. Salesmen and gun-runners make such pronouncements all of the time.

Well, don't be seduced by the glossy brochures. Review the facts in the table (left) and images for yourself. And, the facts demonstrate the EF88 is indeed lighter and more modular than its forerunners.

Furthermore, what is illustrated is that the EF88 addresses many of the long-standing perceived and actual areas for improvement associated with the F88.

Some of the key improvements include:

- It is substantially lighter. The 20" standard variant is 3.39 kg and the 16" model is 3.25 kg – almost half a kilo lighter than the F88SA2.
- The stock has been redesigned to make it far more ergonomic. This includes a ribbed buttplate that allows better purchase when firing from the shoulder – with or without body armour. In addition, the movement of the ejection port and the inclusion of a cheek-weld make the weapon easier to fire – with or without a combat helmet.
- Similar ergonomic enhancements have been made to the shape of the trigger guard and the GLA trigger system. Trials have indicated



this makes the weapon easier to employ during both deliberate and combat shooting.

- The STANAG 4694 extended rails on the top and right side of the receiver group enable the weapon to readily accommodate a range of current and likely future target acquisition ancillaries. Such ancillaries are being delivered with the EF88 – see below for description.
- The centre of gravity of the weapon has shifted rearwards, thereby making the weapon feel even lighter than it is – as well as remarkably well-balanced.
- The barrel is fluted, more rigid and enables better heat dispersion.
- The gas plug and folding cocking handle are far more user-friendly than previously.
- The side-opening GLA accommodates all lethal and non-lethal munitions. Moreover, its lightweight construction makes it one of the lightest GLAs commercially available.
- Its superior reliability and maintainability has been confirmed via user trials and rigorous testing involving the firing of more than 500,000 rounds, subjecting the weapon to stringent environmental stressors including sand and dust, and exposing the weapon to numerous contaminants.
- The inclusion of a bottom, or 6 o'clock rail that allows a bipod to be fitted. This feature dramatically increases the accuracy of the rifle. It also allows the GLA to be attached and removed by the operator.

It is very difficult to provide factual, commerciallyreleasable evidence of the EF88's reliability, maintainability and accuracy. However, what can be made public is that successive and exhaustive user trials have found the

EF88 to be 'exceptional', 'impressive' and 'a significant step forward'. The positive feedback from these trials is reflected in the EF88 reviews profiled on numerous weapon blogs.

MELITARY EQUIPMENT

- 1. Fixed, lighter barrel
- 2. Improved gas-plug adjustment
- 3. Double-action, side-opening grenade launcher
- 4. NATO-STD accessory rail for laser aimers
- 5. Improved trigger guard grip access
- 6. Improved access to GLA trigger

The EF88's design improvements have also been matched by the development and introduction of slicker weapon drills. Examples include, but are not limited to: not removing the barrel to clear the weapon (the barrel is actually fixed and cannot be removed); more instinctive stoppage drills; and, faster magazine-changing procedures.

It is anticipated that these design and procedure changes will further enhance the superior functionality, reliability, accuracy, lethality and 'feel' of the EF88 for the soldier.

Of course, the EF88 constitutes only one half of Army's formula to enhance the accuracy and lethality of its rifle. Concurrent to the introduction of the EF88, Army will deliver the following target acquisition ancillaries:

- the side-opening Steyr Manlicher SL40 40mm GLA
- an enhanced day sight for all combatants
- an in-line image intensification device that will enable select combatants to surveil and acquire targets by night and in low-light conditions
- an in-line thermal weapon sight that will enable commanders and marksmen to surveil and acquire targets
- a high-powered weapon torch that attaches to the 6 o'clock rail
- a series of foregrips and bipods that enable a much more stable firing platform for each combatant – extending the effective range of the weapon out to 600m.

The combination of EF88 and target acquisition ancillaries will realise the significant enhancement in lethality afforded by the EF88 weapon system. Specific information on these ancillaries will be provided in the next edition of CONTACT.

This lethality will be further enhanced through Army's night-fighting-equipment replacement project. Aside from delivering a far better night

- 7. Extended ejection port and recessed covers
- 8. Non-slip butt plate
- 9. Modified hammer pack to improve reliability and facilitate silent cocking
- 10. Improved cheek weld
- 11. Improved red dot grenade launcher sight

fighting binocular, this project will also deliver stateof-the-art laser aiming devices for the EF88.

It would be fair to say the news for soldiers being issued the EF88 keeps getting better and better!

We talked earlier about 'future-proofing' the EF88 against the very developments that led to perceived/actual areas for improvement in the F88. Evidently, Army wants to learn from recent history and ensure the EF88 has the ability to evolve, and remain a leader over its life of type.

Well, one of the most encouraging attributes of the EF88 is its potential for future design growth. Already, Army is working with the Capability Acquisition and Sustainment Group to consider a range of design initiatives for the EF88. Given Army's intent to incorporate spiral development into all of its soldier combat system initiatives, the future for the EF88 looks very promising.

THE ELEPHANT IN THE ROOM

Some final issues/elephants in the room worth considering:

Why is it called the EF88?

The EF88 is the name selected for those rifles issued to the Australian Army and Australian Defence Force. Thales uses the F90 nomenclature for the weapon it hopes to export on the international assault-rifle market.

Why not just buy the M4?

While Army is very satisfied with the M4 for SOCOMD's unique mission profiles, it has absolute confidence the EF88 and target-acquisition ancillaries it is delivering to the rest of Army is the right way forward.

In short, extensive trials have confirmed it fits the bill! It is functional, extremely reliable, devastatingly accurate and lethal, lightweight, superbly balanced, is future-proofed and, critically, according to user feedback thus far, feels 'right'.

- 12. Extended NATO-STD top rail for in-line accessories
- 13. Reduced overall mass, improved balance
- 14. NATO-STD rail for grips, bipods and visual illumination devices
- 15. Folding cocking handle less valuable to damage
- 16. Bolt release catch for faster magazine release

The investment made by Thales, Army and the Capability Acquisition and Sustainment Group in developing the EF88 is unmatched.

Furthermore, when one sifts the myths from facts when comparing the EF88 and M4, Army's choice is justified.

Finally, one cannot dispute the fact that Army can transition to the EF88 far more readily than it could convert to the M4. This is no small consideration when analysing the impacts on retraining soldiers and maintainers in a fundamentally different weapon system (M4), while also sustaining Army's readiness requirements.

Private Daniel Horrigan, 1RAR, with a custom-painted EF88 and attached grenade launcher. Photo by Lance Corporal MD Scheimer



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Army has commenced the roll out of its new rifle, the EF88. From 2016, a range of state-of-the-art target acquisition ancillaries will complement it. There is ample evidence that Army is providing a world-class rifle that has leading functionality and reliability, is easy to maintain, is incredibly accurate and lethal and will be future-proofed.

Indeed, the Australian soldier should be encouraged that Army is providing them with an advanced, superior weapon in which they can have absolute confidence, a sense of pride and an assurance that it will feel 'right'.

BACK TO THE FUTURE

HISTORY DELIVERS BIG REWARD FOR TODAY'S DIGGERS

In the first 12 months of its Australia in the Great War (AGW) commemorative campaign, long-time CONTACT supporter Military Shop has raised more than \$250,000 for our favourite charity Soldier On - and has helped hundreds of thousands of people connect to Australia's military history.

The family company based just 10 minutes from Defence Headquarters in Canberra has worked in and around military commemorations for more than three decades and is leading the charge in helping Australians commemorate the Centenary of the Great War.

And with 10 per cent of all of its sales going directly to Soldier On, the past has certainly brought some rewards for today's diggers.

The funds raised for Soldier On will support the charity's work with today's service men and women wounded, physically and mentally, in places such as Afghanistan and Iraq.

Military Shop's Stephen Davie says the 2014-2018 AGW campaign has three key objectives - to engage, to educate and then to let people commemorate with an understanding of the times and people we are remembering in the centenary.

"Our company has been fortunate enough to be involved in many events linked to our military history – from Army's 100th, Air Force's 75th, Navy's International Fleet Review, and the recent Operation Slipper Welcome Home," Mr Davie says.

"It has been our honour to help make these and other great milestones accessible to a wide range of serving and non-serving people.

"We see the centenary of the Great War, and in 2015 the 100th anniversary of Gallipoli, as fantastic opportunities to engage even more people in our national story and to make even more people aware of the need to support today's diggers.

"Our support for Soldier On is about recognising that today's service men and women are linked directly to this amazing military heritage.

"Today's diggers have carried forward that tradition of service just as each generation of service men and women before them has done.

"We work closely with all arms of Defence and know that the work of Soldier On is making a real difference to today's service personnel and their families."



Stephen Davie with a selection of items designed to commemorate, educate, engage – and support today's service men and women through Soldier On.

Mr Davie says the Australia in the Great War campaign will mark the milestones from 1914 through to Armistice. But he wants it to be about sharing an understanding not just a date. That is why he says the company "puts a hell of a lot of effort" into researching and building products that tell the factual story.

"The goal is not to inundate people with only dry facts or history. It is about giving people a real insight.

"Let's create an interest in, and an understanding of our history - and of those who serve today."

To see more on the Australia in the Great War and Gallipoli collections visit

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www.agw.militaryshop.com.au







Our wounded have done their part for Australia, they have given their best. Thousands have wounds, some you can see and some you can't. It is now Australia's turn to look after them, please give generously and make a difference in our wounded warriors lives.



SOLDIER ON IS ABOUT AUSTRALIANS COMING TOGETHER SHOW THEIR SUPPORT FOR OUR WOUNDED. IT'S ABOUT TELLING DUR DIGGERS THAT WE WILL ALWAYS HAVE THEIR BACKS; THAT WE WILL REMEMBER THOSE WHO HAVE COME HOME, AS WELL WE WILL REMEMBER INUSE WHU HAVE DUME HUME, AS WELL AS THOSE THAT HAVE DIED. IT'S ABOUT GIVING THE WOUNDED AS THUSE THAT HAVE DIED. IT'S ABUUT GIVING THE WUUNDED THE DIGNITY THEY DESERVE AND THE CHANCE TO DO AND BE

SOLDIER ON IS ABOUT THE ANZAC SPIRIT, AND MATESHIP AND ALL AUSTRALIANS KEEPING THEIR PROMISE TO TAKE CARE OF OUR





Royal Australian frigate HMAS Newcastle netted 724kg of narcotics worth an estimated \$597 million.

