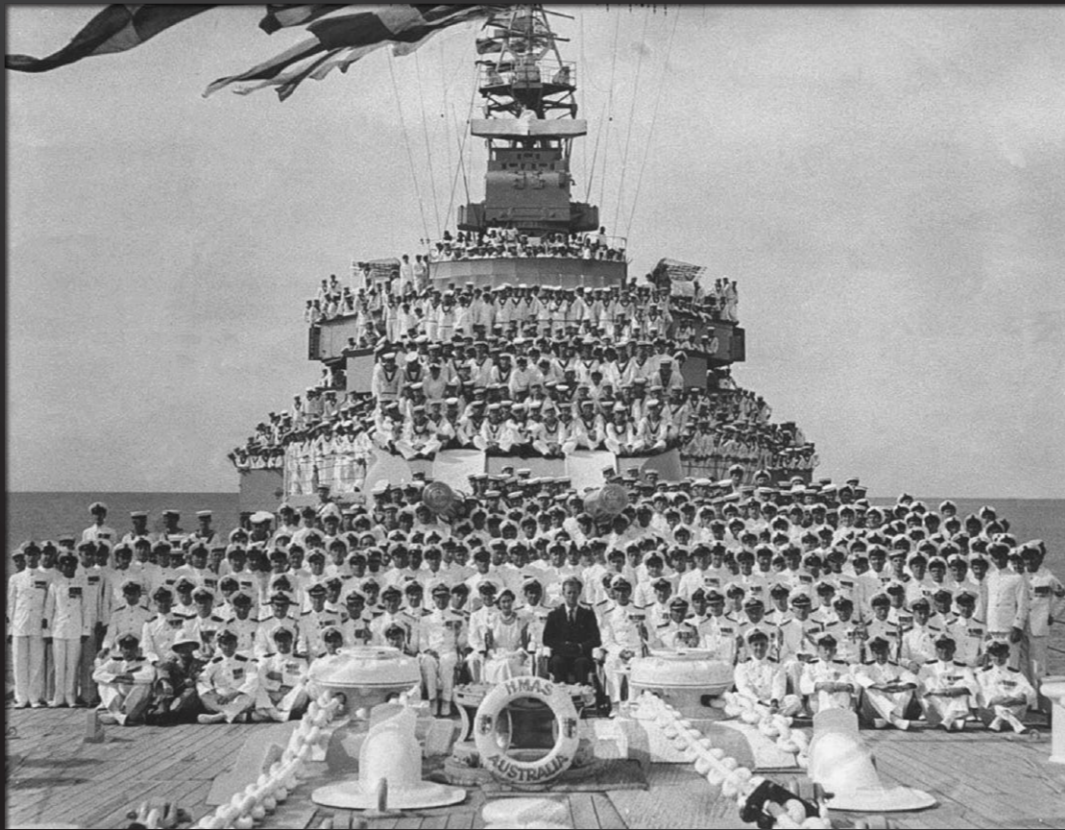


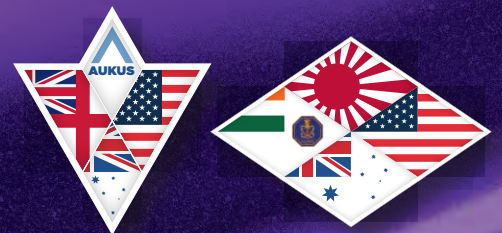
# THE NAVY

THE MAGAZINE OF THE NAVY LEAGUE OF AUSTRALIA



IN MEMORY OF:  
HER MAJESTY THE QUEEN, 1926-2022  
PRINCE PHILIP DUKE OF EDINBURGH, 1921-2021

**BEYOND TRANSITS: CHIEF OF NAVY  
WHAT IS TO BE DONE?  
MAKE READY IN ALL RESPECTS  
SUBMARINES: AN AUSTRALIAN PERSPECTIVE**



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AUSTRALIA'S LEADING NAVAL MAGAZINE SINCE 1938



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 HMAS AUSTRALIA (II) 1954 - the year HMAS AUSTRALIA (II) Decommissioned.

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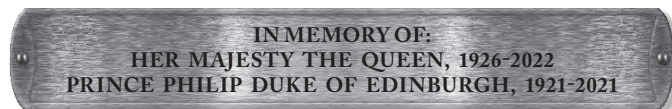
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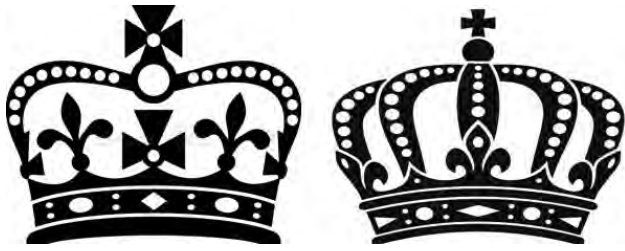


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**Deadline for next edition 5 November 2022**



St Edwards Crown (LHS) and The Imperial State Crown (RHS).

## NEW AGES

This final 2022 issue of *The NAVY* occurs at the end of ages and the beginning of new.

The *Second Elizabethan Age* ended on Thursday 8 September 2022. *The NAVY* and the Navy League of Australia Will Remember Her Majesty Queen Elizabeth II and her long attachment to Australia as Head of State. As recognised in Her Majesty's Royal Australian Navy, through Her Governor General, as Commander in Chief.

*Mortua Regina est; Vivat Rex!*

The changes for Navy may be minimal – perhaps representing the move from Her Majesty's Australian Ship, to His Majesty's, and the change of portrait to hang in ships and messes, to that of His Majesty, King Charles III. If King Charles III chooses to use the Imperial State Crown, as opposed to the St Edward's crown (as chosen by Her Late Majesty), they could be more substantial. If he chooses the former, as is his right – then, just as his official portrait on coinage will change (including from right facing (for Her Late Majesty), to left facing (for HMK)), then also will the RAN crest, buttons, and officer and NCO cap badges, for all RAN personnel. Reverting to the crown previously adopted by King George VI and used until 1953. Obviously, there would need to be a transition to the new crown; noting the change may be sustained by the Prince of Wales, when he becomes King.

The *Second Elizabethan Age* encompassed two scientific ages: the *Industrial Age*, 1920-1965; the *Information Age*, 1975-2020, and the beginning of a new age, described by some as the *Synthetical Age* (others, as the *Cyber Age*) – synthesising the human with the infotechnological; the quantum; with nano; with Artificial Intelligence. Her Majesty's reign also encompassed five generations; *Baby Boomers*; *Gen X*; *Gen Y*; *Millennials*; and *Gen Z*. His Majesty's Australian Ships (average age 24-25) are now largely officered and crewed by *Millennials*; while *Gen Z* starts joining Navy this year. Generational change was also recognised in the new Chiefs of Army, Navy and Air Force (though not CDF or VCDF), who are all *Generation Y* – unlike their *Baby Boomer* (as is King Charles) and *Gen X* predecessors. Thinking through the quantum-connectivity of some of our future ships, the last Commanding Officer, of the last nuclear-powered submarine, will not be born until 2035, and the last CO of the last *Hunter-class* frigate is only two years old. Assuming all things stay equal...

Recognising the emerging strategic context, in which time and the tyranny of distance may no longer be our allies – all four papers in this issue are connected by the fact that things are no longer equal. In Paper 1, *Beyond Transits* by the new Chief of Navy, Vice Admiral Mark Hammond, AM, CN notes:



USMC F-35B conducting landing and take off from JMSDF ship JS IZUMO 2021 (DDH 183).

For decades we have derived these freedoms and our national wellbeing gains from a status quo of almost universal acceptance of, and adherence to, the United Nations Convention on Law of the Sea.

*We all know that is no longer the case.*

This represents the first paper by a RAN Flag Officer in *The NAVY* since before COVID. It is a welcome and timely contribution, upon which it is hoped the RAN, *The NAVY*, and NLA can build. The NLA has provided sincere, loyal, sometimes dissenting support, to Navy since before the RAN was granted Letters Patent, in 1913 (and *The NAVY*, since 2038). At a time of epochal change, tradition and constancy become critical allies. Maintaining this maritime relationship would appear, today, to be in Navy, NLA, and *The NAVY*'s interests.

The second paper, *What is to be Done?* is by longstanding contributors Dr Neil Baird and Dr Simon Reay Atkinson. Following a detailed strategic contextual analysis of Australia's geopolitical, industrial and shipbuilding base, they conclude:

To be better prepared, Australia needs urgently to ensure that Canberra's *jalousies* be removed. Its defence, particularly its maritime defence can be achieved effectively and economically by augmenting, strategically disaggregating and dispersing nationally and reforming much of its unproductive and slow conventional 'wisdom'. Reform of the sclerotic and unimaginative thought processes that are entrenched in current peace-time thinking is both urgent and vital.

The third paper, by Mark Schweikert maintains the themes of both papers 1 and 2. Entitled *Make Ready in all Respects*, Mark notes:

As history has shown, first world liberal democracies tend to only ramp up their military spending and posture when it's too late. The way to enable peace and security (and prosperity) is through changing the perceptions of our politicians, senior defence and naval officers and the public.

*Lasting security takes 'the will'.*

Mark concludes by stating: "Your Navy League will keep pressing this, as Australian lives are too precious to waste to ambivalence and ignorance". This segues to Geoff Hawkins' final paper, *Submarines: an Australian Perspective – Fix the problem, not the blame*. Geoff is one of our retired, non-professional authors, with a non-engineering, Army background. Admitting to repairing things that engineers have designed, his technical analysis is detailed and apposite. He concludes by raising a number of useful questions, that



INS VIKRANT (R11) Flying the New Indian White Ensign.



The new Indian Navy White Ensign.

Defence needs urgently to address:

- Does Australia buy nuclear boats (MOTS)? *Does Australia buy nuclear boats and fit them out here? Does Australia design, with help from our AUKUS partners, an all-Australian boat, and then build here? Who supplies the reactor? Is it us, them, or all the above?*
- Will our nuclear boats be: *designed with a prejudice toward traditional submarine warfare (sea lane raiding, anti-surface fleet attack, and counter submarine warfare)? or will they be more general purpose, with land attack capability (specific missile VLS fitted) and miniature Special-Forces submarine and drone capable?*
- How do we fill the capability gap? *How many submarines do we actually need? Are we able to operate two types of boats (nuclear & conventional) simultaneously? Walk and chew gum!! Where do submersible drones, UUVs, Heavy Lift Mother Ships, and miniature special-forces submarines stand in all this? Do we need a couple of “Q-ships” to resupply submarines?*
- How do we go about training crews initially? *Do we go via crew exchange? or do we take a chance and lease four Los Angeles class with crews to train ours? Do we take a gamble and accept the risk? Is there another way of training? Could we build a computer simulator that covers all the areas of concern and train here?*
- If we buy a conventional replacement for the *Collins-class*, should we also buy a heavy lift Q-ship?

Some of these questions (crewing and training in the UK) appear to be in the process of being answered. Geoff wishes Vice Admiral Jonathan Mead, AO (Chief of Nuclear-Powered Submarine Task Force), *Good Luck!* As Napoleon reputedly observed, “I’d rather have lucky generals, than good ones!” Noting hope is not a plan, let’s hope Admiral Mead is, indeed, a lucky Admiral!

The Indian Navy announced the new Indian White Ensign (IWE), on the commissioning of INS VIKRANT (R11) by Prime Minister Narendra Modi, 2 September 2022. The Indian White Ensign, or *Nishaan*, is the fourth IWE since 1950. To “do away with the Colonial past”, the Flag of St George is replaced by an octagon, furnished with two golden borders and a navy-blue background, encompassing the crest of the Indian Navy. Highlighting the national emblem, mounted atop an anchor superimposed. The ensign features a clear anchor, to depict steadfastness, as opposed to the traditional emblem of the Indian Navy (and RAN), the fouled anchor. The two gold borders act as an inspirational emulation of the C17th Indian ruler, *Chhatrapati*

*Shivaji Maharaj Rajmudra*, and the octagonal shape the eight directions: four cardinal and four inter-cardinal, symbolising the multidirectional reach and multidimensional operational capability of the Indian Navy. The Indian Navy motto शं नौ वरुण (Sham No Varuna), translates as “May the Lord of Water be auspicious unto us”. The new IWE retains its links with naval tradition, in line with other White Ensign navies such as Canada, New Zealand, Nigeria, South Africa, and Australia (and the USN!)

On the front cover of this issue, the QUAD Naval Ensign is amended to reflect the IWE. Both the QUAD and AUKUS national and naval ensigns were designed by *The NAVY*, for the NLA, for use by Allied countries.

The *Defence Strategic Review* (DSR) announced by Government, raises a number of issues. For the majority of Defence personnel, a review means “more for less” – where the less is always cuts in people. Inauspiciously calling it the DSR, may be a *sleight* reversal of the failed 1998 UK *Strategic Defence Review* (SDR). From which the UK Armed Forces have yet to recover.

The DSR leads, honorary Professors Stephen Smith and Sir Angus Houston, were *interesting* choices. A previous RAAF CDF, coming back to preside over an Army incumbent. One whose ruthless introduction of the (now much criticised, including by Chiefs of Air Force) F-35A *Lightning II* also limited LHD designs; preventing the adoption of the F-35B, carrier variant (used by QUAD and AUKUS navies). RAAF officers, and others who raised concerns about the F-35 at the time, were moved sideways and / or out. As Defence Minister, Smith presided over Defence cuts, exactly at a time when investment was urgently needed. He never apologised for “comprehensively mishandling the fallout from the ADFA Skype scandal; leading to the incorrect dismissal of its then Commandant”. A naval Commodore. It is to be *hoped* they can now be humble, learn, listen and read. This and previous issues of *The NAVY* may be a good starting point. ■



# STATEMENT OF POLICY

## For the maintenance of the Maritime wellbeing of the nation.

The Navy League is intent upon keeping before the Australian people the fact that we are a maritime nation and that a strong Navy and capable maritime industry are elements of our national wellbeing and vital to the freedom of Australia. The League seeks to promote Defence self-reliance by actively supporting defence manufacturing, research, cyberspace, shipping, transport and other relevant industries.

Through geographical necessity Australia's prosperity, strength, and safety depend to a great extent upon the security of the surrounding seas and island areas, and on unrestricted seaborne trade.

The strategic background to Australia's security is changing and in many respects has become much less certain following increasing tensions, particularly in East Asia involving major powers, and in Europe and the Middle East. The League believes that Australia should rapidly increase the capability to defend itself, paying particular attention to maritime defence.

### The Navy League:

- Believes Australia can be defended against attack by other than a major maritime power and that the prime requirement of our defence is an evident ability to control the sea and air space around us and to contribute to defending essential lines of sea and air communication with our allies.
- Supports a continuing strong alliance with the US.
- Supports close relationships with all nations in our general area particularly New Zealand, PNG and the South Pacific island States.
- Advocates the acquisition of the most capable modern armaments, surveillance systems and sensors to ensure technological advantage over forces in our general area.
- Advocates a strong deterrent element in the ADF enabling powerful retaliation at significant distances from our shores.
- Believes the ADF must be capable of protecting commercial shipping both within Australian waters and beyond, in conjunction with allies.
- Endorses the development of the capability for the patrol and surveillance of all of Australia's ocean areas, its island territories and the Southern Ocean.
- Advocates Government initiatives for rebuilding an Australian commercial fleet capable of supporting the ADF and the carriage of essential cargoes to and from Australia in times of conflict.
- Notes the Government intention to increase maritime preparedness and gradually increase defence expenditure to 2% of GDP, while recommending that this target should be increased to 3%.
- Urges the strength and capabilities of the Army (including particularly the Army Reserve) and Air Force be enhanced, and the weaponry, intelligence, surveillance, reconnaissance, cyberspace and electronic capabilities of the ADF be increased, including an expansion in its UAV capability.
- Considers that the level of both the offensive and defensive capabilities of the RAN should be strengthened, in particular with a further increase in the number of new proposed replacement frigates and offshore patrol vessels, noting the need to ensure essential fuel and other supplies, and the many other essential maritime tasks.
- Recommends bringing forward the start date of the replacement frigate program to both strengthen the RAN and mitigate the local industry capability gap.
- Recommends the timely replacement and increase in numbers of the current mine-countermeasure force.
- Strongly supports the early acquisition of large, long range and endurance, fast submarines and notes the deterrent value, reliability and huge operational advantages of nuclear powered submarines and their value in training anti-submarine forces.
- The League is concerned at the very long time before the projected 12 new conventional submarines can enter operational service, noting very serious tensions in the NW Pacific involving major maritime powers.
- Recommends very early action to provide a submarine base on the Eastern seaboard.
- Notes the potential combat effectiveness and flexibility of the STOVL version of the Joint Strike Fighter (F35 *Lightning II*) and supports further examination of its application within the ADF.
- Supports the development of Australia's defence industry, including strong research and design organisations capable of the construction and maintenance of all warships, submarines and support vessels in the Navy's order of battle, and welcomes the Government decision to provide a stable and continuous shipbuilding program.
- Advocates the retention in maintained reserve of operationally capable ships that are required to be paid off for resource or other economic reasons.
- Supports a strong and identifiable Naval Reserve and Australian Navy Cadets organisation.
- Advocates urgent Government research and action to remedy the reported serious naval recruiting and retention problem.

**As to the RAN, the League,** while noting vital national peacetime tasks conducted by Navy, including border protection, flag showing/diplomacy, disaster relief, maritime rescue, hydrography and aid to the civil power:

- Supports the maintenance of a Navy capable of effective action in hostilities and advocates a build-up of the fleet and its afloat support elements to ensure that, in conjunction with the RAAF, this can be sustained against any force which could be deployed in our area of strategic interest.

### The League:

- Calls for a bipartisan political approach to national defence with a commitment to a steady long-term build-up in Australia's defence capability including the required industrial infrastructure.
- Believes that, given leadership by successive governments, Australia can defend itself in the longer term, within acceptable financial, economic and manpower parameters.



Her Majesty Queen Elizabeth and Prince Philip on board Her Majesty's Australian Barge Lake Burley Griffin 2011



Sailors of His Majesty's Royal Navy Pulling Her Majesty The Queen's Gun Carriage

## FAREWELL QUEEN ELIZABETH II

In spite of all of the sadness and pageantry of the past month one thing has shone through since the death of Queen Elizabeth II. That is, a seamless and stable transition in our system of government. Without a bump or a hiccup, with need for neither election nor revolution, everything changed, while on the other hand, it seems, nothing at all has changed as well.

On behalf of the Navy League of Australia I pay tribute to the tireless commitment of Queen Elizabeth II as Queen of the Commonwealth and of Australia.

At a ceremony in Canberra to remember Queen Elizabeth's constant and reassuring presence the Queen's own voice (from the opening of Parliament House, Canberra in 1988) was played to those present and the millions watching around the country. These words stood out to me:

*Parliamentary democracy is a compelling ideal but it is a fragile institution. It cannot be imposed and it is too easily destroyed.*

That as Australians we have such a system is a blessing and a credit to generations past and present. That we were able to transition from the 70-year reign of the Queen of Australia so seamlessly to the reign of King Charles III who became Head of the Commonwealth, and King of Australia is without parallel.

While under the Australian Constitution the King's duty is limited to the appointment of the Governor General as His Majesty the King's representative and in practice our Head of State, (on the advice of the Australian Prime Minister of the day) it is reassuring to have a system of such longevity, stability and ease of smooth, seamless transition.

We wish King Charles III a long and stable reign.

*God Save the King.*

## NEW DEFENCE LEADERSHIP

Since I last wrote there has been significant change in the senior defence leadership in Australia. While the incumbents have been reappointed for two years as Chief of the Defence Force and Vice Chief of the Defence Force, new Service Chiefs for each of the Navy, Army and Air Force have been appointed for terms of four years.

The Navy League of Australia congratulates all of the newly promoted senior leaders, especially Vice Admiral Mark Hammond AM, who assumed command as Chief of Navy in July this year. As Chief of Navy, Admiral Hammond has a huge task of growth in numbers and transition in assets and capability ahead of him.

Admiral Hammond noted among his priorities the task of growing the Navy from its current strength of 15,000 serving personnel to 21,000 and ensuring Navy's people have the capabilities they need to succeed in a rapidly increasing maritime environment of complexity. Foremost, though, he has focussed on the safety of Navy's people as his key accountability and so his key priority. Optimising the fleet and creating an acceleration mindset is also a key priority, ensuring that Navy does well consistently in the safety and warfighting realms while looking to do things better through an acceleration lens.

With a broad background in defence and diplomatic leadership, sea experience in French, British and US nuclear attack submarines, Australian and Dutch conventional submarines and submarine command, Admiral Hammond will be well placed to guide Navy in this period of substantial growth and operational change. The Navy League wishes Admiral Hammond well and thanks him for the contribution of his paper to this edition and to the future of the relationship between the League and the RAN.

There is more to read from Admiral Hammond in this edition and we commend his paper to you.

## THE NAVY LEAGUE OF AUSTRALIA ANNUAL GENERAL MEETING

After a hiatus of meeting in person for the past two years, the Navy League of Australia AGM and Federal Council meeting is on again in October, this year in person in Canberra.

The Annual General Meeting and Federal Council meetings of the Navy League provide the opportunity for dialogue between Federal Council and the Navy and the opportunity for briefings on current issues, future plans and issues that the League sees important to address. At the meetings representatives from each Division of the League, and representatives from our New Zealand counterparts come together to address matters of import, and also to meet socially, discuss issues affecting the League and its direction and enjoy each other's company.

There is a notice in this edition detailing how members can participate in this year's Annual General Meeting. We will be conducting a hybrid version of the meeting this year, a first for the League, so those in Canberra can join in person while others who wish to join 'on line' will be able to enjoy the meeting via videoconferencing. Many of you will be used to this format of meeting, so we hope you will join us.

The AGM is a great opportunity to further explore the important issues which are canvassed in this *The NAVY: The Magazine of the Navy League of Australia*, to address emerging naval matters and mix with like-minded members. I encourage all members to participate in the AGM, and hope many of you are able to join us.

## THE NAVY LEAGUE OF AUSTRALIA ANNUAL MARITIME AFFAIRS ESSAY COMPETITION

Entries in the Navy League of Australia Annual Maritime Affairs Essay Competition have been received and the competition is closed for another year. One of the tasks of the AGM is to review, assess and make the difficult decision as to prize winners for the competition entrants. That process has begun.

For those of you who missed the deadline this year, details will be out soon also about the competition for the year ahead, so if you are interested in participating, you can get a head-start preparing your paper now. Topics can range across 21st Century Naval Warfare, Australian Naval History, Australian Industrial and Merchant Navy Maritime Strategy, and around all of the subjects which you read about in editions of *The NAVY*. Including the QUAD and AUKUS.

The annual competition offers prizes in the professional and non-professional categories and the opportunity to have the papers published in a future edition of *The NAVY*, as well as the lure of the substantial prizes on offer.

For those of you who have contributed entries, we thank you. We will announce the winners in the edition of *The NAVY* following the AGM.

## IN THIS EDITION

I hope you will enjoy reading the articles in this edition and encourage you to put pen to paper to let us know what you think.

We are lucky to have an article from the Chief of Navy, *'Beyond Transits'*, which should be required reading for all with a maritime interest. In addition, Dr Neil Baird and Dr Simon Reay Atkinson share with us their thought-provoking article *'What is to be done?'*, asking difficult questions which will no doubt generate significant discussion. Our Federal Vice-President Mark Schweikert follows up on the theme of his two earlier papers, with his article *'Make Ready in all Respects'*. Our final paper this edition is from Geoff Hawkins, retired Army with a passion for Navy, who provides his second paper in *The NAVY* magazine *'Submarines: an Australian Perspective'*. Many readers will recall Geoff's previous powerful, passionate and challenging first-person article on the shape of the future Navy.

Happy reading. ■



NOTICE IS HEREBY GIVEN THAT THE

# ANNUAL GENERAL MEETING OF THE NAVY LEAGUE OF AUSTRALIA



will be held online by video conferencing on **Saturday 22 October, 2022 at 12.30pm AEDT.**

To receive video conferencing details please register your attendance (and your email address) by email to [editorthenavy@hotmail.com](mailto:editorthenavy@hotmail.com) by COB Tuesday 18 October and the details will be emailed to you prior to the meeting.

### BUSINESS

- 1 To confirm the Minutes of the Annual General Meeting held by video conferencing on Friday 22 October 2021
- 2 To receive the report of the Federal Council
- 3 To receive the financial statements of the year ended 30 June 2022
- 4 To elect Office Bearers for the 2022-2023 years as follows:
  - Federal President
  - Federal Senior Vice-President
  - Additional Federal Vice-Presidents (2)
  - Honorary Federal Secretary

Nominations for these positions are to be lodged with the Honorary Secretary, Queensland Division prior to the commencement of the meeting.

### 5 GENERAL BUSINESS:

- To deal with any matter notified in writing to the Honorary Secretary Queensland Division, PO Box 620 Morningside QLD 4170 by 15 October 2022

## ALL MEMBERS ARE WELCOME TO ATTEND

By order of the Federal Council

**Matthew Rowe**  
President





**RIP THE BAND AID OFF -  
STOP THE HUNTER-CLASS FARCE**

Dear Aeneas,

In 2018 the Australian Government chose the UK Type 26 design to become the new *Hunter-class* frigates to replace the current *Anzac-class* frigates; which entered service during the period 1996 - 2007. Yet four years on the HUNTER design is still in a state of turmoil with the frigate length and weight increasing to accommodate ever changing design 'thought bubbles'. The first ship for the Royal Navy, GLASGOW, was laid down in 2017 but is unlikely to be commissioned until 2027 and has been plagued with various issues. At one point to save weight the idea of making the super-structure out of aluminium was raised before it was pointed out that aluminium burns as the Royal Navy found out during the Falklands War of 1982!

The *Hunter-class* 'frigate', now displacing 9800 tonnes (so hardly a frigate), is heading down the same track as the light destroyer (DDL) of the early 1970's. This Australian project was created in 1967 to replace the 1950's vintage *Daring-class* destroyers (VENDETTA, VAMPIRE and DUCHESS). The original 1967 design was for a ship of 2500 tonnes but the good ideas fairies continuously hovered around and saw the final design displacing 4200 tonnes. In 1974, with the design still be argued over within Navy Office, the Whitlam Government cancelled the project; and soon after the first of the US *Oliver Hazard Perry class* frigates were ordered by the Labor Government. The Fraser Liberal Government then ordered another two (with these four ships built in the United States) and then another two were built in Australia and commissioned in the early 1990's. These US designed warships went on to provide outstanding service to the RAN and the nation; with the lay-down to commissioning time being about three years per ship.

So, with a potential conflict in the Indo-Pacific region close on the horizon how can Australia quickly increase its numbers of capable warships?

**Option 1** - Build more Guided Missile Destroyers (DDG). HOBART, BRISBANE and SYDNEY were built in Australia to a Navantia design, with a US combat system and the Australian CEAFAR radar, and are currently in service. The pace of construction could be sped up by building at Osbourne and Henderson ship-yards as well as potentially in Spain.

**Option 2** - Build 8-9 updated ANZAC class frigates (perhaps even reactivating the near moribund Williamstown Dockyard to do this thereby re-invigorating the Australian shipbuilding industry). The upgraded design exists and Australian industry has proven it can build these ships.

**Option 3** - Seek to purchase/hire some of the older US Navy *Arleigh Burke* destroyers. 70 ships of this class have been built, or are in build, and while considered somewhat 'noisy' for ASW work they are still a very capable warship. Australia could potentially seek to 'acquire' 3-5 of these destroyers which have a proven record and a substantial logistics and maintenance support system.

**Option 4** - Do Nothing and hope that the *Hunter-class* design settles down and maybe get the first ship off the slipway in about 2030.

With the uncertain security situation in the Indo-Pacific going from bad to worse do we want an unproven design or an actual warship!?

Yours sincerely

*Concerned Tax Payer*

By Editor,

Dear CTP,

Thank you.

May I direct you to papers 2, 3, and 4, in particular – noting also the strategic context painted by the new Chief of Navy, paper 1.

The question we are also faced with, is 'how to stop Canberra thinking with a peace time mentality?' If Canberra is unwilling, or prevented from showing the humbleness to learn, then the Commonwealth is in grave danger.

If you or our readers have any advice on how this may be achieved, please do not hesitate to write.