During the same operation, New Zealand ship HMNZS Te Kaha made two seizures totalling 257kg of narcotics worth an estimated NZ\$235 million.

A Royal New Zealand Air Force P-3K2 Orion played a cruical part in the second New Zealand find.

Both warships were patrolling separately as part of the Combined Maritime Forces, Combined Task Force -150.

All but small samples of the drugs seized were destroyed and the samples transferred to appropriate law enforcement agencies as evidence and for further testing.

HMAS Newcastle's Commanding Officer Commander Dominic MacNamara said narcotics seizures denied a key source of funding to terrorist organisations.



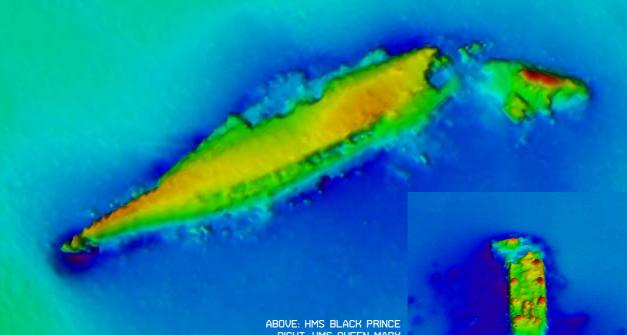


Photos by Lieutenant Andrew Colebourn (main) and Leading Seaman Brenton Freind



39

JUTLAND'S GHOSTS



RIGHT: HMS QUEEN MARY BELOW: HMS INVINCIBLE

Scans of ships destroyed in the Battle of Jutland 99 years ago have been made for the first time using 21st Century technology.

The colourful three-dimensional images made by Royal Navy survey ship HMS Echo belie the horrors played out off the coast of Denmark one Wednesday afternoon during the First World War.

They show the twisted and battered wreck of HMS Invincible, one of 25 warships - 14 of them British that were blown up on 31 May 1916.

Ahead of the battle's centenary next spring - which will form the focal point of the Royal Navy's Great War commemorations - survey ship HMS Echo spent a week scouring the floor of the North Sea with her state-of-the-art sonar suite.

Nick Hewitt, an historian with the National Museum of the Royal Navy, who was on board HMS Echo for the work at Jutland, said the week surveying the battlefield of 1916 had helped to, "build a picture of one of the greatest naval battles in history".

"The condition of the wrecks varies enormously. Some have suffered badly from post-war attempts to salvage them, but others are astonishingly intact," Mr Hewitt said.

"HMS Defence in particular was 'reduced to atoms' according to one contemporary account, but we

found the wreck complete, upright and immediately recognisable by the distinctive profile of her secondary armament, still trained outboard towards her foes a century after the battle."

During the Battle of Jutland, 250 warships from the British and German navies clashed from the afternoon of 31 May 1916 until the small hours of the following morning. When it was over, 25 ships were at the bottom of the North Sea and more than 8500 men were dead, three quarters of them Britons – and more than 1000 of those killed when battle-cruiser Invincible was torn apart when a German shell plunged through the roof of Q turret, detonating her magazines.

At the end of the wreck surveying, HMS Echo's 40-strong ship's company held a service of remembrance before casting a wreath into the North Sea in memory of the British and German dead.





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GREAT AMERICAN

US Ambassador to France Jane D. Hartly, recognised three Americans as heroes for their actions in saving countless lives by foiling a terrorist attack aboard a train headed toward Paris on 21 August.

"We often use the word hero, and in this case I know that word has never been more appropriate," Mrs Hartley said.

"They are truly heroes. When most of us would run away, Spencer, Alek and Anthony ran into the line of fire, saying 'Let's go.' Those words changed the fate of many."

US Air Force Airman 1st Class Spencer Stone and his two friends, US Marine Corps Specialist Aleksander Skarlatos and university student Anthony Sadler, were on vacation and headed from Amsterdam to Paris when an armed man entered their train cabin.

"It wasn't a conscious decision," Specialist Skarlatos said. "We didn't even have time to think about it. We just acted."

The trio had just spent the previous three days enjoying Amsterdam on their vacation. They were excited to make it to Paris so they got up early and made their way to the train station. Their train wasn't leaving for four hours so they killed time buying souvenirs and, according to them, eating the best ice cream they ever had. They thought their vacation was off to a great start.

STORY AND PHOTOS BY TECHNICAL SERGEANT RYAN CRANE, USAF

> "We had first class tickets," Airman Stone explained, "but we just found a spot we liked somewhere else on the train. Turns out our wagon didn't have Wi-Fi so we decided to use our first class tickets and moved to another wagon."

> After about an hour on the train they were settled in somewhere in Belgium.

"I was asleep with my headphones on and my friend, Alek, was sitting to the left of me and Anthony was sitting to my right across the aisle.

 $\ensuremath{^{\prime\prime}}\xspace$ I wake up and I see Alek moving around saying 'oh crap! oh crap!"

Skarlatos motioned to the gunman who entered the cabin brandishing an AK-style assault rifle.

"I kinda turn around and see the guy," said Stone, "and he's got the AK, he's trying to charge it.

"I just throw my headphones off and turn around in my seat, get low and kinda look around."

At this point the gunman had passed Stone and Skarlatos. It was at that moment their lives changed.

"Alek taps me on the shoulder and says 'go get 'em!" and that's when I got up and I sprinted at him. "It was a long sprint. It felt like slow motion.

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"I heard him charge it [the assault rifle] a few more times, and heard a 'click.' It still wasn't working." Stone explained that every time he heard a "click,"

he feared that he would die. "I heard the 'click' and thought, 'whew! I'm still here'."

Stone finally made contact with the gunman, throwing his body into him, and the two started grappling.

"I was feeling for the gun and couldn't find it. "I felt it a couple times but he kept taking it away.

"So I just put him in a rear choke to protect myself. "My friend, Alek, came up and took the AK.

"But he just kept pulling weapons left and right. He pulled a handgun and it seemed like he pointed it back at me and I heard it click."

It is not apparent why the guns malfunctioned so many times, but it gave the trio time to wrestle them away from the gunman.

"I saw him making a slashing motion," Stone explained.

"When I leaned over his shoulder I see he has about a six-inch box cutter blade and I look down and my thumb is hanging halfway off."

At this point Stone lost his grip on the gunman. "I let him go and by that point the shooter was



in the middle and me, Alek and Anthony are just surrounding him and we just started pounding him. "I got him in another choke and I choked him out until he went unconscious and my friend kept hitting him in the face with the gun."

The gunman was down and the trio began assessing whether there were any other threats in the area. "My friend [pointed] out the guy who got hit in the neck." Stone said.

"I don't know how he got hit but he was spurting blood everywhere.

"So I yelled out 'I'm a medic, I'm a medic!' and took the guy and held him down.

"I just stuck my finger in his neck, found what I thought was an artery and just pressed down. "I held that position until authorities came."

Stone was pretty badly wounded. His thumb was nearly severed and he had sustained gashes that were dangerously close to major arteries.

But, despite his own wounds, Airman Stone never had a second thought about going to the aid someone else.

"I felt like I was the only person who could help him," Stone said.

"I didn't really care about my injuries at that point

because I thought that guy was gonna die, so I wanted to give him a fighting chance."

Stone said he believed everything happens for a reason – every moment in life leads to the next.

He said that there was a reason he and his friends were on that train and a reason they moved to first class.

"I feel good that we were able to save those people there in that right moment."

Stone, 23, has been in the Air Force for nearly three years and said his training as a medic prepared him for the situation – but his family had already taught him to help those who needed it.

"[That's] how I was raised and the Air Force just gave me the tools I needed to be the person I have always wanted to be I guess.

"There have been a bunch of influential people in my career so far that have just helped me gain the knowledge I have."

When asked about his family, Stone cracked a broad smile.

"Oh yeah. My family is proud of me. My brother is velling 'My brother is an international hero!' over the phone. My mother, sister, friends, family neighbors - everyone is excited for me."

The trio of American heroes, and a British man who assited them, were caught up in a frenzy of media attention over the days and weeks that followed the incident.

Many said it felt like a movie in the making - and Stone joked that he'd like to see Denzel Washington play his part.

Despite his fairly calm demeanor only days after the attack, Stone was able to reflect on the event as a day that could have gone a lot differently.

"If it wasn't for Alek and Anthony, I'd be dead.

"I wouldn't have been able to do it by myself. He [the gunman] definitely woulda' got me.

"He seemed like he was ready to fight to the end," Stone said.

"So were we."





Allbartross-loves E

A brand new and potent warfighting aircraft and an old and proud squadron were both formally commissioned into the Royal Australian Navy in June.

MH-60R Seahawk 'Romeo' and its parent unit 725 Squadron were both introduced into the fleet at a formal cermony at HMAS Albatross in Nowra, New South Wales, on 11 June.

A total fleet of 24 MH-60R was acquired by the RAN, at a cost of about \$3.2 billion, to fill an advanced anti-submarine warfare and antisurface warfighting requirement.

About half the helicopter fleet has been delivered, apparently on budget and ahead of schedule.

The helicopter, which is in essence a militaryoff-the-shelf purchase, is equipped with a sophisticated sensor suite, Mark 54 antisubmarine torpedoes and Hellfire air-to-surface missiles.

Acquisition of 24 'Romeos' means Navy will have the simultanious capacity to provide at least eight warships with an embarked combat helicopter, with the balance based at HMAS Albatross in various stages of the training and maintenance cycles. Commander Australian Fleet Rear Admiral Stuart Mayer said 725 Squadron represented the future of naval aviation in Australia.

"Romeo has already demonstrated great prowess as the maritime combat helicopter of the Royal Australian Navy," he said.

"Now 725 Squadron, and in the future 816 Squadron, will take this very capable aircraft even further and will join with the surface and subsurface elements of the fleet in forming a networked sea-control team."

725 Squadron was originally raised in the Royal Navy in 1943 and disbanded in 1945. It was first formed as a Royal Australian Navy Air Squadron in 1958 and, apart from a brief break in 1961/62, served continuously until its last decommissioning in 1975.

Although formally commissioned on 11 June 2015 (with the commanding officer and some members of 1975's 725 Squadron present) the unit was actually reraised in Jacksonville, Florida, nearly two and a half years ago to accept the first helicopters.

725 Squadron served in Vietnam, in the Melbourne-Voyager-crash rescue in 1964 and clean up efforts after Cyclone Tracy in 1974.



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EXERCISE NOBLE JUMP occurred in April and June 2015 and was designed to refine NATO's ability to rapidly deploy troops at short notice across the Alliance. Part one in April was an 'Alert Exercise' that focused on rapid movement of troops and supplies. In June, a 'Deploy Exercise', saw troops from NATO's Interim Very High Readiness Joint Task Force tested on its ability to deploy and respond to an evolving crisis.

Beckground

A NATO Response Force (NRF) was established in 2003 as a high-readiness force comprising land, air, sea and special forces units capable of rapid deployment.

At a summit in Wales in 2014, NATO agreed to enhance the capabilities of the NRF in order to respond to emerging security challenges posed by Russia as well as the risks emanating from the Middle East and North Africa.

This force is now in transition as military staff work to phase in the concept of a Very High Readiness Joint Task Force (VJTF) into the overall NRF structure.

The NRF is designed to perform a wide variety of tasks including:

- immediate collective defence response capability, before the arrival of other forces;

- crisis management and peace support

operations; and,

- disaster relief and the protection of critical infrastructure.

Overall command of this force belongs to the Supreme Allied Commander Europe (SACEUR), with NATO's two Joint Force Commands (based in Brunssum, The Netherlands and Naples, Italy) having operational command of the NRF each year on rotation.

Rotating forces through the NRF requires contributing Allies and partner nations to meet significant procedures and standards required for defensive and expeditionary operations. As a result, participation in the NRF is preceded by a six-month NATO exercise program in order to integrate and standardise the various national contingents.

Generally, nations carry out a further pre-training period of 6 to 18 months before assuming the role of an NRF high-readiness unit.

Enhancing NRF and Developing VITF

In order to adapt to emerging security challenges on NATO's eastern and southern flanks, the Alliance is enhancing the NATO Response Force into a highly flexible and capable 30,000-strong joint force, which will include a number of land, maritime, air, and special forces packages that can move at short notice in order to rapidly respond to threats.

As part of restructuring the NRF, NATO is also establishing a Very High Readiness Joint Task Force (VJTF), which can deploy within days.



VJTF will comprise a multi-national brigade of approximately 5000 troops, with up to five battalions, supported by air, maritime and special forces. Some elements will be ready to move within two to three days.

The force will be available to move at the first warnings and indicators of potential threats, before a crisis begins, and to act as a potential deterrent to further escalation.

NATO says the rapid arrival of this small but capable military unit would send a very clear message to any potential aggressor.

"Any attempt to violate the sovereignty of one NATO nation will result in a decisive military engagement with all 28 allied nations," a spokesman said.

The VJTF's rapid response times are what set it apart from other components of the NRF.

NFIU

Rapid deployment of the VJTF will be facilitated by small command and control and reception facilities called NATO Force Integration Units (NFIU). As an initial step, NFIUs are being established in Bulgaria, Estonia, Latvia, Lithuania, Poland and Romania, and will be staffed on a rotational basis. NFIU's will work in conjunction with host nations to identify logistical networks, transportation nodes and supporting infrastructure to ensure NATO high-readiness forces can deploy into an assigned region as quickly as possible.

With the help of NFIUs, some units of the VJTF will be capable of moving in just two days, with most ready to move in less than seven.

VATI Development

Work on developing and testing the VJTF concept has already begun. The Land Component of the 'traditional' NRF 2015 is now acting as an Interim VJTF and is the basis for VJTF development.

Troops for NRF 2015 are provided by Germany, the Netherlands, Norway and other nations. Maritime and air elements will be provided by the United Kingdom, France, Spain, and Belgium amongst others.

A series of exercises, trials, and evaluations will be conducted throughout 2015 in order to develop, refine and implement this concept, including:

- Table-top exercises occurred in January and February 2015, which refined the overarching military concepts that will underpin the VJTF;
- Exercise NOBLE JUMP occurred in April and June and refined NATO's ability to rapidly deploy troops at short notice across the Alliance. Part one in April was an 'Alert Exercise' that focused on rapid movement of troops and supplies. In June, part two of Exercise NOBLE JUMP – a 'Deploy Exercise' – saw troops from the Interim

VJTF tested on their ability to deploy and respond to an evolving crisis; and,

 Exercise TRIDENT JUNCTURE in October, as well as in other exercises later in the year, will refine the VJTF concept.

The development of the VJTF is a process that is expected to continue as the Alliance refines its concepts and capabilities over the next few years.

NATO has high-readiness forces in place now, and these forces will increasingly adopt and refine the VJTF concept during 2015.

This evolution will continue into 2016 as NATO moves towards a more mature capability and continues to adapt to future threats.

NRF New Structure

With the introduction of the VJTF concept, the NRF will comprise four parts:

- Command and Control element, based on a deployable Joint Task Force HQ;
- Very High Readiness Joint Task Force (VJTF) the new component of the NRF, consisting of forces at the highest level of readiness;
- Initial Follow On Forces Group (IFFG) highreadiness forces that can deploy quickly following the VJTF, in response to a crisis; and,
- Response Forces Pool (RFP) NATO will retain the





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same broad spectrum of military capabilities that it did in the previous NRF structure.

ssets Assigned to NRF

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Command and Control: Joint Force Command Naples is the lead headquarters for the NRF in 2015, and is supported by the following command and control elements:

Land: First German/Netherlands Corps (Münster, Germany);

Air: Joint Force Air Component HQ (Lyon, France);

Maritime: Spanish Maritime Force Command (Rota, Spain);

Special Operations: Polish Special Operations Command (Krakow, Poland);

Joint Logistic Support Group from JFC Naples (Naples, Italy); and,

German Chemical Biological Radiological Nuclear Task Force.

Combat Forces: Air, land, maritime, special forces, and logistics troops from across the Alliance have been placed on a high level of readiness and are available to support NRF 2015 if required. Details on the exact composition and disposition of these forces is secret, but it is known that 25 Allies currently contribute military forces to NRF 2015.



100



COME FLY WORDS AND PHOTOS BRIAN HARTIGAN

The Boeing E-7A Wedgetail's relatively small cockpit has just one spare seat – and even that is only a simple foldout padded slab in the doorway. Yet, being positioned in the doorway, slap bang on the centreline of the aircraft, and slightly elevated compared to the captain on the left and his co-ie on the right, it is without doubt the best visitor's seat in the house.

And I feel immensely privileged to be sitting here as E-7A Wedgetail A30-001 trundles down the taxiway for takeoff on runway three-zero at RAAF Base Williamtown, New South Wales. Even more privileged that I am the first reporter ever allowed aboard for a live training mission with Australia's newest and most capable intelligence platform.

HIL

In the last issue of CONTACT, I outlined in some detail how the Royal Australian Air Force's Wedgetail Early Warning and Control aircraft is the darling of the armada of air assets arranged by our coalition partners in the fight against ISIS in Iraq. This issue I want to give you a much more personal tour of this distinctive aircraft. Many of you will have seen a Boeing 737 at some stage. As the

best-selling jet liner in commercial aviation history, the 737 is daily visible at just about every commuter airport in the world.

If you've actually encountered a B737, your closest view of it may well have been through glass at an airport terminal or from the inside as a passenger, when you entered through the forward cabin door and turned right to shuffle through the crowded aisle to your allotted seat. You may even have seen the 737BBJ-based Wedgetail at Avalon or another airshow, where you could get close - 'but no touching please'.

But me – I got to climb those tairs, enter that cabin door – and then turn left into the pilots' domain and remain in the cockpit for takeoff and, seven hours later, for the landing too. Bragging aside, here's how it

came to pass. I've long had an interest in Wedgetail. No doubt, it's an unusual aircraft, especially with that rather large and distinctive radar fin

on its back. But my knowledge of and interest in Wedgetail goes all the way back to 1999 when, as a rookie ARMY

the Australian

1111

Aircraft captain Squadron Leader Glenn 'Fish' Salmon (left) and co-pilot Flight Lieutenant Paul 'Pip' Pippia at the controls of an E7/A Wedgetail 001 during takeoff from RAAF Base Williamtown, near Newcastle, NSW, for an F/A-18 training-support mission.

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Newspaper reporter with a penchant for aviation, I was assigned to cover

Goldthorpe (the only non-commissioned officer on the flight) tasked with Sniff/SAM rings. SAM rings - is that what I think it is? Yep, surface-to-air missiles. But simulated, of course, on this occasion.

For no reason apparent to me, the line items skipped to number 18 – Flight Lieutenant Tim 'Pup' Growden (who graced the front cover of the last issue), tasked to escort me and "help 'Robbo' pass 'Sling'".

So, it turns out 'Sling' was 'watching the SCOs' because he, in turn, was being watched/assessed as an instructor.

International Airshow at Avalon for ARMY Magazine and the newspaper.

Project AIR5077, otherwise known as Project Wedgetail, was in the late stages of its competition phase at the time, with Lockheed Martin, Raytheon and Boeing all jostling for attention in Avalon's trade exhibition halls and keen to hand out information, pamphlets, posters and trinkets to the madding crowd.

By September the same year I was able to write a short news piece announcing Boeing as the preferred tenderer, with Northrop Grumman as the radar supplier.

So, I've always had a professional interest in Wedgetail and tried to remain sympathetic during its somewhat troubled and elongated introduction into service with the RAAF.

Then, recently, an old shooting buddy from way back got in touch to say he was involved in Wedgetail support at RAAF Base Williamtown, and asked if I'd be interested in doing a story on the platform's recent and very successful first operational deployment.

It took me a nanosecond to say yes.

Anyway, cutting to the chase, I spent two days at RAAF Base Williamtown being introduced to the rightly proud workforce charged with supporting Wedgetail operations.

And on the second day, I got to go flying.

The day started early, with a crew brief at 0700. Squadron Leader Glenn 'Fish' Salmon would be our aircraft captain for the mission, with Flight Lieutenant Paul 'Pip' Pippia in the co-pilot's seat – or as the missionbrief running sheet had it, "help fly/be my [the captain's] official friend".

I was included in the official mission-brief running sheet too, at line-item number three, as PAX with an 'official' mission task to 'report good things'. That wasn't going to be hard.

Following me at number four on the crew list, things got a little (read a lot) complicated for the ignorant reporter, in terms of the crew task list – though I hoped it would become clear (or at least clearer) as the mission went on.