Kind regards

*Aeneas*

Editor

*The NAVY*

Journal of the Navy League of Australia



ADV v HMAS

Dear Navy League,

I'm hoping you can help. In spite of my searches, I have not been able to come to understand why the new Evolved Cape Class Patrol Boats are designated as Australian Defence Vessels rather than Her Majesty's Australian Ships, particularly since they are manned by Navy personnel and have essentially the same role as the Armidale class and previous patrol boats which have all been designated as His Majesty's Australian Ships.

Maybe I'm searching in the wrong places, but I'd be grateful if you could shed some light on this subject for me or point me to an authoritative source.

Yours faithfully,

Jules Smibert

By Editor,

Dear Jules,

Thank you. You raise concerns raised by a number of members as to why Border Force Command is creating its own private Navy – under the Blue Ensign and not the White Ensign. There are also issues regarding the Articles of War. It seems to be a form of back-door privatisation or grandiose empire building. Either way, it appears not to be "all of one ship's company".

Most grateful if members and readers can offer advice and a paper on the same.

Kind regards

*Aeneas*

Editor

*The NAVY*

Journal of the Navy League of Australia



# BEYOND TRANSITS: CHIEF OF NAVY SPEECH

## INDIAN OCEAN DEFENCE AND SECURITY CONFERENCE OPTUS STADIUM PERTH

By Vice Admiral Mark Hammond, AM

In August, at 50 days into my term as Australia's Chief of Navy, it was great to be back in Western Australia to talk to the theme of this important and inaugural conference. The theme – Beyond Transits – the emerging security relevance of the Indian Ocean – invites a discussion that intellectually departs from the traditional discourse about Sea lanes.



Figure 1: Chief of Navy Vice Admiral Mark Hammond AM, RAN.

This paper version of Chief of Navy's recent speech "Beyond Transits" was provided by kind permission of the Chief of Navy, Vice Admiral Mark Hammond AM, for publishing in *The NAVY*, Journal of the Navy League of Australia.

### ACKNOWLEDGEMENT

I would like to acknowledge the traditional custodians of the lands on which we meet today – the Nyoongar People – and pay my respects to their elders past, present and emerging.

I would also like to pay my respects to the aboriginal and Torres Strait Islander Men and Women who have contributed to the defence of Australia in times of peace and war.

### INTRODUCTION

Thirty-five years ago I joined my first warship – HMAS SWAN – a destroyer escort based at Fleet Base West. I was a 19-year-old Seaman.

As I continued on my Navy journey it was here in 1994 I was awarded my Watchkeeping qualification in a guided missile frigate – in the waters off Fremantle. I was a proud 26-year-old Lieutenant.

Which brings me to 1995 where I was awarded my submarine qualification in an Oberon-class submarine in the waters of Gage Roads – prior to celebrating with my shipmates in Fremantle.

Having served in submarines COLLINS, WALLER, SHEEAN and FARNCOMB in the waters surrounding Western Australia, I have felt both privileged and humbled by the experience of serving our great country.

I have travelled from Esperance to Port Hedland, and trained in the seas from Albany to the Arafura, I have tested our submarine skills amongst the oil rigs of the NW Shelf, and against many unsuspecting merchant ships that ply the West Coast. My family and I have lived, learned and worked in Western Australia and consider it a second home having spent so many years here.

### BEYOND TRANSITS

The theme – *Beyond Transits* – provides a focus beyond the traditional discourse about Sea lanes.

I welcome this focus, because our economic wellbeing is derived from much more than just our import/export economy which almost exclusively relies on sea-based transport, and the relevance of the system on and under the Indian Ocean is of both National and Global significance.

### RELIANCE

We are now equally – and increasingly - reliant on our sovereign and Industry seabed infrastructure. Notably, there are 5 important cables that connect Western Australia with the global trading system. Another that connects WA to the East.

And our wellbeing is equally dependent on adherence to international laws and conventions that underpin the global trading system.

TO PROTECT AND ASSURE THE ECONOMIC WELLBEING OF OUR NATION

Australia's seaborne and undersea supply chain is the lifeblood of our economy.

A nation dependent on its use of the sea and seabed to confer its economic well being, must be capable of defeating threats on and from the sea.

This inextricable link between the security of our seas and the prosperity of our nation underpins the direct relationship between the quality of our maritime forces and our quality of life.

Deter the use of force against Australia's economic lifelines  
Defeat military forces in the maritime domain

OUR VALUES  
SERVICE  
COMMITMENT  
INTEGRITY  
EXCELLENCE

NAVY

Figure 2: Assurance and Wellbeing of our Nation

I invite you to reflect on Figure 2 – a work in progress, just like me. It is the only slide I will use today as I believe it speaks to the relevance of all of our surrounding seas, as well as the Indian Ocean – as I set the context for our Navy and our Nation today.

*I will discuss what is changing; and what it means for all of us.*

### MARITIME SECURITY

First, our maritime security context. Australia – an island, trading nation – is:

*entirely dependent on a peaceful, stable, maritime environment to convey the instruments of our economic wellbeing – our 2.3 trillion-dollar economy.*



Figure 3: HMAS SWAN (DE50).

We rely on import and export freedoms on the sea, and we are dependent on uninterrupted use of seabed cables to animate the financial and communications systems that connect us to the global trading system.

For Australia maritime trade is a source of national prosperity. It is what enables governments to provide hospitals and schools. It is what enables businesses to offer well paid and fulfilling employment. In short, maritime trade underpins the quality of life we enjoy.

Maritime trade plays the role it does because it is very efficient. It is efficient because of the safety and security of the maritime environment which is enabled by a shared global value for the safety of life at sea and for the rule of Law – be it Admiralty Law, International Law, Commercial Law, or the Regulations for Prevention of Collision at Sea.

## RULES BASED ORDER

What we regularly refer to simply as the ‘rules-based order’ is actually a complex and sophisticated fabric of treaties and laws, all enabled by nations and organisations intent on behaving in a way that supports this rules-based order.

This good will and ‘good order at sea’ is important too for the security of communications – 99% of which passes through undersea cables – and for the fair use of marine resources which are crucial for many nations in the Indo Pacific.

For decades we have derived these freedoms and our national wellbeing gains from a status quo of almost universal acceptance of, and adherence to, the United Nations Convention on Law of the Sea.

*We all know that is no longer the case.*

Freedoms in the maritime domain in the Indo Pacific can no longer be assumed. Sovereign ships and aircraft operating in international waters and airspace are being followed and harassed in contravention of established norms.

## COMPETING CLAIMS

Competing claims of sovereignty over maritime features – including some with no legal basis for a sovereign claim – have been decided and enforced unilaterally.

And those nations who are reliant on these freedoms which have been eroded – nations from Western Europe to the Indo Pacific – are taking steps to update their insurance – and assurance – policies, by developing and acquiring increasingly potent military forces.

There is also greater uncertainty caused by the impact of climate change – more frequent and intense natural disasters and rising sea levels. The international system has also been rocked by impacts of the Covid pandemic – especially impacts on the movement of goods and people across international...and national...borders.

More recently, the Russian invasion of Ukraine and consequent impact on global food supplies is a demonstration of two things.

One: that disregard for international law, for accepted norms of behaviour, has immediate and direct consequences for millions of people.

And two: millions of people affected are spread far beyond the theatre of war. Our globally connected maritime trading system operates for the benefit of us all.

But it is global, and disruptions have real world consequences that ripple across the entire system.

In summary:

- our economic well-being is dependent on ‘transit activity’ on and below our surrounding seas, and;
- we are also dependent on adherence to the international rules-based system to sustain the peaceful and prosperous use of the sea by all nations, and;
- adherence can no longer be assumed, and;
- neither can our economic wellbeing.



Figure 4: HMAS ONSLOW (SSG 60) Oberon-class alongside at the Australian Maritime Museum.



Figure 5: HMAS SHEEAN arrives in Devonport, Tasmania Apr 2022 (Image POIS Andrew Dakin).

## NATIONAL INTEREST

*It is a truth that our economic wellbeing IS our most Vital National Interest.*

In the context of Vital National Interest:

**that which cannot be assumed, must be assured.**

Vital National Interests enable our way of life and everything we value. And the principles, infrastructure and systems that underpin it must be protected and assured.

The change to our security environment is occurring despite our desires. This is not a change we, Australia, elicited or chose.

But it is one we must consciously contemplate and adjust to.

Against this backdrop the design, roles, employment and deployment of our Navy and Defence Forces are again coming into sharp relief.

This deterioration in the maritime security environment is now the catalyst for a re-evaluation of our Nation's ability to assure the operation of our trading system, to protect the vital instruments of our economic wellbeing, and to deter contemplation of threats to it.

And this is why our Nation is conducting a Defence Strategic Review (DSR) – a review I welcome and support whole heartedly as we collectively contemplate the implications of our changing environment and the ways and means by which we will assure and insure our ongoing wellbeing as a Nation.

## A WORLD IN CHANGE

The world is changing. The centrality of our trading system and maritime capabilities to our economic well-being is coming into increasingly sharp relief, as uncertainty in the security environment increases.

And the importance of the Indian Ocean's role in assuring our economic wellbeing is increasing – as evidenced by our collective attendance at this conference and by the arteries and veins depicted on the slide behind me.

Finally, I submit that defence and protection of our vital infrastructure is but one role we must re-evaluate and optimise for.

We must also deliver capability to respond to threats in a manner that gives pause to potential aggressors. In the event that conversations between nations become violent, Nations must have partners and capability to disrupt and degrade the economic wellbeing of anyone who would threaten ours, because it is ultimately the nation that best sustains its economic wellbeing during conflict for the longest, that emerges the strongest.

*But that is perhaps a topic for another day. ■*



Figure 6: HMAS FARCOMB (SSG74) Sails into Albany, WA, to Remember WWII Submariners (image Navy).

# WHAT IS TO BE DONE? [1]

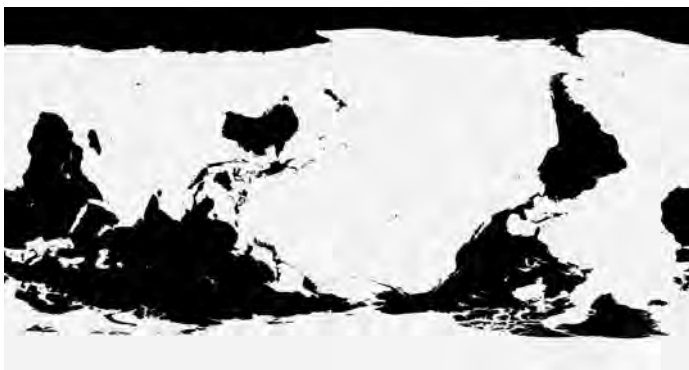
By Dr Neil Baird and Dr Simon Reay Atkinson

As we are slowly becoming aware of the dangers threatening us from at least one dictator, strongly entrenched in power to our north, perhaps it is time we threw Lenin's question back to prepare us for the depredations of all dictators. So, we should ask: "What is to be Done?" in the sense of what Australia should and can realistically do to protect its people from such malevolence.

## INTRODUCTION

V. I. Lenin posed this rhetorical question in 1902 in the introduction to his book of the same name. [1] Little did the then contemporary world know where Lenin's musings would lead it in less than twenty years. Nor did the world have any idea where the equally crazed ambitions of another denizen of St Petersburg, who by coincidence shared Lenin's first name, some ninety years later.

There are many coincidences in history and the behaviour of murderous dictators over the millennia has exhibited many of them. Since Lenin wrote those words, 120 years ago, Australians have suffered from dictatorial depredation on several occasions including the present. On none of those occasions was Australia adequately prepared for the damage the dictators concerned would cause it. It is most definitely not so prepared now.



A World Turned Upside Down – Global Chart Centred on Midway; not Rome (More Sea than Land)

Over the years *The NAVY* has continually and thoughtfully prescribed responses to the geostrategic threats facing Australia [*The NAVY passim*]. The difference now is that, for the first time since World War II, the threat appears to be real, immense and imminent. Given the parlous state of our defences, and our Covid-19 battered economy, it has become urgent that we rapidly, sensibly, practically and economically boost them very significantly.

*So, what is to be Done?*

## STRATEGIC CONTEXT

*Wolfpolitik* was first identified by Reay Atkinson and Bogais [2] from Yaqing Qin's (2016) [3] *Relational Theory of World Politics* as a rejection of the global rules-based order through a dynamic policy of 'world order from a hundred competing rules': or 'Let a Hundred Rules of World Order Contend' (让世界秩序的百条规则抗衡). *Wolfpolitik* can be summarised as:

We wish to deny no one access to our new silk road (our one belt and one road), but we demand in return control over our own sovereign identities and claims and interests in space and the global commons. [2]

我们不想让任何人远离我们的新丝绸之路(我们的“一带一路”),但作为回报,我们要求控制我们自己的主权身份以及对太空和全球公域的主张和利益

*Wolfpolitik* is underpinned by three conjoined grey-zone political, economic, sûreté (PES) strategies [4], identified by *The NAVY* in 2016. [5] Namely:

1. *The New Silk Road*, comprising an Economic Belt and Maritime Silk Road, also known as 'the Belt & Road, or One Belt and One Road (一带一路), or OBOR Strategy'.
2. *The String of Pearls* (珍珠串) strategy, incorporating China's First (essentially the Nine-Dashed Line) and Second Island Chains and;
3. *The Dragon's Spear* (龙的) strategy, incorporating the Chinese Motte, Keep, Bailey, Mote (reclaimed islands), and Moat (the SCS and ECS).

*When it comes time to hang the West,  
they will sell us the rope. [6]*

The current U.S. administration may have inadvertently contributed to the current disorder in three connected ways:

- A. Through Executive Orders on *Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis* and *Tackling the Climate Crisis at Home and Abroad*, cancelling the XL pipeline permit and pausing new oil and natural gas leases on public lands – so making the U.S. (and the Global West) more energy dependent; while strengthening the hand of other (mostly illiberal) energy suppliers;
- B. National (grand) strategic 'failure of duty, allowed for a quick Taliban takeover of Afghanistan and a botched withdrawal that left hundreds of Americans and tens of thousands of Afghan partners behind'. Seen by many friends and allies to represent a strategic defeat of the U.S. – potentially much worse than Vietnam: "the United States will have to deal with the fallout of this failure for years to come". [7]
- C. President Biden seemingly signalling to Russia in January 2022 that a "minor incursion" of Ukraine might be permissible. [8]

The failure to adequately indicate to Russia the likely response to its "war" on Ukraine, C., may have emboldened Russia to undertake the attack as soon as the Winter Olympics ended. Notwithstanding, the impact of the war on energy prices and security (noting that the U.S. was less energy self-sufficient due to A.) – in addition to related matters of grain and fertilizer production – has contributed significantly to inflation.