At number four, Flight Lieutenant Daniel 'YT' White was responsible for TPA and Dets - whatever that meant.

Number five was Flight Lieutenant Jeffrey 'Guns' Young looking after IQ and YT, with 'Dash' as MC - mission commander - see, I'm learning the lingo already!

At number seven was SSCO Flight Lieutenant Ryan 'Sling' Slinger, tasked with watching SCOs and handling external comms.

Number eight was SCO1, Flying Officer Joe Noble, tasked with SPINS/ROE/something-or-other Coord/GEOs

- SCO2 at nine was 'Steph H' with Evac2/SATCOM -SCO3, Squadron Leader Will 'Hippy Shake' Hipps taking

care of Evac1/Jetpack/LSIF/NOTAMS - and SCO4,

'Dobby' on PUBS/ATIS.

At line item 12 was Flight Lieutenant Bryce 'Robbo'

Robinson who had the curious task of CQ Slinger. Number 13 was ESMO Warrant Officer David 'Goldy'



Electronics technicians Leading Aircraftman Jack Farey (left) and Corporal Mathew Sharman discuss a technical issue in the cockpit during pre-flight maintenance.



Co-pilot Flight Lieutenant Paul 'Pip' Pippia runs through his pre-flight checklist

in the cocknit before takeoff





58



A30-001 is nosed in to the hangar (above and below) for minor after-flight maintenance following a seven-hour training-support mission over northern New South Wales.

Things are starting to become just a little clearer already.

Not listed on the initial running sheet but along for the ride were Flight Lieutenant Ian 'Toddy' Todd and Flying Officer Power.

After the briefing, which was pretty short and sweet and full of more acronyms than a mere mortal could consume, we were off to the life-support room where the crew were kitted out with life-support vests that include life jackets, an emergency radio, first-aid kit, a light, a whistle and so on - only not bright orange or yellow like on other 737s. These were olive drab and a little bulky and were draped over shoulders on the walk to the aircraft, removed for pre-flight checks and setup, worn properly for takeoff (and landing) and removed again when established in the cruise. And, hanging on the backs of workstation chairs, made the cabin look a lot more functional and military-businesslike than any other 737 I've ever been on. Of course the array of radar and computer screens and computer peripherals and outboard-facing chairs – and the absence of any windows - also made this airborne workspace quite unlike any other 737 too.

Anyway, our mission for this flight was to provide airborne early warning and control for four separate waves of F/A18 'Classic' Hornets conducting a component of a Fighter Combat Instructor Course.

Within about 40 minutes of takeoff we were leveled out at 30,000 feet, engines cut back to 89% power to maintain our 250-knot cruise speed, and set up and ready on station.

"So, it's pretty much 'hurry up and wait' now until the fighters turn up – then it'll be on like Donkey Kong down the back," Fish said, just before accepting an offer of coffee from Goldy – "white with one, thanks mate".

Each wave of fighters would see four blue-force Hornets (the good guys) trying to infiltrate enemy territory and engage a ground-based target, without getting shot down by four red-force (enemy) planes or three simulated surface-to-air missile emplacements (I bet the mayors and citizens of Moree, Narribri and Inverell didn't know they were such a threat to the RAAF). The good guys, of course, had Wedgetail on their side to help them avoid the hazards – on the way in and the way out.

All this took part in what is known as the North-West NSW Restricted Airspace – an almost circular chunk of sky west of Glenn Innes, north of Tamworth, and north and west past Moree and Narrabri (see map here if you want to see the full expanse of the space they had to play in).

It was almost an hour after our own takeoff that the first wave of jets entered the airspace, via the Hunter Corridor – a designated corridor of airspace between restricted zones around Newcastle Airport/Williamtown.

I'm not sure how long the mission took – or even how well the good guys won (because the good guys always win, especially with Wedgetail's guidance) – because I was very intent on trying to figure out what I was actually looking at on the various screens. It seemed I was looking at six or even eight very different views of the same battlespace across the 10 screens, depending on the various tasks of each individual crewmember.

Plugged into a headset, I could hear calm, concise and rapid instructions and acknowledgements – without understanding a damn thing that was said.

I listened for it, but not once did I hear, "Yeeha, Jester's dead".

Seriously though, here's something for you to think about – how does an operator on an airborne early warning and control aircraft tell the good guys where the bad guys are and which direction they are flying in? That's not a stupid question if you think about it. Not only are the good guys and the bad guys constantly moving – and at high speed – but so is the observer's point of view because the Wedgetail is constantly moving too.

What's needed is a fixed reference point – a point on the map everyone knows and can take bearings to and from. And so the controller gives the good guys their instructions, directions and bearings as if he were sitting at a desk at that fixed point on the map. And all those instructions must be delivered very quickly. Hence, my ignorance of what was being said, because it was all in aviator code and abbreviations.

Appropriately, this fixed point on the map is called the Bullseye.

I won't try to explain it, but if you are interested, you can get a good overview in this game-based tutorial on how Bullseye works.

Bullseye

in relatively

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be used for real in the

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once you've got a handle works pretty simply when you are familiar airspace with

the fuel

we

Anyway, by the time the second wave of jets came through, it was getting more interesting to watch on the screen. Not only was I getting a little more in tune with what was happening, but this wave seemed to be actually teasing the SAM sites, darting in and out of the danger zones in a bold, seemingly deliberate way.

I was sure Maverick and Goose were in this flight. After the second wave, word started to come

through that maybe the Wedgetail wasn't needed for the next two sorties. Apparently there was a group of new joint terminal attack controllers getting close to the end of their own course and the opportunity for them to handle live jets was too good to pass up.

While we waited for a decision, Steph H whipped up a round of triple-deck toasted sandwiches for everyone, while Goldy took care of the coffees.

It took a while, but eventually, the Wedgetail was officially released from task. Whispers of an early mark drifted about the cabin. Up front, however, Fish pronounced, "No. We haven't hit Joker yet" – which, I learnt, means the plane was actually too heavy to land. 'Joker' I learn, is a pre-flight planning-stage calculation of the earliest time we can land based on book o by the land v Whe tonne was st So, c and y comm calcul fuel w extra, flight. Tasm – but i Harboo

10

took off with, unless we dumped some overboard. And, by the way, 'Bingo' is the calculated latest time we can land without refueling – about three hours after Joker. When the mission was cut short, we still had 18.9 tonnes of fuel on board and on Fish's notepad 'Joker' was still 3.5 hours away.

So, apparently, when your mission is cut short and you've got 3.5 hours to Joker time, the mission commander, in consultation with the captain, calculates alternative activities to kill time and burn fuel without wasting the opportunity to deliver some extra, unscheduled training options for the rest of the flight.

Tasmania was talked about – and the Gold Coast – but in the end, an instrument-approach to Coffs Harbour, without touching down, was agreed. While this was obviously a good pilot-training option, time was not wasted down the back either. The pilots nominated a time and each screen operator marked a place on the aircraft's predicted track where they calculated the aircraft should be at that time. Then, one by one, best-guess plots, visible on every screen, turned red as the point marked was overflown, until there was just one left – and Steph H was

hailed the winner. Any new destination at this point, picturesque as it might be, meant little to those in the back of the Wedgetail. I mentioned windows



earlier - or the lack of them in the work space. Well, beyond the working cabin with its computer and radar screens and non-natural lighting, there's a small airline-style galley and beyond that a 'crew rest area' with four standard airliner windows on each side. But, while they do let a nice bit of sunlight in, the view out is actually rubbish thanks to a metal Faraday cage designed to keep the radar's ergatrons out.

This crew rest area boasts business-class seats and lots of legroom – but the vinyl floor covering ruins any semblance of luxury. There are no airline-style overhead lockers either, but there are a few cupboardlike storage spaces of the type normally only accessed by airline staff. That said, however, and despite the size of the plane, there's apparently only enough space for each crew member to take about an echbag of personal gear onboard, which means logistics support is required for extended away-from-home exercises or deployments.

Staying in the crew rest area for a while, I'll mention the military-grade full-face oxygen masks everywhere. These are required because of all the military-grade inert-gas fire extinguishers about the place - in turn required because of all the sensitive electronics.

These weren't used on my flight of course, but a fire drill was conducted. I happened to be in the cockpit when the "for practice, practice, practice" emergency was announced through the headset and the crew's non-normal fire/fumes checklist was invoked.

While the crew down the back went through set routines to isolate the source of the smoke, we in the cockpit closed the door, isolated our air supply and began working through the series of prescribed checks and actions required for dealing with this specific emergency.

One lesson learnt out of this, which was discussed in debrief post flight, was that despite being almost overhead Tamworth when the 'emergency' arose, and with his plane supposedly on fire, Fish still set course for landing back at Williamtown. The reason for this, as the captain explained to everyone later, was that to land at Tamworth would have required a tricky and acute spiraling decent, whereas the straight-line decent to Williamtown was more easily achieve.

"An airplane can go down or slow down, but we can't do both," Fish said.

"Our descent path from 30,000 feet is about 90 miles, so it's actually much harder to spiral down to an airfield below us than to b-line for home."

Anyway, for the eventual real approach to home base at Williamtown, I was back in the cockpit soaking in the view, the atmosphere and the banter.

Pip's house was pointed out as we flew abeam one of the many picturesque coastal hamlets. The pros and cons (mostly pros) of the Newcastle lifestyle were discussed – and the fact that 2 Squadron is a very sought-after posting because of all the trips it does, domestically and overseas, thanks to Wedgetail's growing reputation as a 'must-have' rather than a 'nice-to-have' in the battlespace.

AUSTRALIAN AIR FORCE



Eventually, towards the bottom of our 90-mile glidepath, and with engines cut back to 32%, Pip took us all the way in to what I thought was a pretty smooth landing.

But, as is the way with many professional pilots, Pip, in self-critique mode, said it could have been better, and the technicalities were discussed and analysed as we rolled back along the taxiway, and eventually marshaled to a halt on 2 Squadrons capacious concrete apron.

"That'll be a 7.0 hours for your log books ladies and gents.'

After disembarking and reporting technical issues to the maintainers, the aircrew debriefed another safe mission and another good day in the 'office', before dismissing the reporter, trusting that his mission to report good things - would also be successful.

-

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National Servicemen's Memorial Band

Wows Nounea

The National Servicemen's Memorial Band - formed in 1999 as a living memorial to the more than 300,000 men called up for national service between 1951 and 1972 and who fought and unfortunately sometimes died serving Australia, especially in Vietnam – is a very busy, very proud, Brisbane-based volunteer organisation.

The Pipes and Drums of the band recently returned from a very successful trip to New Caledonia, as guests of the French Military, on the third such trip in support of Bastille Day celebrations – with the Aussie band being the highlight of a number of events throughout the island nation this year.

Greeted on arrival by the French Governor of New Caledonia and the general in charge of all military bases on the island, Pipe Major John Arnfield said the band had a

very busy schedule mapped out for the week-long visit.

"We arrived at around 2350 hrs on Thursday 9 July, and with the help of Colonel Christian Airault, the reserve commander, we were whisked through Immigration and Customs and transported to the artillery base and home of the French Foreign Legion, where they billeted us for the week." John said.

"This base would have to have one of the best aspects of any military base in the world, perched on the peninsula that separates Moselle Bay and Citron Bay."

On Friday, after a short sleep, the band was off to play at two schools.

After α hot lunch (the norm in French schools) with more than 1500 pupils, the band had just a few hours to rest before traveling to the Marine Battalion of the Pacific (RIMaP-NC) at Plum, at 1800 hrs, where they played for about 30

minutes to troops who were in training for deployment to Mali to tackle Boko Harem.

"The following morning, another 30-minute gig at the markets saw the band surrounded by cheering and clapping islanders, and invited to partake of coffee, fruit, and anything else they thought we might like," John enthused.

"After that, we went to Bout du Monde (the end of the earth) restaurant, to entertain diners, before finally getting a few hours to ourselves."

Sunday 12 July was the band's only free day, and so the members took time to visit attractions around Noumea - "and partake of the local beers".

Monday saw the band play at a memorial to French forces killed in both World Wars, after which they were invited to the local Council Chambers, "where we had far too





"This festival is held every year on the night before Bastille Day and sees the population of Noumea carrying paper lanterns with a tea candle lit inside.

"Despite a couple of rain showers, we led the lantern parade around a number of streets, before ending back at the start, where we played for around 15 minutes, and were then given the honour of standing around a monument to nearly 500 reservists killed in WWI and WWII.

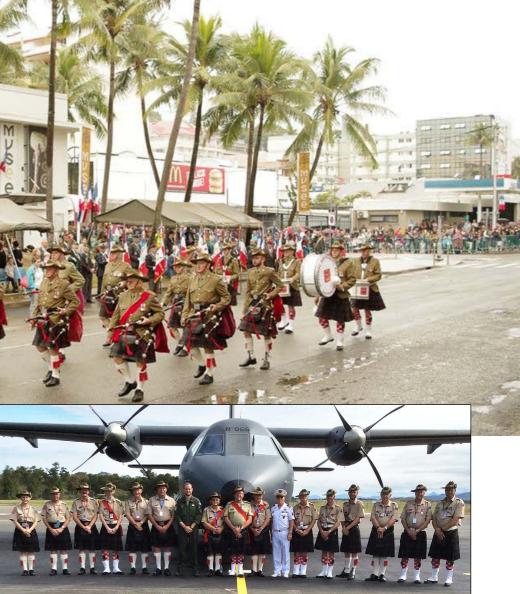
"We played a number of times, and finished with the Marseillaise, which brought a tremendous cheer from the thousands of people gathered there, who also sang along."

"Tuesday 14 July - Bastille Day saw us depart their base at 0730 for the main parade.

"Bastille Day Parade is very much like our Anzac Day parades, except that only serving full-time or reserve forces can take part, though this also includes the Gendarmes, the Police Nationale, and the Police Municipal.

"We were given the distinct honour of leading the parade, and we certainly got the largest, and

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loudest cheers from the people lining the streets.

"Later, the French equivalent of our RSL, the Maison du Combattant, put on a cocktail party in their HQ. in Noumea, where we again met a number of officers from the French military, and also the Australian Consul-General.

"Once again we were free for the late afternoon and night – and Maccas got a hiding, because there was free WIFI there."

"Wednesday morning was another early start so we could travel to the Lycee du Grand Noumea Senior High School, where students are around 18 or 19 years old.

"We played to them for about 30 minutes and were again mobbed when we played the Marseillaise. "Thursday morning saw a very early start for cleanup and pack up before we traveled to the air force base Tontouta, situated next to the civilian international airport.

"The base there is very heavily controlled because there's a huge communications base there, with

fortified double fences, electrified. "We were given a tour through

the base including a close-up look at helicopters and transport aircraft before we were taken to a field some distance away to watch paratroopers practicing low-level, static-line jumps, in preparation for their deployment to Mali.

"Back at the base we played for the troops and met Group Captain Antoine Sadoux, the Commanding Officer of the Air Force in New Caledonia.

"After a hearty meal, we changed into civilian clothes, and departed for the civilian airport to fly home, arriving in Brisbane at 2015 hrs tired and footsore, but full of praise for the way the French Military treated us, and the huge reception we got from the local people."

The National Servicemen's Memorial Band's next big gig is an eight-day tour of outback and central Queensland in late November, to support communities hurting from ongoing drought and the downturn in employment.



Carinthia MIG 3.0 Jacket

It's been a cold winter – and the cold hasn't left us yet. Carinthia know this and, following the success of the MIG version 2.0, Austrian military manufacturer Carinthia has released an updated version of this hugely popular jacket.

MIG stands for Medium Insulation Garment and the MIG 3.0 jacket improves upon version 2 by including Cordura[®] reinforcement panels across the shoulders and over the elbows to make the jacket even more durable.

To add to comfort, Carinthia have moved from elasticised cuffs to adjustable velcro closures, also reinforced with Cordura® around the tabs and cuff hems to deal with wear and tear on the sleeves. Fleece wrist

warmers are included in the sleeves to allow more user function and comfort. Gortex Windstopper® is still used on the outer and Carinthia's world-best G-Loft ISO+ memory insulation provides the warmth, keeping active users warm to as low as -15° C as well as allowing the jacket to be compressed to a small packing size when not in use.

That means this jacket deals with anything the weather can throw at you in Australia. Carinthia is the choice of almost all European Scandinavian armies and their special forces as well as many other nations and, when you get your hands on this gear, you'll understand why. Available in stores now - go to www.premierdefence.com.au to find a retailer.

By the sword

When buying a sword, whether for uniform or collection, there can be only one rule buy the best you can afford. A quality sword has a 'feel' that lesser products just cannot match.

Two top names in military ceremonial swords for Navy, Army and Air Force are Windlass and Crisp & Sons. Both provide excellent detailed blade etching and both manufacture to the detail and design specifications set out by the British Ministry of Defence (and ADF). And they are both exceptional sword makers.

So how do you choose? Again, it is what you can afford. The Indian-made Windlass is the less expensive. The company has its roots in 1941 when its founder created the famous khukris blades for the British Gurkha Regiment. Its swords are forged in German steel - carbon or stainless - to an exacting standard.

The British-made Crisp & Sons (1975) swords on the other hand are hand-manufactured only in traditional carbon steel. The quality is a reflection of the exceptional manufacturer Wilkinson Sword, which led the market until its closure in 2005. C&S inherited many of Wilkinson's staff and equipment and its

blades are now found in several Royal households.

Compare the price of an Infantry sword with leather scabbard - C&S RRP \$1900 versus Windlass at RRP \$995 Both are quality swords with fine detail in the grip, guard and on the blade and will last through generations. Both look and feel superb – but the C&S has that little extra that distinguishes it from the Windlass. Yet the Windlass is not left wanting. Ultimately either is a safe selection.

You can see and feel these swords for Navy, Army and Air Force at Military Shop in Canberra, just down the road from RMC Duntroon, or view them online at the web site below.

Military Shop is a recognised supplier to the graduating classes at ADFA, RMC Duntroon, HMAS Creswell, OTS RAAF East Sale, Victoria, and often has graduation specials and package deals.

See Military Shop's sword selection at www.militaryshop.com.au/features/swords.html

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One more step on a very long road

Key MoU signed

Australian-registered International Anti-Poaching Foundation (IAPF) signed a Memorandum of Understanding with Mozambique's National Agency for Conservation Areas (ANAC) in June to collaborate on biodiversity protection and anti-poaching support in what has been described as "the most critical piece of land on the planet for rhino conservation".

With illegally traded rhino horn now reportedly selling for in excess of \$75,000 per kilogram, pressure on the endangered animals from poachers is extreme and increasing.

The MoU comes as poaching of rhinoceros intensifies, with reports of nearly 500 of the majestic animals killed already in the first six months of this year.

Founded in 2009 by former Royal Australian Navy Clearance Diver and Special Operations sniper Damien Mander, the IAPF has grown into a respected global conservation charity which brings military-derived tools, technologies and techniques to the front line of the poaching war.

Applying the motto "Wildlife conservation through direct action". Damien Mander's

organisation shows that warfocused skills and experience have a significant use beyond the human battlefield where they were conceived.

Under this new agreement with Mozambique's National Agency for Conservation Areas, IAPF will bring much-needed relief to the front lines of the poaching war on rhino and elephant along the South Africa/Mozambique border.

The border forms the boundary of Kruger National Park, home to as many as 40 per cent of the world's remaining rhino, with the majority of this population in the southernmost quarter of the park. In 2014, Kruger National Park

accounted for more than two thirds of South Africa's 1215 rhino fatalities.

Sources within Kruger maintain that the vast majority of rhino poachers entering the park do so from Mozambique, using the poorly-protected areas of the Greater Lebombo Conservancy as ready entry and exit routes.

This area serves as the only buffer between the southern section of Kruger National Park in South Africa and the Mozambican communities closest to the park's border.

"At the cross-roads in the battle to save the species from extinction, the Greater Lebombo Conservancy is now the most critical piece of land on the planet for rhino conservation," Mr Mander said.