## POLITICAL ECONOMIC SÛRETÉ

*"It's the economy, stupid" [9]*

The world remains a carbon economy – with coal production and use increasing over the last three years. Including in Western Europe. Without further damaging the economy and industry, locked-in carbon reduction targets may act to keep energy costs (and inflation) high; reducing the value of budgets accordingly. They might also reduce the competitiveness of local industry – just at a time when Australia is looking to grow its sovereign capability in key strategic industries, including shipbuilding.



'Incontestably in the Crosshairs' – A Pox on All our Houses [2]

Russia, while being impacted by economic sanctions, continues to punish and restrict energy supplies to Western Europe, is seeing its energy income (in US Dollar priced Roubles) boom. Further "fuelling" the costs of its war. One U.S. response to high fuel prices in July was to go cap-in-hand to the Kingdom of Saudi Arabia, apparently to request increased oil production. KSA increased supplies marginally – allegedly by buying more oil and gas from Russia. Not increasing production. Punishing the U.S. and the Global West for A. (and B.). In Europe, having closed down its nuclear power production facilities (Germany), or allowed them to age without replacement (UK and France), the response has been to increase the use of coal and gas – both acting to increase carbon output. All this occurring before the European Winter, when all indications suggest that Russia will further tighten its energy noose. It is to be hoped that the European, NATO and EU has a strong neck. [10] But hope is not a plan...

Energy security, costs, and inflation are inevitably linked – as they are to climate change policy and carbon reduction. It is not simply about Russia and the invasion of Ukraine. Inflation at 7% means \$100 halves in value every 10 years and is worth \$75.00 in four. At 7% inflation – noting Defence Cost Inflation (in peacetime is considerably higher) – a Defence Budget of \$50B in 2022, would be worth about \$37.5B in 2026, and \$24B in 2032. All the more reason to spend today and in the next 4 years, while the sun still shines and the dollar still goes further.



AUSTAL Built USS COLARADO (LCS 4) and USS INDEPENDENCE (LCS 2).

## INDUSTRIAL CONTEXT

Naval shipbuilding, weaponry and ammunition manufacturing and the logistics and infrastructure pertaining to them have, since the 1970s particularly, become the victims of significant political opportunism mostly because Australia's political leaders have been unable or unwilling to distinguish between warfare and welfare.

Shipbuilding projects, particularly, have seemingly been allocated largely on the basis of perceived sociological need in particular federal electorates or groups of electorates. Proven shipbuilding efficiency, or the opposite, has largely been ignored in such allocations in favour of attending to electoral vulnerability. The waste of taxpayer money and defence preparedness time has been shameful. The too close connection between pandering to electorates and the support of the seemingly much over-favoured corporations has potentially been negligent.

Most recently, the AUKUS nuclear submarine deal has been presented by politicians, of both sides, as the solution to all our defence problems. Apart from their very lengthy delivery times, rational thought will conclude that, at best, they will only represent a partial solution. There is much more that needs to be done. We would be very foolish to rest on "future" nuclear submarine laurels.

Further, the overall shipbuilding management or oversight approach by government, especially Defence, has been destructive and enormously costly. Oversight has been inefficiently intrusive, interfering and delaying which, when combined with practically endless 'variation' demands have made Australian naval shipbuilding disappointingly slow and needlessly expensive.

## LEARNING FROM HISTORY?

The first author has an enduring recollection of visiting the NQEA shipyard in Cairns in 1983. It was then building the *Fremantle-class* patrol boats for the RAN. He asked the shipyard's managing director, Don Fry, "what the price of the boats would be?" The answer was "about 11 million dollars". Rather taken aback, he asked why? The immediate response was, "See him and him and him", pointing to several young lieutenants and lieutenant-commanders wandering around ostentatiously carrying clip boards. "They just get in the way and waste time and money", Fry explained. Asked how much a *Fremantle* would cost a commercial customer, the response was, "About four million dollars. That, it seems, has largely been the tragic reality of Australian naval acquisition for the last forty years at least.

Given their often bitter experience over the past forty years, it is unsurprising that Australia's world-class commercial shipbuilders are reluctant to deal with Government except with the insurance of very heavily 'padded' prices. Neil Baird has discussed the problem with several leading shipbuilders. They all gave similar answers to the effect that it simply isn't worth dealing with Australian governments.

Australian commercial shipbuilders and naval architects are the world leaders in the construction of fast, durable and very economical aluminium vessels. They successfully and very competitively export their products practically everywhere. One, Austal Ltd, has been successfully building ships for the United States Navy for years and, while it has built vessels for the RAN and Border Force, they, in dollar terms, have been much smaller projects than those Austal has undertaken satisfactorily for the USN.

## WORLD CLASS

Australia's globally renowned naval architects, too, have developed alongside its current generation of commercial shipbuilders who have largely evolved from its fishing industry via fast ferries and offshore service vessels to patrol boats and logistics support craft. Indeed, an Australian firm of naval architects designed the very effective 'platforms' of the PLA Navy's impressive high-speed catamaran missile craft, the *Houbei-class*. [11]

That, of course, raises the embarrassing question as to why the University of New South Wales was permitted to close down/move to Canberra its world-renowned naval architecture school, thus effectively closing it. Do we really want our future naval architects to be managed by the dead hand of bureaucrats from the major maritime port of Canberra? If we do, we are almost certain to never again see the kind of world leading innovation that flowed out of the UNSW until 2018.

This is the kind of illogical, inefficient and previously wasteful background to the country's naval acquisition problems. So, 'what is to be done' to solve that enormously important problem? There are many potential solutions but none of them will be achievable without first overcoming the heart of it all which is the completely erroneous, counter-Federation (and constitutional) cultural belief that 'Canberra knows best'. That belief has been proved comprehensively to be so wrong for so long – rammed home during the Covid-19 pandemic – that it is incomprehensible that so few of our politicians are aware of that vital reality.

From Federation, until about 1980, Australia did relatively, compared with today, well with its naval acquisitions by benefit of a mix of mainly imports and, sometimes, well-organised local construction. We did not always choose the most appropriate ships and effective weapons, but we did acquire some useful and effective ones that largely did the job. Of course, we did not then attempt to build submarines. Mostly, but not always, delivery times and prices were acceptable and, thanks to our fortunately very effective great power diplomacy, we remained reasonably safe despite a close call in 1942.



Japanese Submarine TAGEI first of the AIP TAGEI-class.

Another very important factor in that relative success was the involvement of some of our greater military, industrial and construction 'brains' such as General Sir John Monash, John (Job Crew) Bradfield CMG and BHP boss Essington Lewis CH during wartime and other emergencies. Lewis and Bradfield, with the support of the Australian Shipbuilding Commission/Board (ASB), effectively, pushed a young Canberra Inc. and its newly minted bureaucrats aside and ensured that Australia got the best bang for the buck as quickly as possible. [12]

## WORLD WAR II

Shipbuilding during World War II, generally, was notably successful because ship production, planning and management was largely not in Canberra and mostly disaggregated across states and in civilian, non-bureaucratic, hands.

The success of the *Bathurst-class* minesweeper/corvette construction programme was a notable example of what could be achieved by reducing to a minimum the interference of Canberra's 'dead hand' and by minimising the unnecessary complexity of the vessels themselves. Some 60 of the locally designed ships were built in a number of yards for the RAN and RIN. Even their engines and complete propulsion systems were constructed locally. [13] They were simple and unglamorous *utility-ships* but they served us very well.

- During World War II some 160 new merchant and naval vessels and 36,000
- smaller vessels and ancillary craft of 160 types were built in Australia.
- The latter were built under the control of the Small Ships Division of the ASB.

Some were built by established yards such as Halvorsens, Norman Wrights and Bowdens in Sydney and Brisbane but others drew on the production line skills of companies like Ford Motor Company, General Motors Holden, Slazenger (tennis racquet manufacturers) and Concrete Constructions. Most were wooden craft and ranged down from 125-foot cargo vessels through 112-foot Fairmiles, 73-foot SDBs, 63-foot ASR boats, 40-foot workboats and 38-foot crash boats to 8-foot plywood dinghies.

Of the larger vessels, three *Tribal-class* destroyers were built at Cockatoo Island; 12 River Class frigates, 4 at Mort's dock, 2 at Cockatoo, 1 at Williamstown, 1 at Evans Deakin, and 3 at Walkers; Cockatoo built 2 Escort vessels (Sloops); and, 60 Cockatoo Docks designed *Bathurst-class* corvette/mine sweepers of which 36 were for the RAN, 20 for the RN but with RAN crews and 4 for the Royal Indian Navy. They were built: 14 by Mort's Dock, 8 by Cockatoo, 8 at Williamstown, 4 at Whyalla, 11 at Evans Deakin, 7 by Walkers, 7 by Poole and Steel, and 1 by the State Dockyard at Newcastle.



HMAS JERVIS BAY (II) chartered by the RAN on 14 May 1999 for a period of two years.



Essington Lewis (image NPG).

Sir John Monash.

Four boom defence vessels were built at Cockatoo, six oil lighters were built by Mort's Dock, Evans Deakin and Poole and Steele. Mort's Dock also built 2 Battle Practice target vessels and three 94-foot diesel tugs. Poole and Steel also built another of the tugs. All the minesweeper/corvettes and frigates had high levels of Australian content including propulsion systems and armaments. [14]

## NAVAL ACQUISITION SINCE THE 1980S

Once the war had been successfully concluded, government and the naval focused shipyards slipped rapidly back to their old bureaucratic and inefficient pre-war habits. Productivity declined markedly and thus set the pattern for the following eighty years. [15]

Even worse, however, our naval acquisition programmes have run badly off course since 1980. While, obviously, some acquisitions, such as the *Hobart-class* air warfare destroyers have been relatively successful, if very expensive, but the majority, seemingly, have not. The initial *Collins* [now a successful submarine following significant post-build investment and rework] and [cancelled] *Attack class* submarines and, more recently, potentially the *Hunter-class* frigates are unfortunate cases in point. On past performance, any attempt at local construction of foreign warship designs in defence yards is likely to be fraught with cost and time over runs and political and bureaucratic meddling.

These continuing naval shipbuilding failures have been disastrous for both our defence preparedness and our economy. We have been indeed fortunate that, until recently, the geostrategic situation has been relatively benign. Now, of course, it is not as we are increasingly learning almost daily. So, given our increasingly dire circumstances, 'what is to be done' to reform our naval shipbuilding and weaponry acquisition processes? How do we ensure much faster delivery of naval assets at significantly more reasonable prices? How, in other words, do we obtain more bang for our bucks more quickly? How do we, as *The Australian* newspaper's Greg Sheridan so aptly put it, "Prepare for warp speed in aid of the nation's defence"? [16]

## NEW THINKING

*Quantity has a Quality all of its Own* [17]

First, a mechanism must be devised, modelled on the World War II solution, to remove the naval acquisition process as far from Canberra and Defence as possible and to simplify the ships and weaponry required. Such as advanced by Rensis Likert for the rebuilding of the US Pacific and Merchant Fleets after Pearl Harbour. At least we also have a proven model to work with in our World War II experiences.

Co-incidentally, in his latest ASPI essay, former Department of Defence economic adviser Rob Bourke, largely supported, clarified and expounded upon Greg Sheridan's lengthy article. [18] Bourke focused on affordability and timeliness in defence acquisition. He effectively and decisively refuted the political conventional 'wisdom' of the local construction imperative. His detailed workings clearly illustrate the folly of that for larger vessels, at least.

Apart from demonstrating the pure economic incoherency of persisting with a seemingly 'welfare before warfare', policy of local construction, Bourke sensibly pointed out Australia's serious shortage of time in which to prepare for war. The simple fact is that we have very little, especially for the construction of submarines and larger surface vessels above OPB size.

Of course, Australia could easily, quickly and economically build smaller ships and boats locally. There are numerous active, competent, innovative, imaginative and commercially successful Australian shipyards that build for local and foreign commercial customers. They, as their predecessors were during World War II, are quite capable of quickly developing sophisticated smaller ships. Indeed, unlike their WW II predecessors, they now benefit from the presence of world leading local designers and their own world leading construction capabilities. Not that many of the defence decision makers in Canberra appear aware of that. The 'Canberra cultural cringe' – in thrall to foreign cultures – prevails.

So, the obvious solution will be an appropriate mix of local and foreign construction aided by a minimisation of bureaucratic interference. Order from companies with proven designs and strong records of reliably building good products. With a minimalist approach, specify exactly what is needed and the time in which it must be delivered. Then, as commercial customers have done successfully for millennia, let the builder get on with the job with a minimum of interference and no expensive featurism disguised as "variations".

Obviously, as the authors have propounded previously (*The NAVY passim*), another major imperative is the need to have as many eggs in as many baskets as possible. We should have as many smaller and more heavily armed vessels as we can afford. They should be obtained from as wide as possible spectrum of both local and foreign suppliers as quickly as possible.

## DOOMSDAY BOOK OF AUSTRALIAN SHIPBUILDERS

It would obviously be particularly sensible if Defence or, preferably, any future successor to the Australian Shipbuilding Board/Commission had a detailed audit and inventory of Australian shipbuilders and repairers (as for our Cyber and IT industries). It is almost certain that the government has no such inventory and, even if it did, it is even more unlikely to be accurate or up-to-date. Much the same applies to an inventory of appropriate, preferably Allied (QUAD (including Japan and India), 5-Eyes, Five Power Defence Arrangement (including Singapore), AUKUS, ANZUS, and Australian-based Training Partnerships, such as with South Korea (Japan, Singapore and the U.S.)), reputable foreign shipbuilders and weaponry manufacturers.