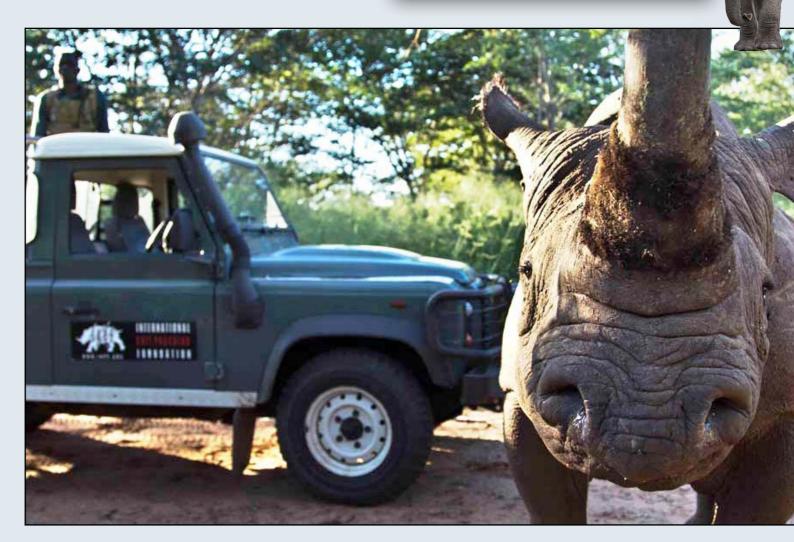
"The world is seven years into a losing war and, whilst there are reportedly more than 400 rhino non-government organisations focusing their efforts in South Africa, fewer than a handful are going to the root of the matter and supporting rhino conservation efforts in Mozambique's Greater Lebombo Conservancy.

"This is where the IAPF's sights must be set."

IAPF's support to local antipoaching efforts will help safeguard up to 10,000 rhino, meaning this growing non-profit and its Aussie founder may well play a critical role in the future of the species.

Importantly, according to Mr Mander, it may also provide an opportunity to prevent poachers meeting a gloomy fate while conducting their gruesome operations.

"Nearly 400 poachers have been killed in recent years, and as many more sit in jail facing an uncertain future.



"Better training for rangers, better equipment, better understanding of the local communities and what drives poaching – all these go towards saving both animal and human lives," Mr Mander said.

Kruger National Park Director of Special Projects retired Army General Johan Jooste said the law-enforcement officials in Kruger National Park welcomed the new Memorandum of Understanding as the concessions to the east of the park form an integral part of the strategy and plan to combat rhino poaching in a more proactive manner.

Mr Mander said that while the IAPF was dedicated to helping buy more time for the rhino by slowing the hemorrhaging, the long-term focus needed to be on working with the communities that surround conservation areas.

"The possibility of safe rhino populations once again roaming in Mozambique is also a common vision we must strive to fulfil." "At present, rhino crossing unprotected into Mozambique have a life expectancy of less than

24 hours."

At Maputo's Cardoso Hotel, Damien Mander and ANAC Director General Bartolomeu Soto signed the MoU.

Dr Soto, "This is just the beginning".

The MOU paves the way for a long-awaited lifeline for rhino protection in the region. IAPF's one-million-dollar 'Million for Mozambique' campaign seeks to raise this amount in donor funding for front-line support over the next two years within the Greater Limpopo Transfrontier Park, and in particular, the Greater Lebombo Conservancy.



WWW.TAPF.ORG

The MoU-signing ceremony also coincided with the fourth anniversary of the formation of ANAC and the signing of a landmark agreement, more than a decade in the making, between Mozambique's Minister of Land, Environment and Rural Development Celso Ismael Correia, and the Tanzanian Minister of Environment Binilith Mahenge, which will see greater collaboration in the north of Mozambique, where the two countries share a border.

IAPF is reliant on the financial support of individuals, corporations and organisations who understand the urgent need to back determined efforts at the front lines of the wildlife wars. Please visit www.iapf.org to see how you can help.

GLOSE BUT NOT GLOSE ENOUGH

Australians recommended for the VC but not awarded

Sergeant Harry Bridle MM 3rd Battalion AIF

Carrying three separate wounds, the sole survivor led a second charge before accepting medical aid.

NEVER GIVE UP



Harry Bridle was born in London on 4 May 1889. Following school he took an apprenticeship as an electrician at M and H.G. Andrews in Bournemouth but soon was looking for a better life and made his way to Australia¹.

In August 1914, Australia went into "War Fever" when Britain declared war on Germany. Thousands of eager men, young and old alike, flooded the recruiting depots. Harry read of the rush to join up and walked straight up to his foreman and handed in his notice. As the two men shook hands, the foreman said – "Don't worry mate, I won't be far behind vou!"

Harry presented himself for enlistment on 17 August 1914. It was the day that authorisation had been given to establish a new New South Wales Battalion – the 3rd. Harry was given Regimental Number 98 and allocated to A Company¹.

A Company was commanded by Captain Malcolm St John Lamb, a 40-year-old school teacher from the seaside suburb of Sandringham who had served previously in the Boer War as a trooper in the 2nd NSW Mounted Rifles².

Harry Bridle was a good, competent soldier, and given that he was 26 when he enlisted, he was seen by many as the 'old man' of his platoon.

On 19 October, the 3rd Battalion marched to the waiting troopship Euripides. The following day, with bands playing, friends and relatives singing and cheering, Euripides made its way down the harbour, sailing off to war³, arriving six days later in King Georges Sound, Albany. Here they waited for other troopships to arrive from other Australian

ports and a smaller convoy from New Zealand. On 1 November 1914, the first ANZAC Convoy set sail for Egypt².

Euripides arrived in the Egyptian port of Alexandria on 3 December. The next day, the 3rd Battalion disembarked and entrained for Cairo. From there, they went by tram to Mena Camp, located near the great pyramids of Giza.

The training was hard but good, and when leave was granted, the Diggers swarmed into nearby Cairo, where the sights and sounds of this strange new land captured the imagination of 'the blokes from down under'.

In early April, the 1st Division was ordered to break camp and prepare to move. On 3 April, the 3rd Battalion entrained in Cairo and on to Alexandria. Here the troopship Derfflinger waited to take them to an unknown destination.

A few days after leaving Alexandria, Derfflinger dropped anchor in Mudros Harbour on the island of Lemnos. It was here that final preparations could be made for an amphibious assault. Rumour had it they were to assault the heights of some place called - Gallipoli².

Harry and his mates now knuckled down to the task of mastering the rope scaling ladders, which were strapped to the side of the ship. The Diggers scaled down the ladders into the waiting whaleboats. On more than one occasion a soldier would miss his footing or lose grip on the ropes, which would see him plummet into the waiting sea. At first, mates laughed out loud at their companion's mishap, but this soon stopped when they realised the Digger didn't come back to the surface, for the weight of weapons, ammunition and equipment took them quickly

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to the bottom. In the later stages of the training, full-blown rehearsals were carried out landing the battalions on the nearby foreshores of the harbour.

On 24 April, sailing orders arrived and the Commanding Officer, Lieutenant Colonel Owen, assembled his men in the well deck. He was a man of few words – he merely said "I feel very confident of the manner in which you will acquit yourselves in the task that lies before you!"2

The same day, the Diggers crowded the ship's railings. Many cheered, but others, like Harry, stood in silence as Derfflinger slipped from the harbour, bound for Gallipoli and an unknown future.

Harry lay below decks waiting for the 0400 hours reveille. For him, it had been a sleepless night, as he pondered what the day would bring. He went up on deck and watched as the faintest dawn glow started to appear in the east. Like many of his mates, Harry climbed up the rigging in a vain attempt to get a better look at the shoreline. Breakfast came at five³ and Harry forced himself to eat as much as he could - who's to say when his next cooked meal might be?

Now they were in an open boat and a small steam pinnace towed them as close to shore as possible. As the boats were cast adrift, the soldiers took up the oars. Harry strained as he pulled hard against the clear waters of the Aegean Sea. The night was giving way to daylight and rounds were whistling about their heads, some causing casualties. The rhythmic cadence of the oars became more erratic as the boats got closer and closer to shore. Suddenly the boat touched the shingled

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BY MAJOR DARRYL KELLY

Germans take a pounding on the Western Front, 1917.

beach of a place that would be soon known to all as ANZAC Cove.

Harry jumped over the side and immediately sank to the bottom. Springing up on the loose pebbled sea bed, he managed to get a handhold on the gunwales of the landing boat and edged his way to the beach.

Because the boys who had landed at dawn were now locked in action further inland with the Turks, the men of the 3rd were able to advance in a fairly orderly fashion. Then all hell broke loose with rifle- and machine-gun fire raining down all around them. Harry's mind switched to one thing and one thing only – stay alive.

But, on 19 May, he nearly copped it. The Turks were poised for an all-out attack against the ANZAC line, aiming to force the infidel into the sea. The 3rd took the full weight of the attack.

Many of the battalion equated the surge of Turks rushing at them to a crowd leaving a football match. But the young Diggers held their ground and picked their targets carefully. As they fired round after round into the mass of enemy, the rifles got hotter and hotter and began to jam. With complete calmness, they simply handed them down to those charging the clips in the base of the trench, where a replacement weapon was thrust back up into the hands of the defender^{2,4}. Harry was giving the Turks hell, when suddenly an enemy bullet found its mark thrusting him backwards into the trench. As he drifted in and out of consciousness, he heard the muffled voice of a stretcher bearer saying "Hold on mate, you'll be right!"



GLOSE BUT NOT GLOSE ENOUGH

Australians recommended for the VC but not awarded

- 1 National Archives of Australia: B2445, WWI Service Records, 98 H. Bridle 2 Wren E, Randwick to Hargicourt; History of the 3rd Battalion, AIF, McDonald, Sydney, 1935
- 3 AWM 8, Unit Embarkation Rolls, 3rd Battalion, 1914-1918 War
- 4 Video Documentary –"Boys from the Dardenelles" AWM 1985
- 5 AWM 28, Recommendation Files for Honours and Awards, AIF, 1914-1918 War

6 Reveille Article December 1930 - SGT H. Bridle. AWM 43

Harry's wound was serious enough to warrant his evacuation to the beach, where the blokes from the field ambulance looked after him. Luckily, the round merely grazed him and, after a brief rest, he was well enough to return to the forward trenches, where one of his mates said, "Good to see ya back Harry. We knew that they hadn't yet made a bullet with your name on it!"

The fight continued. But the onset of the summer months brought a new menace to the Diggers – flies, thousands of them. And, fat from feasting on the bodies of the dead, disease came with them.

Sickness took a greater toll on the allies than the Turks did. Harry lasted as long as he could but finally succumbed to a severe case of dysentery and was evacuated to Mudros, then on to St Andrews Hospital in Malta. But the doctors there were not happy with his condition and decided to send him to England to fully recuperate¹.

It wasn't untill August 1916 that Harry was deemed fit enough to return to his battalion, which was now locked in battle around the fortified village of Pozieres, in France¹.

As he made his way through the crowded trenches, Harry could recognised too few familiar faces. Asking about old friends, he heard a common theme – "Oh he copped it at Lone Pine!" or "Sniper got him!" or "Carried off on a stretcher. He was pretty bad. We've never seen him since!"

If Harry thought that Gallipoli was bad, Pozieres proved worse. Artillery took a shocking toll on all the battalions, but the 3rd came in for special attention from enemy guns, leaving the ranks severely depleted.

Following the eventual capture of Pozieres, the 3rd Battalion moved north into Belgium.

In October 1916, Harry was promoted to lance corporal¹. Like the rest of the 3rd Battalion, Harry suffered through the worst winter to hit Europe in 40 years. But, Harry thought it was a godsend when in February he was informed he was heading to the rear, to attend a gas training school. There he had hot tucker, a clean uniform, a roof over his head and a warm bed. It was only a week, but it felt like heaven.

In March, Harry's company was in action at a place dubbed 'Trip Trench'. It was a fog-shrouded morning and Harry's platoon manned one of the most exposed outposts. Their sister platoon manned another adjacent post some 150 yards away. All of a sudden, the adjacent post was hit, and hit hard. The Diggers fought as best they could, but the post was soon overwhelmed with a significant number killed and 12 captured, including the commander of the post, Corporal Haworth. This blooding and the loss of so many mates hurt the battalion badly.

On 16 March, the 3rd Battalion moved into billets in the village of Dernacourt. Soon after arriving, Harry was called up to see his company commander. The officer laid the matter clearly on the table – "Harry, you know we lost Johnny Haworth to the Huns? We're putting his section back together and I want you to head it up. Get these sewn on, quick smart!" With that the officer threw a set of corporal stripes to Harry.

As casualties continued to grow, Harry was again promoted, this time temporarily to lance sergeant with his substantive promotion coming on 20 April.

Harry proved himself to be a competent leader. He was fair and firm, gaining the respect of those around him.

In August 1917, he was detached for a stint as an instructor to the 1st Training Battalion in England. His job was to pass on the latest lessons and tactics that the battalions were using in the forward trenches to the newer soldiers.

With the collapse of the Russian Army in the latter half of 1917, the Germans could now throw a further 70 divisions onto the Western Front.

On 21 March 1918, the Germans launched an all-out offensive with the main blow falling on the British front. The attack was so intense that, within a week, the old Somme battlefield was back in German hands and the strategic town of Amiens and even Paris were under serious threat of being captured². The 1st Australian Division was rushed towards the front to help stem the tide of the German advance. At the front, it was like a world gone mad and some units seemingly ceased to exist. Groups of stragglers from various units were banded together in a vain attempt to stem the German tide. Others were quickly captured and marched to the German rear and captivity.

Harry read of the German offensive and craved to get back to the action. It was clear the situation was desperate and all the old hands were desperately needed. Finally he was able to secure a return to the battalion and rejoined them on 6 May.

The 3^{rd} Battalion was defending the village of Strazeels – a key point in the operation, for if it fell then the key railway hub of Hazebrouck could be lost and the way to Amiens opened. The battalion was determined to not give an inch. They were dug-in and ready.

On 24 June, Harry's platoon launched a local counterattack, so as to push the enemy back from some of the adjacent high ground. It was vital to dislodge the enemy, as they had a perfect vantage point to rain rifle- and machinegun fire onto the forward trenches. As they advanced, the platoon commander took a round in the chest. Harry immediately took charge and urged his men forward. Casualties were mounting on both sides but Harry knew the score and continued to drive harder and harder. Suddenly, he too was hit when a machine-gun round got him in the shoulder and another hitting his arm. Disregarding the pain, Harry summoned all his strength and pushed on.

He was now on the crest of the feature and put a Mills bomb into the last of the rifle pits, but not before the occupants threw their own 'potato masher' bomb. This exploded alongside Harry, sending a piece of red-hot shrapnel into his wrist.

Then, as suddenly as it started, the carnage stopped and a strange silence descended. Harry needed to consolidate the position and looked around to call his men forward, but realised he was the only one left. He took stock quickly – and knew he was badly wounded and bleeding heavily.

The Germans knew, as the Aussies did, that occupation of the position was vital, but Harry knew he couldn't hold the position by himself. He needed to get word to his company commander, but he had no runner to send. He would have to go himself.

In an attempt to stem the flow of blood, Harry quickly stuffed his field dressing into his shoulder wound. He went to the body of the nearest Aussie and grabbed another dressing and wrapped that tightly around the wound in his arm and shoved the injured arm into the front of his jacket.

Bending to pick up his rifle, he felt dizziness try to overtake him. Finding the rifle now cumbersome and difficult to handle, he grabbed a pistol from a dead Hun and shoved it into his belt, then started down hill.

Stumbling through the forward trenches of B Company, a stretcher bearer caught hold of him, but Harry said, "Quick, get me to the CP!"

The company commander saw the bloodied sergeant approach – "You alright Harry, you look a real mess?"

"Yeah Sir, I'm OK!" – and proceeded to brief the officer. "Right, we'll get some blokes up there – toot sweet!" the officer chimed.

"Sir, they won't make it, unless I take them up. The bloody Huns are all over the place!" Harry replied.

"Don't be stupid Harry, you're in no shape to lead them – you'll bleed to death!"

Harris Ha

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"No time to argue – we've got to get moving!" Harry said and started moving towards the front.

Harry led the relief platoon and successfully occupied the position, just in time to repel a determined German probe. Only as the enemy retired and he knew the area was secure, did he allow his wounds to be treated and for him to be taken back to the aid post.

Harry had lost a lot of blood and the medical staff worked hard to keep him alive. It was touch and go for a while but Harry survived his wounds and was eventually evacuated to a field hospital.

Unbeknown to Harry, his actions in taking the feature had been observed by a nearby British officer who was amazed at the determination and bravery of the Aussie sergeant and set out to have Harry Bridle's courage officially recognised, writing a recommendation for the Victoria Cross, confident it would be successful.

But, it wasn't, although Harry's courage was recognised by the awarding of a Military Medal.

The British officer's citation read: "In an operation against the enemy position near Strazeele, on the 24th of June, 1918, Sergeant Bridle took command of his platoon when his Officer became a casualty. He led his men on to their objective, but all his men were killed or wounded, and Sergeant Bridle reached the position alone. He was wounded, but returned to his Company Commander and guided another platoon to

the captured position. His bearing throughout was beyond praise, and it was owing to his initiative and determination that enabled the enemy post to be occupied."

On hearing of the award of the lower-grade decoration, the British company commander was said to be 'chagrined'¹.

Harry's wounds were serious enough to keep him from further combat and returned to Australia, with his papers clearly marked 'medically unfit'¹.

Upon his discharge on 22 February 1919, Harry chose to remain in Sydney. He moved into a modest house in the eastern suburbs and took up employment with the department store chain Anthony Hordern's.

In December 1930, Harry was the subject of a small article in the RSL magazine, *Reveille*, which highlighted his actions at Strazzels⁶.

One of Harry's children, Bernard, served as a lieutenant in the Signals Corps during World War Two.

Harry passed away in 1962 and was cremated.

This gallant old soldier now lays at rest in Sydney's Rookwood Cemetery.

MILITARY FITNESS



3.

1.

When it comes to developing maximal strength for military fitness there are a handful of basic exercises that form the core of every program I write. In previous articles I've covered squats, deadlifts and pullups, so now it is time to cover bench pressing and overhead pressing.

When it comes to strength training no exercise is more popular than the bench press. It is a running joke among trainers and serious strength athletes that every Monday is "International Bench Press Day" when the gym is packed with guys pumping their pecs, before mysteriously going AWOL before the hard work of leg day.

The obsession with bench pressing and curls leads to a lot of injuries and can cause issues that will actually hinder your military fitness so, if you are going to bench (and I know you are) please keep the following in mind;

- 1. A big bench is impressive but a big overhead press is just as important and more functional from a military perspective.
- 2. If you are going to do a lot of bench then you have to balance it out with a lot of unsexy back work to avoid injuries. Seated row, dumbbell row and chin-ups - at least one rep of back for every rep of bench, no excuses!

- Upper body pressing is not just an upper-body exercise. To be a good presser, it helps to have a strong core, so suck it up and do some core work too.
- 4. Stretch! Benching can make you tight in the chest and shoulders, limiting your ability to get your arms into useful positions.
- 5. For military fitness there is no need to employ advanced powerlifting techniques such as a huge arch in the bench.
- 6 For bench press, use a power rack or spotter, people die every year from getting pinned.

Now that we've covered that, let's look at some tips for becoming a better presser and then I'll outline a couple of techniques and program ideas that will push your press numbers up.

for both L

Create a stable base - when pressing, it is important to realise that while your chest, shoulders and triceps are moving the weight, they can't do so effectively if the rest of your body is softer than hotbox pasta. Make sure you plant your feet firmly on the ground (no dead-bug pose on

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the bench!), brace your abs and set your back in a neutral posture. In the bench press, your head, shoulder blades and glutes should touch the bench and your feet should push into the floor.

Take a deep breath and hold it - intraabdominal pressure stabilises the spine and signals to your body that something important is going on. Breathe in during the lowering phase of the press and hold your breath until you are past the sticking point.

2.

- 3. Crush the bar – as with breathing, trying to crush the bar activates stabiliser muscles and signals to the body that maximum effort is needed.
- Don't compromise technique for weight. 4. Every week at my gym I watch two guys who load up the bar with too much weight and then proceed to do bench presses that are higher than Snoop Dogg. For months now they have not gotten any stronger or more muscular. Bury your ego and press all the way from your chest to full lockout each rep, even if it means only one 20kg plate per side instead of two.

Couch to Commando

Developed from over 10 years of military fitness coaching experience Don Stevenson's new book "Couch to Commando" covers every aspect of military fitness training.