Similarly, it is unlikely that Defence would possess an accurate recent inventory of the potentially useful civilian vessels, such as fishing boats, ferries, tourist and dive boats, OSVs and motor yachts, that could quickly and economically be acquired and converted for naval use if necessary. There are plenty of them. What about coastal cargo vessels, though? That inventory would be quick and easy to record. There are only a dozen of them! However, an obvious, quick and cheap solution to the coastal cargo conundrum would be the use of tugs and barges. We have some but not enough in the event of a major war. Barges, apart from carrying cargo, could make strong and easily constructed and moved missile-launching platforms, used





John Bradfield.

with devastating effect during WW2 in the Pacific and European theatres. Who owns them and where are they, though? Does anyone other than the authors know? Here we might learn from recent Ukrainian experience in the Black Sea.

A very significant problem facing local construction of all vessels is a supply of engines and propulsion systems. We manufacture propellers and shafts and some waterjets here but not much else. No diesel engines. No outboard motors, no AZDs. We should be organising to build MTU, MAN and Yanmar diesel engines here under license. The same applies to azimuthing drive units for tugs and the like. It would be wise to purchase a substantial quantity (at least 2,000 units) of 300 horsepower diesel outboard motors. In single and multiple installations, they could serve a multitude of purposes on workboats, muxe-floats, landing craft, patrol, assault and rescue boats and much more. They provide the ultimate in durability, flexibility and replace-ability.

So, too, with fuel. Far too little attention seems to have been paid to our very limited supplies of diesel and jet fuel – and local, dispersed refining capacity. That activity, also, should be privatised.

Without greater attention to that, much of the above would be irrelevant. Perhaps we should be dusting off our old steam engine drawings. We have huge reserves of coal!

There is much that can and ought to be done quickly and relatively cheaply to improve our naval defence readiness. It can all be done much faster than it has been for the past four or five decades. The problem, as always, is developing or inspiring the political will to make the necessary practical decisions no matter how distasteful they may be. An even bigger problem to be overcome is the vital need to train the bureaucracy to refrain from interfering, second-guessing and wasting time.

## MILITARY & MARITIME – ARMY & NAVY

Anyone who has looked at a map of Australia in a world atlas would be well aware of its geographic strengths and weaknesses. It is, of course, surrounded by a mostly wide but sometimes shallow moat, particularly to its north. That certainly will prevent, or at least inhibit, most likely military incursions or attacks. That is an important strength. However, that strength is somewhat reduced by the vast length of its sparsely populated coastline. [19]

A more detailed examination of the vast array of available and usually very accurate naval hydrographic charts of Australia's surrounding seas reveals much more useful information and inspiration. [20] Even more so, does a close perusal of the *Admiralty Sailing Directions* that so accurately describe the coasts of Australia and its neighbouring countries.

The knowledge gleaned from such studies must make any strategic planner think of several likely scenarios for attempted attacks on or invasions of Australia and the appropriate responses to them. Simply reading the daily news offers a useful guide as to who and how effective any attackers or invaders effecting such incursions are likely to be. Presently, the villain is most likely China and its likely approaches fairly obvious.

Unless an attacker wants to travel further to attack Australia's generally more adversely weather affected and densely populated southern coasts, which seems unlikely, the action is more likely to take place in the tropical north. Obviously, because of the distances involved, any direct attack would require the support of larger warships, aircraft carriers, LPDs, destroyers, LSTs and the like, together with tankers and other logistics ships – prime targets for our submarines! An incremental, island-hopping attempted invasion and its defence, however could very effectively involve generally smaller craft. [21, 22]

Either way, the coasts of Australia and its immediate neighbours are generally shallow and severely indented. That offers benefits and dis-benefits.

## FORWARD DEFENCE – STRATEGIC THINKING

So, assuming our most likely aggressor will be China, again, 'what is to be done'? Do we focus on home or forward defence or a judicious mix of both? If forward defence, how far forward? Where, too, does 'home' begin? These questions must be carefully answered and quickly. The kinds of ships, boats and weaponry we need depend very much on those answers.

Given that Australia is likely to be heavily out-spent, out-shipped and out-gunned by an aggressive China, it would seem appropriate to concentrate more on very effective and especially economical home defence and focus on the region within the 'arc of instability' to our north. The shallow-ish Coral, Arafura and Timor seas and Torres Strait are our moats. They could effectively and economically be defended if our existing and readily available future defence resources were to be used intelligently. [23]

Further, if we were to build more 'all-weather' roads into our tropical northern coasts on Cape York Peninsula, Arnhem Land and The Kimberly, those areas could be well and comparatively economically served by truck mounted missiles and, even, aircraft and drones using parts of those roads as airfields.

Whatever submarines, either diesel or nuclear, we acquire could usefully provide our forward defence component working with our AUKUS, QUAD and other allies. In a major war our existing surface fleet of conspicuous and inadequately armed destroyers, frigates and LHDs will be prime targets and tragically unless up-armoured may go the way of half our World War II cruiser, destroyer and sloop flotillas. In reality, the *Hunter Class* project (although considered by the NLA to be the best design then available) needs critical review and funds allocated and re-directed to:

- the prompt purchase of modular-weaponised (commercially-hulled) escorts, and;
- heavy lift mother ships to support and extend the existing *Collins-class*, or;
- a complete modern diesel AIP submarine from Korea or Japan. [21, 22, 24, 25]

Until any 'nukes' arrive, such AIP-boats would provide Australia's most effective forward defence provided, of course, sufficient fighting-thinking commanding officers can be recruited and trained to drive them.

The valuable and effective geographic 'moat' will best be defended by a mix of smaller, locally constructed, missile boats, truck-mounted missiles, drones and aircraft operating from many more advanced strips around the coasts. Mines, too, can be quickly and

very effectively laid by a variety of readily available and easily converted craft such as fishing boats and OSVs. [21, 22]

Australia has substantial high-quality fleets of the latter. Attention should be paid to the establishment of an expanded RAN Reserve, particularly of officers, to operate such craft. Again, this was done effectively in World War II in Australia, Britain, Canada and the United States. [26] Indeed, China is doing so very effectively now with its enormous Maritime Militia. [27]

Many senior regular ADF officers and APS may seem to take a rather dim view of reservists. Reservists have proved useful in the past and will do so again. They only require modest amounts of training in naval doctrine, communications, procedures and tradition – the Navy way – to fit in. Mostly and drawn from seagoing communities,

they are likely to be superior and more experienced ship and boat handlers than many naval officers. A reinvigoration of the Australian Naval Cadets and a revival of the RANR and RANVR – including provision of Reserve-crewed (modular) Ships – could be achieved relatively rapidly and economically.

To be better prepared, Australia needs urgently to ensure that Canberra's *jalousies* be removed. Its defence, particularly its maritime defence can be achieved effectively and economically by augmenting, strategically disaggregating and dispersing nationally and reforming much of its unproductive and slow conventional 'wisdom'. Reform of the sclerotic and unimaginative thought processes that are entrenched in current peace-time thinking is both urgent and vital. ■

### About the Authors:

**Dr Neil Baird** has spent 43 years as a global maritime publisher, commentator and event organiser as co-founder, with his wife Rose, of Baird Publications, now [www.bairdmaritime.com](http://www.bairdmaritime.com). He has been a commercial fisherman, briefly a naval reservist, a journalist, and, always, a keen yachtsman. He has been involved with the NLA for more than 30 years, including serving several years on its Federal Advisory Council with the late John Strang AO. Currently, he comments on matters maritime, tends to his investments, and is writing a maritime history of Australia.

**Dr Simon Reay Atkinson** is an adj. Emeritus Professor at Sydney University, Centre for International Security Studies, chief engineer and Naval Reservist. He is published widely on strategic, defence economics, and engineering design; including modular warships, submarines and cyber.

### REFERENCES AND NOTES

- [1] See V. I. Lenin, What is to be done? Attributed to Vladimir Ilyich Lenin (as N. Lenin) 1901.
- [2] See Reay Atkinson and Bogais.
- [3] See Qin.
- [4] Sûreté encompassing security, safety, assurance and trust.
- [5] See Blake, 2016
- [6] Paraphrased from an attributed but not confirmed comment by Lenin (1905), ascribed by Aleksandr Solzhenitsyn in a speech delivered in Washington, June 30, 1975
- [7] See U.S. Senate Committee on Foreign Relations, Minority Report, "A Brief Assessment of the Biden Administration's Strategic Failures during the Afghanistan Evacuation", February 2022, see: <https://www.foreign.senate.gov/imo/media/doc/Risch%20Afghanistan%20Report%202022.pdf>, accessed Aug 2022.
- [8] "Its one thing if it's a minor incursion and then we end up having a fight about what to do and what not to". Jan 2022.
- [9] Presidential candidate Bill Clinton to President George Bush (snr) in a presidential debate, 1991.
- [10] "Some chicken, some neck" was a retort by Winston Churchill, in Ottawa, 30 Dec 1941, in reference to the sneering comment made by Marshal Philippe Pétain, leader of the collaborationist Vichy regime, that "in three weeks England will have her neck wrung like a chicken".
- [11] See [www.bairdmaritime.com](http://www.bairdmaritime.com) *passim*.
- [12] Neil Baird, *Australia and the Sea*, Chapter 7.
- [13] *Australia and the Sea*, *op cit*.
- [14] Evans, Vaughan et al, *Shipshape Downunder*.
- [15] Baird, Neil, *Australia and The Sea*.
- [16] Sheridan, Greg, *Prepare for warp speed...*
- [17] *Attr. Joseph Stalin*.
- [18] Bourke, Rob, *Budgets, the economy and the Defence Strategic review*.
- [19] Sheridan, Greg, *Prepare for warp speed...*
- [20] Bourke, Rob, *Budgets, the economy and the Defence Strategic review*.
- [21] See Reay Atkinson, 2022.
- [22] See Blake, 2019.
- [23] *Discussed in 'Industry' above*.
- [24] See *The NAVY (2022) Flash Traffic*, NLA Critical Submarine Debate, Vol 84, Iss 3, (Apr-Jun), pp. 16-18.
- [25] See Baird and Blake, 2021.
- [26] See, for example, Jones, Julia, *Uncommon Courage...* for the British approach.
- [27] Erickson, Andrew S. et al, *China's Maritime Gray Zone Operations*.

### BIBLIOGRAPHY

- Anon, *Admiralty Sailing Directions: Australia Pilot Volumes 1, 2 and 3, Pacific Islands Pilots Volumes 1 and 2, and Indonesia Pilots Volumes 1, 2 and 3*, UK Hydrographic Office, Taunton, UK, ongoing.
- Anon, *Charts of Australian and nearby seas*, Australian Hydrographic Service, Canberra, ongoing.
- Anon, *The Times Atlas of the World: comprehensive Edition*, Times Books, London, 1993.
- Baird, Neil, varied and extensive commentary in [www.bairdmaritime.com](http://www.bairdmaritime.com), *Ausmarine*, *Professional Fisherman*, *Ships & Shipping* and *Work Boat World* magazines since 1978 and various issues of *The NAVY*.
- Baird, Neil, and R.C. Blake, *Future [Attack-Class] Submarine - A Stocktake*. *The NAVY* - Journal of the Navy League of Australia, 2021. Vol. 83, No. 2, Apr-Jun: pp. 7-12.
- Baird, Neil, *Australia and the Sea: An Encyclopaedic Maritime History*, A yet to be published manuscript, Sydney, 2022.
- Blainey, Geoffrey, *The Steel Master: Essington Lewis*, Macmillan, Melbourne, 1971.
- Blake, R.C., *Flash Traffic: The Chinese Motte; Keep; Bailey; Great Sand Wall – Dragon's Point Strategy*. *The NAVY Journal of the Navy League of Australia*, 2016. Vol. 78 No.1, Jan-Mar.
- Blake, R.C., *The Emergence of Zombie Fleets (And BMW Builds Minis in Oxford)*. *The NAVY Magazine of the Navy League of Australia*, 2019. Vol. 81, No. 2, Apr-Jun: pp. 13-18.
- Bourke, Rob, *Budgets, the economy and the Defence Strategic Review*, Australian Strategic Policy Institute, (ASPI 174), Canberra, August, 2022.
- Bussert, James C. and Elleman, Bruce A, *People's Liberation Army Navy: Combat Systems Technology, 1949-2010*, The Naval Institute Press, Annapolis, 2011.
- Cole, Bernard D. *The Great Wall at Sea: China's Navy in the Twenty-First Century, Second edition*, The Naval Institute Press, Annapolis, 2010.
- DeTugny, Matthieu, *Shaping a Better Maritime World*, Bureau Veritas, Paris, 2022.
- Erickson, Andrew S. and Martinson, Ryan D. (Eds), *China's Maritime Gray Zone Operations*, The Naval Institute Press, Annapolis, 2019.
- Evans, Vaughan, Jeremy, John C. and Campbell, Robert, *Shipshape Downunder: Shipbuilding in Australia since 1788*, Unpublished manuscript, Sydney, 1990.
- Jones, Julia, *Uncommon Courage: The Yachtsmen Volunteers of World War II*, Adlard Coles, London, 2022.
- Lenin, Vladimir Ilyich, *What is to be Done? Burning Questions of Our Movement*, Foreign Languages Press, Peking, 1971.
- Lim, Yves-Heng, *China's Naval Power: An Offensive realist approach*, Ashgate Publishing, Farnham, UK, 2014.
- Qin, Y., *A Relational Theory of World Politics*. *International Studies Review*, 2016. Volume 18, Issue 1, 1 Mar: pp Pages 33-47.
- Reay Atkinson, S., *An Army for all Regions*. *The NAVY, Journal of the Navy League of Australia*, 2022. Vol 84, Iss. 1, Jan-Mar: pp. 22-28.
- Reay Atkinson, S., & J. J., Bogais, *Quo Vadis Australia*. *The NAVY Journal of the Navy League of Australia*, 2018. Vol. 80 No.2, Apr-Jun: pp. 10-15.
- Ross, Andrew T, *Armed & Ready: The Industrial Development & Defence of Australia, 1900 – 1945*, Turton & Armstrong, Sydney, 1995.
- Sheridan, Greg, *Prepare for warp speed in aid of the nation's defence*, *The Weekend Australian*, Sydney, August 27-28, 2022.
- Stevens, David, *In All Respects Ready: Australia's Navy in World War I*, Oxford University Press., Melbourne, 2014.
- Swanson, Bruce, *Eighth Voyage of the Dragon: A History of China's Quest for Seapower*, The Naval Institute Press, Annapolis, 1988.
- Veitch, Michael, *Australia's Secret Army: The Story of the Coastwatchers, the Unsung Heroes of Australia's Armed Forces During World War II*, Hachette, Sydney, 2022.
- Veitch, Michael, *Turning Point: The Battle for Milne Bay 1942 – Japan's first land defeat in World War II*, Hachette, Sydney, 2021.



## ZZZ: CHIEF OF NAVY'S FLEET INTENT

On coming into office in July, Chief of Navy, Vice Admiral Mark Hammond, AM – as is traditional (see ZZZ: Chief of Navy's Fleet Intent, AUKUS, Flash Traffic, *The NAVY*, Vol 83, No. 4, Oct-Dec 2021) – released his Fleet Intent for the final quarter of 2022.

CN stated he was looking forward to serving with and for Navy, as Navy collectively strives:

*to meet our Nation's expectations during these extraordinary times.*

CN is focussed on meeting Navy needs as the custodian of this role; united with Navy's pursuit of meeting the needs of our Nation.

### CN Intent:

*to ensure Navy is aligned from the strategic level in Canberra to the deckplates.*

It will remain true:

- that the **security** and **prosperity** of all Australians is the primary reason that our Nation builds, sustains and employs Naval Power.
- that our seaborne and undersea **supply chains are the very lifeblood** of our economy, and underpin our way of life.
- that to **defend** the rules-based order that supports and enables this global system – across, over, and under the maritime domain – is to **defend** Australia.

*In this context our purpose  
– our mission – is clear.*

### Our Mission:

*to prepare Naval Power in order to enable the joint force in peace and war.*

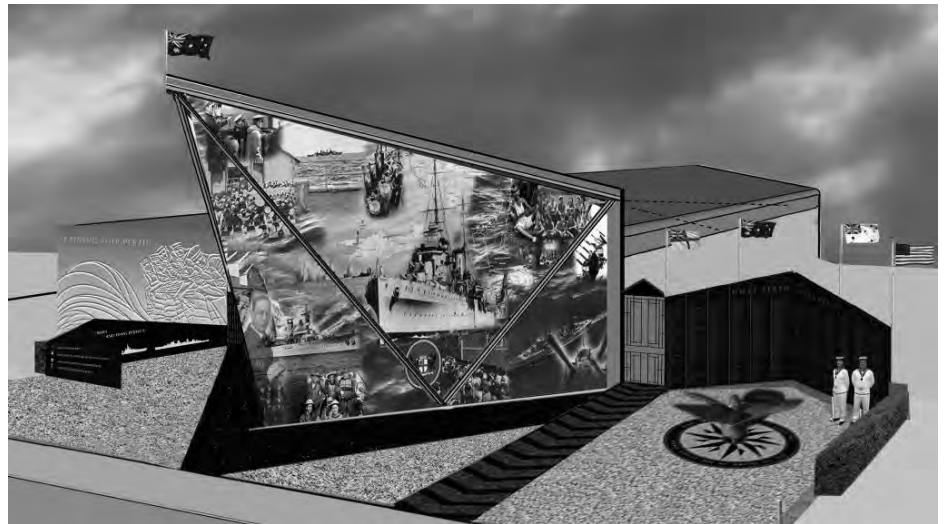
### Our Priority:

As part of the Joint Force, we must be prepared to:

- **deter** actions against our nation and our economic lifelines, and;
- **optimise** our capability and capacity to **defend** Australia and our national interests if called upon to do so.

Since assuming Command of the Royal Australian Navy, CN has been focused on listening and learning – engaging with Government, the Secretary and CDF, his peers across Defence and the Public Service, partners and Allies, and most importantly our sailors and officers.

Concurrent with CN's appointment, the Government has commenced a *Defence Strategic Review* to consider the future structure of the Australian Defence Force, in an evolving strategic context.



HMAS-PERTH (I) Memorial site has now completed section 1.

This review is now well underway and, in due course, this will likely lead to a new statement of Defence priorities and missions. Navy will then update our priorities. CN will then review his Intent.

Notwithstanding the need to await the Strategic Review findings, some things will not change.

In the final quarter of 2022, Navy will focus on:

1. **Sustaining:** Delivery of battle worthy Naval Power for operations.
2. **Optimising:** Mastery of our profession, our platforms, and ourselves.
3. **Accelerating:** Delivery of lethality enhancements to our fleet, and removal of unnecessary work.
4. **Our Leadership:** We will operate as a team that understands, values, invests in and empowers our people.

At sea and ashore Navy will achieve results with and through our people – not at their expense. Humbly, respectfully, professionally, selflessly, as a team – dedicated to serving Australia.

### STATEMENT OF POLICY

Sir,

Thank you for your long contribution to Navy and paper 1, this issue: *Beyond Transits*.

The NLA and *The NAVY*, *inter alia*, at the **Statement of Policy**, p. 4:

- **Notes** that through geographical necessity, Australia's **prosperity**, strength, and safety depend to a great extent upon the security of the surrounding seas and island areas, and on unrestricted seaborne trade.
- **Supports** the maintenance of a Navy capable of **effective action** in hostilities and advocacy for a build-up of the fleet and its afloat support elements to ensure

that, in conjunction with the RAAF, this can be sustained against any force which could be deployed in our area of strategic interest.

- **Supports** a strong and identifiable Naval Reserve and Australian Navy Cadets organisation.
- **Supports** the development of Australia's defence industry, including strong research and design organisations capable of the construction and maintenance of all warships, submarines and support vessels in the Navy's order of battle.
- **Believes** the ADF *must* be capable of protecting commercial shipping both within Australian waters and beyond, in conjunction with allies.
- **Believes** that the level of both the offensive and defensive capabilities of the RAN should be strengthened.
- **Promotes** Defence self-reliance by actively supporting defence manufacturing, research, cyberspace, shipping, transport and other relevant industries.
- **Advocates** maintaining urgent research and action to remedy the reported serious naval recruiting and retention problem.
- **Advocates** Government initiatives for rebuilding an Australian commercial fleet capable of supporting the ADF and the carriage of essential cargoes to and from Australia in times of conflict.
- **Urges** the strength and capabilities of the Army (including particularly the Army Reserve) and Air Force be enhanced, and the weaponry, intelligence, surveillance, reconnaissance, cyberspace and electronic capabilities of the ADF be increased, including an expansion in its UAV capability.



Then CN Vice Admiral Michael Noonan, AO, RAN, inspects the guard at commissioning of HMAS ENCOUNTER.

The NLA motto is to “Keep Watch”. This it has done steadfastly and loyally – through thick and thin – since 1900. It has been a lonelier watch since 2016. Quoting Lord Horatio Nelson,

*Time, [timing and tempo] is everything; five minutes make the difference between victory and defeat.*

“We” may have run out of time.

The NAVY believes – like Nelson – “that Australia and Australians will sooner forgive an officer for attacking an enemy than for letting it alone”.

If *The NAVY* has erred in the past, it is for steering fearlessly toward the sound of the guns, wherever they be found – not out of any disloyalty to Navy, Country, Commonwealth, or King

With very best wishes

*Aeneas*

For Editorial Board

## ALIGNING PRIORITIES IN THE INDO-PACIFIC: DEPUTY PRIME MINISTER

In his CSIS Briefing in Washington 9 July 2022, Deputy Prime Minister and Minister of Defence Richard Marles stated, *inter alia*:

- Two years ago, to the credit of the former government, they undertook the defence strategic update, which observed pretty significantly:  
*for the first time, in 2020, it was observed that Australia was within the 10-year threat window.*
- There had always been an assumption in strategic planning in Australia that we would be given 10 years ‘notice if anybody wished to do us any harm.

- All of us here understand the challenges we face:
  - A military build-up occurring at a rate unseen since World War II;
  - the development and deployment of new weapons that challenge our military capability edge;
  - expanding cyber and grey-zone capabilities which blur the line between peace and conflict, and;
  - the intensification of major-power competition in ways that both concentrate and transcend geographic confines.
- For the first time in decades, we are thinking hard about the security of our own strategic geography:
  - the viability of our trade and supply routes;
  - the preservation of an inclusive regional order founded on rules agreed by all, not the coercive capabilities of a few;
  - (in particular) the use of force or coercion to advance territorial claims, as is occurring in the South China Sea, and its implications for any number of places in the Indo-Pacific where borders or sovereignty are disputed.
- The global nature of security explains why Australia is standing with Europe at this crucial time.
- Russia’s war against Ukraine is not just a brutal attempt to subjugate a sovereign state, it’s a calculated application of violence intended to roll back the post-Soviet order from one founded on sovereignty and self-determination to

ungoverned by the rule of might and force – where only great powers are truly sovereign and where the choice of smaller states is to be either a vessel or an enemy.

- AUKUS is more than just a capability program for nuclear-powered submarines. We have made good progress on AUKUS advanced capabilities, and Intend to keep that momentum going.

## KAKADU BRIEFING

Chief of Navy in a detailed press briefing for *Exercise Kakadu* (see ABC News, Andrew Greene, 9 Sep), noted:

- It is now standard practice for Australian warships to be closely shadowed by the PLA Navy when they transited through the South China Sea.
- “Routinely, whenever we have a ship up there, there is a PLA Navy vessel within sight, quite often following us around. That is unusual behaviour”
- “I don’t know another navy that does that. It’s a departure from what we would call normal maritime behaviour, but it hasn’t stopped us from conducting our operations.”
- Interactions with the People’s Liberation Army (PLA) remained safe and “professional”.
- We are where we are – I am yet to see an Australian ship invited to a PLA Navy exercise.

## Taiwan Strait Transits

- Some have occurred in the “last couple of years” but these “are political decisions so, if directed, we’ll continue to do them”

## On AUKUS

- “I would listen to whatever the President of the United States and their authorised spokespersons say on this because I think there’s going to be lots of different opinions in lots of different pockets and there’s certainly no shortage of opinion and commentary out there.”

## MORE DÉMARCHÉ

In addition to China’s 14 Demands on Australia, CCP Fourth Level Foreign Minister, Wang Li demanded that Australia “...reshape a correct perception of China, and reduce negative assets and accumulate positive energy for improving China-Australia relations”. The extraordinary new démarche include:

- First, *stick* to regarding China as a partner rather than a rival.



NLA SA IPP Dean Watson presenting a carved wooden crest of HMAS ENCOUNTER II to CMDR McDonald-Kerr.

- Secondly, *stick* to the way we get along with each other, which features seeking common ground while reserving differences.
- Thirdly, *stick* to not targeting any third party or being controlled by any third party.
- Fourthly, *stick* to building positive and pragmatic social foundations and public support.

There seems to be a lot of *stick* in the CCP demands of Australia, and not much carrot.

The previous fourteen demands – that have not gone away – include that Australia:

1. **Stop** future criticism of the CCP by MPs
2. **Stop** critical reporting on China and the CCP by the Australian media.
3. **Stop** funding Think Tanks and research critical of China, the CCP and [concerns about] Xinjiang
4. **Stop** allying with the US and spreading disinformation regarding Covid-19
5. **Stop** surveillance into Chinese Press Corps activities in Australia
6. **Stop** future criticism of China regarding cyber attacks
7. **Remove** Foreign Interference legislation
8. **Remove** legislation preventing individual States and Territories from joining the One Belt & Road
9. **Remove** National Security cancellations of 10 Chinese Investment programmes;

10. **Remove** the ban on Huawei Technologies;
11. **Remove** political interference creating barriers for entry and visa restrictions
12. **Desist** from non-littoral representations to the UN on the South China Sea
13. **Desist** from any future criticism of CCP actions in Xinjiang, Hong Kong and Taiwan and cease spearheading the crusade against China;
14. **Desist** from future politically manipulated calls for independent international enquiries such as into Covid-19

In some respects, these types of non-negotiable demands are not dissimilar to those placed on Ukraine by Russia since before 2014.

China and the CCP now have eighteen demands against Australia. Agreeing to any one of which would mean surrendering Australian sovereignty, and sovereign independence. It is to the credit of the new Government that its position has, if anything, strengthened against these unprecedented demands of an independent, freedom loving nation state.

### CHIEFS OF DEFENCE

At the end of June, the Government announced the promotion and appointment of the next senior leaders of Navy, Army and Air Force:

- Vice Admiral Mark Hammond AM RAN to be the Chief of Navy for a period of four years.
- Lieutenant General Simon Stuart AO DSC to be the Chief of Army for a period of four years.
- Air Marshal Robert Chipman AM CSC to be the Chief of Air Force for a period of four years.

The Government also and somewhat puzzlingly – notionally to provide continuity – extended the Chief of the Defence Force, Angus Campbell AO DSC, and the Vice Chief of the Defence Force Vice Admiral David Johnston AC RAN, by two years. The Chief of Joint Operations (CJOPS), Lieutenant General Greg Bilton AO CSC, was also extended by two years.

To some degree, the extensions may suggest a reluctance to make hard choices? Noting that the Brereton Report still hangs over Army (and CDF), this also gave the new Government the opportunity to lance the boil. Which honourable resignations, on the release of the Brereton report and a number of missteps, might have avoided. Retention also, perhaps, places CDF and Army in thrall of the politicians – unable to exercise vital small-P manoeuvre space on behalf of Government.

### NEXT SHOTS?

For Navy, its next shot at CDF will not now be at least until 2024 – twenty-two years after the last Navy CDF left the job (Admiral Chris Barrie, AC).

#### *Does it matter?*

Potentially after this length of time, Yes. It suggests that Navy has not been in focus (or vogue) and / or that it is not good enough. There may be shades of both – noting the operational focus on RAAF and Army the last two decades, referred to in Mark Schweikert's paper, paper 3. However, as time goes by it also may become an issue – which might also constrain the correct decisions, or selections. The British Royal Navy had almost twenty years between RN Chiefs of Defence Staff (2003-2021).

For Army, lack of movement across two Army held General and Lieutenant General positions (CDF and CJOPS) – will mean that a generation of Army officers will miss out on appointment to two-Star and above. The ripple effect of the extensions will cast long-career shadows.

The net effect of the two-year holding pattern may ultimately work against ADF and the Government. Preventing change, exactly at a time when generational change and a new dynamic could be vital.