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BY DON STEVENSON PHOTO BY ADF

Programming

In general, to avoid stagnation, it is important to rotate between different loading parameters over the course of a week or month rather than just banging away at three sets of 10 for months on end. Typically I advise two sessions a week of each press with the following format (I'm going to use a theoretical one-rep max of 100kg to illustrate)

- Day 1 Heavy Day work up to a single rep at 90kg then do 3 x 5 reps at 80-85kg. Each week increase the weights by 2.5kg. Dumbell rows for 3 x 10.
- Day 2 Rep day warm up and then do 3 x 8 with 70-75kg. Each week add a rep or two until you can do 3 x 12. Pullups for six sets of max reps.

After 4-6 weeks retest your max and reset the percentages.

On the same day as bench, I normally program squats, and on the overhead-pressing day I program deadlift.

Once you can bench at least 75% of your bodyweight for women or 100% of bodyweight for men for a solid set of eight reps (50% and 75% respectively for overhead) then you can explore advanced techniques such as some forced reps.



www.octogenstrengthcoach.com



Tipping the bank balance at nearly \$250,000, 5 Wing's new glider VH-NQV and her bespoke trailer are sure to make a massive difference to pilot numbers coming out of Tasmania in years to come.

NQV is the fourth aircraft to join the 5 Wing fleet, with hopes of another glider to come soon, thanks to increasing recruitment success over recent years – 5 Wing now boasting just over 2000 active members.

> Air Commodores Delahunty and Peitsch and Group Captain 'dont tell me trailers' Sloane check out 5 Wing's new glider.

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Further information on Cadets can be found at WWW.Cacletnet.cjov.au



An inaugural 3 Wing Musicians' Course was held at RAAF Richmond from 4 to 11 July, affording 22 musically inclined cadets from all over NSW an opportunity to combine their passion for the AAFC and their passion for music.

The detachment participated in several masterclass-type workshops conducted by current ADF Band musical directors and musicians, and were also assisted by the CO and musical director of the 2 Wing AAFC Band.

A new band formed on the course participated in the 3 Squadron Association Parade on 8 July, commemorating 90 years since the squadron first landed at RAAF Richmond and 75 years since it marched through the base gates on their way to WWII.

The band received many favourable comments on their performance, with onlookers astounded that it had only been rehearsing for three days.

The 3WG Band will hold two week-long musicians' courses each year, with a small number of weekend rehearsals interspersed.

There are vacancies for new members in this band and current 3WG cadets and staff are encouraged to contact Flying Officer (AAFC) Ben Simon on 0408 486 859 or email benjamin.simon@aafc.org.au if interested.

Subscríbe free at www.aussiecombat.com

ARMENNEVERASI

Pilot Officer Patrick Verdich and Leading Aircraftwoman Becky Lee march the No 3 Squadron Association's banner ahead of No 3 Wing Australian Air Force Cadets No 1/15 Musicians' Course to the original gate of RAAF Base Richmond for a commemoration - and, below, the new band. Photos by Corporal Veronica O'Hara



A five-month project to deliver infrastructure, health services and training for local people in Titjikala began in early June as the first soldiers arrived in the NT community for the annual Army Aboriginal Community Assistance Programme.

AACAP is a collaborative partnership between the Department of Prime Minister and Cabinet, which provides up to \$6 million per year, and the Australian Army, which contributes significant personnel and equipment resources for the works.

Assistant Minister for Defence Stuart Robert said a contingent of about 150 soldiers from the 6th Engineer Support Regiment would deploy to the remote Titjikala community to undertake the work.

"Our soldiers will provide several health, training, arts, culture and sporting initiatives, in collaboration with other agencies," he said.

"AACAP has successfully supported 40 Indigenous communities across Australia over the past 18 years and the continued momentum provided by the Army in partnership with PM&C will yield significant results for Titjikala.

"This programme provides significant benefits to remote Indigenous communities and facilitates access to services and resources that encourage sustainable outcomes. Frequently, this is about the provision of drinking water, sanitation and other essential infrastructure.

"The Army's ability to deliver an holistic range of activities and services in a single project is tremendously uplifting for everyone involved."

AACAP aims to improve environmental health and living conditions in remote Indigenous communities. Initiatives have been tailored specifically in collaboration with the community, the Aboriginal Lands Council and relevant government agencies.

Minister for Indigenous Affairs Nigel Scullion said AACAP was a direct way of assisting Indigenous people living in remote communities.

"AACAP is a great opportunity for Army personnel to use their technical expertise and experience to improve living conditions and community safety," Senator Scullion said.

"These are on-the-ground services that will directly benefit the community and the government is proud to support them through AACAP."

This year, Titjikala will receive significant new infrastructure including a waste-water-treatment system and duplex housing.

Health education and clinical treatment, veterinary assistance and some significant training courses, in first aid, food preparation, basic numeracy and literacy, multi-media, welding and other hands-on skills will also be delivered during this years AACAP.

ARMY

ABORIGINAL COMMUNITY ASSISTANCE



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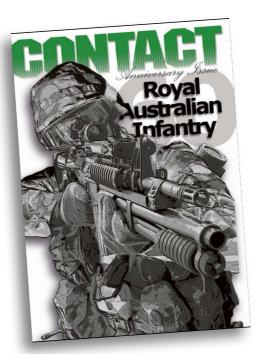






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COMBAT Camera is a photo-essay-based magazine with the same DNA as CONTACT. CC01 is available

FLOP IT OUT AND GET CHARGED

Email your comments, critiques, criticisms or death threats, to gearinsider@militarycontact.com

I know where your minds are going with this headline – and that is not the right direction! But it is an hilarious sales slogan for military solar panels we overheard at a recent trade show.

In our last article, we looked at the little things that don't get much attention but which mean so much to us out in the field. Having discussed the evolution of those items over the years, we were moving into the electronic devices that we now take bush and, just like our civilian friends, can't seem to do without. These items range from smart phones to personal media players, as well as small, cheap walkie-talkies for individual coms amongst the lesser equipped units where clear speech and informal RATEL procedure is frowned upon.

Of course, we also have officially issued electronic items that require a power source too - but, be warned, you must use only approved, issued batteries and battery chargers with issued radios and other electronic devices. Got it? Good. The results of using non-approved power sources can be catastrophic to the equipment and your career.

Getting back to the subject, I find myself these days taking my phone with me as it has music, movies and books on it – a bonanza of personal entertainment compared to my Walkman cassette player and old-fashioned paperback novel of the '80s! While the Walkman wasn't too good on batteries (but you could often get spare AAs on a resup), the book was always available.

Not so with the phone. Thanks to miniaturisation, phone and device batteries are now conformal, internal and non disposable, so we need an alternate power source to charge from.

For some of us, there is access to generator sets, and it is pretty common to see all spare power outlets filled with phone chargers and electric razors. In hierarchical order, of course!

So if we can't get to the mountain, I guess we have to bring the mountain to us. For the most part, our device batteries will last a long time because we won't have the device powered on all the time (to conserve the battery of course!) and we probably won't get that much down time where we are awake and can use the device. In this fashion we might go a few days, even a week before needing power. That time can cover quite a lot of field activities.

But when we do need that power, we are pretty much limited to two sources – solar and storage batteries.

I'll start on the latter.

Storage batteries are just that. A battery or ganged set of batteries that exist solely to charge or power another device when its internal power source has been exhausted. They can be their own internal conformal battery or a device allowing you to use disposable and rechargeable cells to power the device with a cable connection.

Some of these devices now even have small, inbuilt solar cells to charge the pack when not in use, allowing you to top-up the battery or give it a full charge, time permitting.

Most common you will find is a pack with cable connection, however there are versions that form part of the protective case for your device, including some that have both the battery pack and solar cell. As you know with batteries, there is a weight penalty but I wouldn't consider it much of a penalty unless you want the battery pack with the most grunt to it.

The big advantage is that these battery packs often provide a fast charge and give immediate use whilst charging but at a cost of faster battery drain. You may need to carry an extra cable as well.

Biggest advantage? These packs work silently at night.

Biggest downside? If you drain them, you'll need another power source or new batteries.

Solar is our next alternative and, logically, it doesn't work at night - unless you can put it under a suitable light source. But, if you have that, you probably have a generator, so why bother.

The progress in design and efficiency of solar cells has now reached a point where small, flexible and durable personal systems are available. We recently saw a device with four rugged and flexible panels that fold into the rough size of an A5 notebook, weighs under 300 grams, puts out 6 watts of power in optimal conditions and charges most phones faster than a wall socket.

A couple of hours exposure to sunlight is all you need - and if you're thinking what I'm thinking, you could hang if off your pack while you stomp, or have it hooked up to flip out and charge any time you stop.

However, like everything, there is a caveat with solar power, and that is that it doesn't always run at peak efficiency. In fact, unless the day is perfect and you keep the sun at 90° to the panels, you won't get full power. Which means you'll need more time in the sun.

This goes for all solar panels no matter how big or small. If you have solar panels on your house, you already know this. The only way around is to gang more panels together, but that's just not going to be practical as charging your personal device is exactly that, a personal thing.

There is one more power source that is neither battery nor solar. It's a group of products that produce power via heat and they come in the form of a small woodstove (about 1.5 times the size of a Jetboil) and a small kettle. These produce quite a lot of power, 10 watts or so, from a thermal reaction, but it's not a leave-and-forget kind of thing. It also produces a light, thermal and smoke





signature for the stove and a light and thermal signature for the kettle, so it isn't tactical. There is a size penalty too. So, they are less suitable for us in the military sphere, which is a pity, because the power output is significant.

That said, I still like the stove concept as it uses small twigs for fuel and gets around having to carry hexamine or gas canisters which is great if you're going by RAAF air.

The big question now is, which one are you going to choose?

At the risk of sounding like a skipping CD – as always, do your homework on this.

But, if there was ever an area where it is better to spend more and avoid cheap products, this is definitely one of the important ones. There are no really cheap ones but performance varies wildly. You have been warned.

Next issue, we'll revisit the military-gear aftermarket and see what's happening there.

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Following the success of last year's public vote, the RAF is again allowing the public to choose their favourite photo from the Royal Air Force Photographic Competition. This is CONTACT's pick. Last year was the first time this unique opportunity was opened to the public and it attracted more than 12,500 voters. The RAF is hoping for even more support this year. You can cast a vote by visiting the RAF website HERE. Polling closes at midnight London time on 6 September and the winner will be announced at a special presentation ceremony on the 11th. The nine contenders for the People's Choice Award were chosen by a panel of three journalism and photography professionals.

This photo: By Senior Aircraftman Tim Laurence, Command Video HQ, AIR Command at RAF High Wycombe, is titled 'Heat'



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