Divers Down Inspecting Damaged Prop Shaft of HMS PRINCE OF WALES (R09).

## COMMISSIONING CEREMONY FOR HMAS ENCOUNTER

Navy League SA Division was honoured to be invited to the commissioning ceremony of HMAS ENCOUNTER III (formerly shore establishment Navy HQ-SA).

The previous HMAS ENCOUNTER, Port Adelaide, was decommissioned in 1994. Vice Admiral Michael Noonan, AO gave a stirring address at his last official engagement in South Australia, before retiring as Chief of Navy in June.

Rear Admiral Mark Hill AM CSC RAN and former VCDF and Chief of Navy Vice Admiral Ray Griggs AO CSC RAN (Rtd) – a strong supporter and contributor to the NLA and *The NAVY* – who both served at HMAS ENCOUNTER, Port Adelaide, together with Warrant Officer of the Navy Deb Butterworth, were in Adelaide to take part in the Commissioning and congratulate Commander Emma McDonald-Kerr ADC RAN, on her command as Commanding Officer HMAS ENCOUNTER III (Keswick, SA).

Note: Like the current Chief of Navy, Vice Admiral Ray Griggs joined Navy as a Seaman, in Ray's case as a Radio Operator (RO).

## ANNUAL NAVY LEAGUE LUNCH – SOUTH AUSTRALIA DIVISION

The South Australian Annual Navy League lunch was held at the Combined Ex Services Mess, ANZAC House, Torrens Parade Ground, Adelaide with a complement of 62, enjoying "Sunday Roast" finishing with "Port" of the day!

It was a great privilege and pleasure to welcome the NLA SA Patron, the Honourable Frances Adamson AC, Governor of South

Australia and Mr Rob Bunten, and introduce them to the executive committee and guests. Her Excellency and Mr Bunten have thrown themselves into South Australian activities, including the area of Defence.

The Commanding Officer of HMAS ENCOUNTER, Commander Emma McDonald-Kerr, ADC RAN of the newly commissioned HMAS ENCOUNTER III was the very popular guest speaker. Only having "taken the weight" as CO last December, Commander McDonald-Kerr has become very much part of the defence community in Adelaide.

The NLA SA Division welcomed guests from Naval Association SA, The WRANS SA Association, HMAS ENCOUNTER Association, Australian Navy Cadets, Seven Seas Club, Australian American Association, Royal Caledonian Society, Victoria League for Commonwealth Friendship, English Speaking Union, Royal Society of St. George, and special guest Sue Moorhouse, President Legacy South Australia and Broken Hill.

## NAVY LEAGUE OF AUSTRALIA WESTERN AUSTRALIA

The annual AGM was run in concurrence with the HMAS PERTH Memorial Foundation AGM. Luke Simmons from BAE Systems gave an overview of all three PERTH's but with an emphasis on the recently completed Anzac Midlife Capability Assurance Program AMCAP upgrade to HMAS PERTH III (FF 157).

Section one of the HMAS PERTH Memorial is about to be completed It is hoped section two will commence shortly.

The design of the HMAS PERTH (I) Memorial is based on an emotional response on the

part of NLA WA, the Foundation, the artists, within an extremely practical methodology that seeks to blend both the existing structures and the dramatic development of these into a cohesive entity, that will serve as a fitting memorial to commemorate this major historical tragedy in the history of Western Australia but crucially, to also represent the whole of Australia, from whence these men (and their families ) emanated : 681 in total, for that fatal last voyage.

The approach pioneered by NLA WA and the HMAS PERTH Memorial Foundation, is two-fold:

1. to encapsulate and express the horror and pain of this tragedy and to do so, on a site that has physical restrictions and a pre-ordained purpose;
2. that of a training facility containing memorabilia relating to HMAS Perth (I) (II) and (III) and a meeting place, for the veterans and their connections.

Located in East Fremantle, the HMAS PERTH Memorial was formally opened by the previous Governor (and NLA WA Patron), Hon Kim Beazley AC KStJ in February 2021. It is well worth a visit if you are ever in WA.

Donations can be made at:  
[hmasperth1memorial.com.au](https://hmasperth1memorial.com.au).

## GREENWICH STATION

The announcement that the RN is moving back into experimentation and developing an experimental mindset – something that has not existed in the RN since the 1990s – came with the announcement of the commissioning of the Experimental Vessel *XV Patrick Blackett* (X01), see back page. This represents an important step for the RN as it returns to be a thinking, not just fighting Navy – like the RAN.

One step back was represented by the failure of HMS PRINCE OF WALES (R09) external coupling; connecting the outer propeller shaft to the drive shaft from the propulsion motors. Shortly after leaving Portsmouth for U.S, the propeller broke free of the coupling – leading to damage to the rudder, as the propeller drove astern. Reasons for the coupling breaking are not yet confirmed. As a result, HMS QUEEN ELIZABETH (R08) has had to replace the PRINCE OF WALES as NATO Flagship and for vital trials and exercises off the U.S. east coast. ■





## WHERE IS THE DETAIL?

Prior to coming into Government, Labor was hard over on establishing a *Strategic [Merchant] Fleet*. The PM, as Leader of the Opposition, stated in early 2022:

An Albanese Labor Government will enhance Australia's economic sovereignty and national security by creating a Maritime Strategic Fleet to secure our access to fuel supplies and other critical resources, even in times of global instability.

These vessels will be Australian flagged and Australian crewed.

We expect the vessels will be privately owned and operate on a commercial basis, they will be available for requisition by the Defence Forces in times of national need, whether that be natural disaster or times of conflict.

As a first step towards establishing a strategic fleet, an incoming Albanese Labor Government will appoint a Taskforce to guide it on the establishment of the Fleet as quickly as possible. The Fleet is likely to include up to a dozen vessels including tankers, cargo, container and roll-on-roll-off vessels.

Since coming into power, the Albanese Government has worked assiduously to hold a jobs and skills summit, promote the Voice, and set up various commissions, reviews; including a Minister for the Republic (also Assistant Minister for Defence and Assistant Minister for Veterans' Affairs – now removed from Cabinet) and a Defence Security Review. As of writing, there is no sign of a *Strategic [Merchant] Fleet Task Force*.

The NAVY previously submitted that Bill Shorten, Minister for the National Disability Insurance Scheme and Minister for Government Services – should lead such a Task Force. Perhaps Mr Shorten could also become Minister for the Merchant Navy – or, even more progressively – Secretary for Navy. Combining both roles?

There is a need, as Australia mobilises, to reflect political-economic-security positions, alongside military and public servant counterparts. As for Army and RAAF.

The RAN will be imbalanced without a healthy Australian Merchant Navy; and the Merchant Fleet similarly. Together, they should form a critical part of the Defence Strategic Review and its recommendations.

## MUA PLAN

The MUA proposes that “with political leadership, sensible reforms will boost the nation's economic and security interests for decades to come”.



The MV Maersk Honam on fire 2018 still burning after 6 weeks.

The MUA 10-Point Plan includes:

1. Creating a national strategic fleet of large commercial vessels to move goods between Australian ports and support new industries.
2. Reforming the licencing system, closing loopholes that allow foreign vessels to dominate domestic trade.
3. Providing incentives for Australian companies to own and operate Australian-flagged vessels through better design of shipping tax incentives.
4. Creating a level playing field with other forms of transport by bringing support for shipping into line with that provided to rail and road.
5. Reforming the maritime crew visa system to create employment opportunities for Australian seafarers in the maritime industry.
6. Restoring balance through reform of maritime safety and navigation laws.
7. Re-establishing the Maritime Workforce Development Forum to develop strategies to reverse the decline of maritime skills.
8. Establishing a national shipping industry reform council to drive industry changes and oversee the development of a strong maritime industry in Australia.
9. Establishing a national shipping infrastructure fund to revitalise Australian shipping and ensure a level playing field between freight transport modes.
10. Providing policy coordination for port and supply chain development in Australia, including a tailored fees and charges regime that supports Australian shipping.

Noting full union representation at the jobs and skills summit, it is to be hoped that

the MUA ‘in office’ will be as strident in support of Australian mariners, as it was in opposition.

## SEALED BOX FIRES

In recognition of a long-felt need to address fires in containers a consortium of technical expertise is being established. (see Michael Grey, Baird Maritime, 15 Sep 22).

A serious fire in a container occurs every five weeks while there are many more that can be locally dealt with.

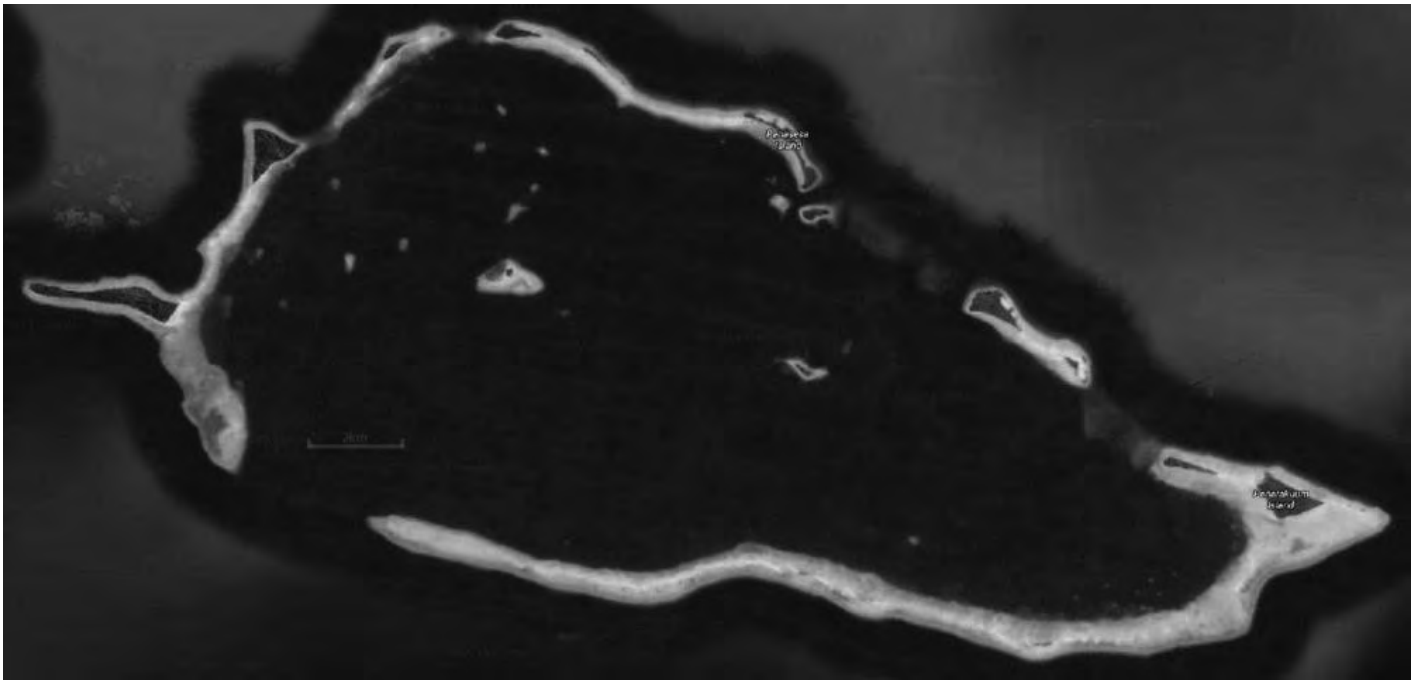
The European Maritime Safety Agency, the Danish Institute of Fire and Security Technology, along with Bureau Veritas and the Research Institute of Sweden and the University of Southern Denmark are collaborating to deliver a *Formal Safety Assessment Study* on containership fires. It will be completed by the beginning of 2023.

The issue of fires in containers has increased significantly in recent years. The problem is also associated with scale both in terms of the size of container ships, and the number of small sealed box-containers they are carrying. While some of these containers are fitted with fire-fighting facilities and monitors; the majority are not. Nor is it always clear what is being carried, or how it is packed. Whereas Merchant Navy officers in the 1980s had clear oversight, responsibility, and knowledge for cargo handling and storage, this no longer applies. Again, largely for reasons of scale and economy. There has also been an increase in the containerised movement of chemicals and even charcoal – notoriously prone to overheating in damp conditions. There is also indication, as costs rise, that shortcuts are being taken – notwithstanding an increase in illegal and / or unregistered movements, particularly in the Far East. ■

# MAKE READY IN ALL RESPECTS

By Mark Schweikert

China is being very subtle in its quest for control of the Pacific, and thus to isolate Australia from the US. So, alarm bells should now be ringing loudly in Canberra as the 'shape and deter' part in our "Shape, Deter, Respond" Defence strategy has failed.



A satellite image of The Conflict Islands. Located on the eastern tip of PNG and north of the Coral Sea they are close to our major merchant shipping lane, uninhabited, easily developed and currently up for sale. They bear a striking resemblance to the many Spratly Island clusters that China has fortified and militarised in recent years in the South China Sea.

## INTRODUCTION

In the Solomon Islands it would seem life is imitating art. In the very popular 1980s British TV Sitcom 'Yes Prime Minister', there was a scene in which the UK's Chief Defence Scientist convinces 'the egregious PM Jim Hacker' that the Soviets would never mount a frontal assault to control western Europe, but rather use "salami tactics". Small continuous slices to gain a foothold in places without committing to serious nuclear conflict or attracting a military response.

The recent signing of a security/cooperation deal with China and the Solomon Islands, the suspension of an upcoming election and the subsequent banning of all naval ships is a concerning 'salami slice' style of development to say the least.

## SCENARIO DEVELOPMENT

With China still on the move there are three possible scenarios in which the ADF, and ergo our Navy, could be involved with. The first, SCENARIO 1, is a war over Taiwan.

After a first strike by China to either degrade the Taiwanese military or through straight-out invasion, our government will be faced with the decision to send forces, or not, to help with Taiwan's defence and/or recapture. As part of a US led operation, Navy would be well placed to contribute, although casualties could be expected. Our weapons, tactics and logistics fit neatly with the US Pacific Fleet, with the combined forces providing the mass, and thus safety, that our navy can't achieve alone (strength in numbers).

The second scenario, SCENARIO 2, could involve an Australian-led and initiated pre-emptive air and/or amphibious assault on a near neighbour, similar to what the US did in Grenada in 1983, to either oust an embryonic foreign military presence in our region, or forcibly occupy an area to deny it to an enemy. Either would eventually require some high-end warfighting, which Navy is currently only marginally equipped to handle on its own, particularly if US forces are engaged elsewhere.

The third, SCENARIO 3, is a hot Cuban Missile crisis style scenario wherein China covertly begins, and succeeds, in deployment of anti-ship ballistic missiles, long range anti-aircraft missiles, and possibly long-range bombers, ships, submarines and marines to an island nation as part of a 'regional security and stabilisation' mission dubiously supported by local political figures. Their expulsion would be a matter of national survival for Australia.

## SCENARIO 3

In Scenario 3, this could not only involve a superficially agreeable nation, but also the numerous uninhabited island atolls littering the near Pacific. For example, the Conflict Islands to the North of the Coral Sea and on the eastern tip of PNG are currently up for sale. The Conflict Islands comprise 21 uninhabited, undeveloped, pristine, freehold islands linked by a common and sheltered 600m deep lagoon covering a total landmass of 375 Hectares (925 acres).





HMAS BRISBANE showing her very innovative Phalanx mounts for her deployment to the first Gulf War. (RAN)



A German Type-122 class frigate with two Mk-49 RAM launchers on either beam at the aft end of her helicopter hangar roof. A similar fitment to our AWDs would give them an extra 42 anti-ASM rounds and improve their survivability to swarming attacks.

The *Conflict* which first charted the islands in 1886. The main island in the group, Irai, has capacity for a 3,000-metre sealed runway. With China having considerable experience in occupying and then fortifying small island atolls, these make for an interesting strategic dilemma for Australia given they are only 1,000km off our shore and see around 30 large merchant ships movements to and from Australia every day.

To complicate matters, with no aircraft carrier capability to project sea control and isolate the captured island/island nation in scenario 2 and 3, the ADF will have to rely on 3rd party basing for its airpower. Historically, this is usually hard to come by unless the host nation is willing to endure the ire of the other belligerent (or charges 'through the nose' for the privilege). For this, French New Caledonia may be the best jumping off point to projecting power into the South West Pacific. However, logistics support and basic apron space for parking lots of military aircraft safely and securely are currently non-existent.

## QUALITY V QUANTITY?

For want of a better term, Navy has not had the luxury or privilege of modern combat experience as their counterparts in Army and Air force. Army has had extensive ground combat experience in Iraq and Afghanistan with corresponding influences and improvements in their soldier equipment ensemble, armoured vehicle capability and doctrine development.

Similarly, Air force has conducted fighter combat operations in the second Iraq war and more recently in Iraq and Syria against ISIS forces with live ordnance and potential Russian military engagement the further they got into Syria, which had to be prepared for. Not to mention the logistics missions in the face of a surface to air threats.

This is not to criticise Navy by any stretch. Navy has been very busy (and professional) in the exercise space and in the border protection role. But these activities tend not to hold the same value in gaining insights into a future state on state conflict, or motivation to drive serious and innovative capability improvement (to paraphrase Winston Churchill, 'nothing is more motivating than being shot at').

To illustrate, the *Hobart-class* Air Warfare Destroyers (AWDs) represent an opportunity for some innovative capability improvement i.e., quality. Many would argue that their current weapons configuration is more of a training capability than high end warfighting capability (despite being a massive step up in their own right).

With only 48 vertical launch cells and one Phalanx close in weapon system, the idea of a swarm attack by Anti-Ship Missiles (ASMs) doesn't appear to be a serious consideration. The Falkland's Conflict example of 1-2 missiles being fired each time at a screening warship

is no longer relevant. An enemy knows that swamping the defences and/or potentially running the magazines out is the way to victory.

## INNOVATION

Navy has form for innovative warship improvement. Take for instance the accelerated upgrade Navy did to the DDG HMAS BRISBANE on its deployment to the first Gulf War in 1990. Radar absorbent material, two Phalanx weapon mounts and numerous other improvements were applied in quick time given the realisation she could not survive in a proper missile aged shooting war. Some good old Aussie lateral thinking came to the fore and improved the vessel to make it the most potent DDG in the world. This same level of lateral thinking could easily transform our AWDs into the high-end warfighting ships many in the lay community (and Government) think they already are.

At the risk of solutionising, there are examples that could be used to inform a capability enhancement of the AWDs.

The USN appears to be moving away from the SM-2 anti-aircraft missile and onto the SM-6. The SM-6 has been mentioned in previous Defence White Papers as a priority for Navy but nothing seems to have eventuated.

The SM-6 is a maritime warfare game changer. It can be targeted by 3rd party platforms, such as an Airborne Early Warning & Control (AEW&C) aircraft (like our E-7 Wedgetail) or even by a F-35 JSF operating completely passively. The fire-and-forget SM-6 has a range of approximately 250kms. Its latest version can even engage ballistic missiles in their terminal stage of flight. This being very important given the effort China is making in the anti-ship ballistic missile space.

Similarly, the USN seems to be moving away from Phalanx and onto RAM and SeaRAM. RAM, which stands for Rolling Airframe Missile, is a fire and forget Infra-Red and Radio Frequency homing missile specifically designed for the anti ASM role. It comes in either a Mk-49 21-cell launcher or on a Phalanx Block 1B mount in an 11-cell 'cassette' in place of the 20mm gatling gun.

Adding two 21-cell Mk-49 launchers to the AWDs at the aft corners of the helicopter hanger (see image of German Type 122 for example) in place of the single Phalanx, and removal of the bridge wing 25mm guns and replacing with a Phalanx in each spot would be the capability and survivability enhancement the AWDs critics have been screaming for.

In fact, a fleet wide replacement of Phalanx for SeaRAM, with additional systems to ensure fit out of all ships, would provide a considerable increased measure of hard kill defence against numerous salvos of ASMs. Noting that our most vulnerable and important ships, the Canberra-class LHDs, still have no hard kill ASM defence whatsoever.

## ARMING UP

The next most obvious and immediate lever Navy and Government can pull on this is to arm the new *Arafura-class* patrol boats akin to what they were originally designed with as a baseline capability (at the time of printing the sixth ship started construction). That is, a long-range air and surface search radar, a 57mm Bofors automatic cannon for light watercraft, aircraft and ASMs, radar and electro optical guidance to control the gun and four Exocet class ASMs (the recent purchase by Navy of the Norwegian NSN to replace Harpoon would make a perfect addition).

While not a war winner in their own right, several ships operating together or in company with other warships provide a force multiplier no enemy amphibious task group or surface action group could ignore.

This is of course a minimum lethality improvement fit out. Other modular systems such as ISO style mission containers embarking mine hunting and Anti-Submarine Warfare (ASW) equipment could be embarked in the stern mission bay, as could a light helicopter to further improve the capability.

While the *Arafura-class* helicopter pad is unable to take the weight of a SH-60R Seahawk ASW helicopter, it could take a variety of smaller and cheaper armed utility helicopters to complement and supplement the precious Seahawk force for all manner of non-ASW tasks. A marinized version of the Airbus H-145M armed light attack/utility helicopter comes to mind.

The concept of a corvette patrolling our waters was successfully demonstrated during WW II with the 60 *Bathurst-class* ships. Many of these saw effective active service and enabled larger units to be free from the more mundane yet necessary local security and coastal ASW role. They also conducted escort for larger convoys. A continuous build of an up gunned *Arafura-class* could be a nation saver.

## SI VIS PACEM, PARA BELLUM

'Si vis pacem, para bellum' is Tacitus' Latin adage translated as,

If you want peace, prepare for war.

Australia currently spends 2% of its GDP on defence. This is a peacetime 'maintenance' budget at best. Not a military build-up/war preparation budget. Fighting a war generally attracts a budgetary figure closer to 20-30% of GDP in order to win - remembering winning a war is how death, horror and destruction are untimely stopped.

Israel currently spends 5% of its GDP on defence and hasn't faced a major state on state threat for decades. Singapore spends 3.2%, Brunei 4.1%, India 2.9% Korea 2.8% and US 3.7%. These are good indicators of where Australia's budget for its security should currently stand given the recognised deterioration in our strategic situation.

For further context, in 2021-22 Australia spent approx. \$35.4b on defence, \$41b on COVID, \$90b on health and \$201.7b on social security. [1]

## PARA BELLUM

To avoid a war, an overt display of preparation for war is now required, beyond the standard exercise schedule, to demonstrate we are serious about maintaining peace in our region. Not just the purchase of a silver bullet the Minister can get a photo op with,



The Brunei Navy KDB DARULAMAN with HMAS PARRAMATTA. The KDB DARULAMAN is similar to the RAN's *Arafura class* patrol boats with the exception of being armed. With an electronics and armament upgrade, the *Arafura-class* could make for very effective destroyer escorts, providing a force multiplier effect to the larger ships of a task group by fulfilling the inevitable medium to low end warfighting tasks required. (Defence)

or long-term plans for some 'you beaut bit of kit', but widespread capability and organisational improvements of the legacy force. We actually have the makings of a noticeable 'Respond' capability, it just needs tweaking (and money and lateral thinking).

If we don't have much time to prepare for war, then trying to introduce new major capabilities now will only affect the defence budget negatively. Enhancement of the existing capabilities, regrettably, should be the focus with future capabilities coming in at a very close second priority. Even enhancements to current capability, as mentioned above with the AWDs and *Arafuras*, will take time.

## ORGANISATIONAL CHANGE

### — PERSONNEL & CULTURE

Another necessary measure for the preparation for war is change. Change is always uncomfortable and at times attacks culture and the feeling of security, particularly for high certainty conservative organisations like militaries. With a real war looming this has to be put aside for the good of the nation and the lives of our people.

People are still the core of a nation's ability to fight wars. For Navy and the wider ADF, the 3 Rs are Recruitment, Retention and Reserves. The previous Government announced a massive recruitment and personal ceiling increase program for the ADF. As people are a major drain on a budget, it will be interesting to see if the new Government's Strategic Defence Review (SDR) will retain the policy. Navy has suffered from the 3 Rs in the past even to the point of basing capability decisions on its projected human resource pool and bill.

Retaining our people who have had the training and experience is vital as 'the old salts' will be needed to impart their knowledge and encourage a warfighting demeanour. Retention also has a strong capability and economic element.

One way to practise retention, and recruitment to a lesser extent, is Reserves. Keeping experienced personal in the system for calling out when needed will allow for a qualitative surge force.



An 11 round SeaRAM on a US Navy *Arleigh Burke* class destroyer. Mounted on a Phalanx Block 1B in place of the 20mm gun, SeaRAM is being adopted by many navies as a step-up improvement on Phalanx. (USN)

## THE FOURTH AND FIFTH (?) ARMS

An underappreciated force multiplier effect for Navy and the ADF is the Australian Public Service (APS), professional service providers, contractors, industry & cadets.

Too many expensively trained, highly experienced and valuable uniformed personnel are sailing a desk in Canberra in a job that doesn't need high end warfare training. Experienced APS and ex-ADF people can provide for this. It's a cultural issue that the uniformed side of Defence needs to come to terms with. So many times, has the phrase been uttered around Canberra 'they won't believe it coming from a non-uniformed person'. Granted there are still roles that require/necessitate uniformed trained experience. But a re-think is required to get the tax payers value for money in providing more teeth from the tail without affecting the tail (the analogy being that the tail is actually very important to maintain balance and equilibrium for the rest of the animal to function properly)

The Cadet corps provides two useful attributes for Navy. Many cadets end up joining the service they were cadets in, thus providing a steady stream of informed and mature recruitment that might not otherwise had been there. They also provide for that societal 'vote' for Navy and Defence, which we will touch on later.

## HISTORY IS OUR BEST ALLY FOR INNOVATION

As mentioned, the historical example of the 60 *Bathurst-class* corvettes with regard to the new *Arafura-class* patrol ships providing a force multiplier effect is not in doubt. But in the scenarios mentioned, our lack of fire power to support an amphibious assault and close combat ashore is dangerously woeful.

Amphibious operations are the most complex and dangerous of military operations. Modern military history has shown that the side that can inflict more heat, blast and destruction will generally win the day.

During the Pacific War, the US Navy invented rocket armed landing craft to pummel the beach and defensive targets before land forces came ashore. These rocket ships have been described as one of the most terrifying inventions of WWII. The most common version carried 792 5-inch rockets. It was said this barrage was equivalent to the firepower of 80 light cruisers or 200 destroyers. So effective was the capability that Japanese forces stopped defending the beach (or practising Anti-Access/Area Denial as academics phrase it these days) but rather established defences outside the range of the rocket ships, inadvertently giving US Marines a safe and stable foot hold to wage the battle from.

The effect of large massed rocket salvos, particularly newer versions with smart payloads and precision guidance, can be seen in Ukraine today with the introduction of the US HIMARS artillery rocket system having a significantly greater effect than the sum of its parts.

A relatively easy and cheap solution to our deficiency could be an Australian designed and built artillery rocket system for our navy. It could be constructed using a standard existing 155mm artillery round fitted with a simple course correcting fuse (available and used by our Army now), mated with a rocket motor and sprinkled with some university level Newtonian physics. There's your first round.

Another 'left field' lateral thinking innovative solution to some of our amphibious fire support issues and defence at sea dilemmas is the F-35B JSF and it operating from the decks of our Canberra-class LHDs. However, readers of this magazine don't need to be convinced



(From L to R) USN 4.5" rockets being inspected before use. They were essentially 4.5" naval shell mated to a rocket motor. (middle) An Australian Army Gunner carrying a 155mm HE round with a GPS guided course correcting fuze. (right) A USN landing ship loaded with 576 5" projectile rockets.

of the efficacy of this. Suffice to say then that it's more of a cultural problem for Defence than an engineering one.

Another glaring innovation omission in our current at sea warfighting capability is Airborne Early Warning. This was a key lesson of the Falklands Conflict, and one that nearly all non-aircraft carrier navies still have not addressed.

**Innovating thinking time** - Australia has spent considerable research and development funds on the CEA Active Electronically Scanned Array Radar (AESA), currently fitted to our Anzacs, being acquired for Army for its land based anti-aircraft missile capability and to be fitted on our Hunter-class frigates. Producing an airborne version of this radar system and installing it on a large helicopter drone such as the USN MQ-8C Fire Scout (a modified Bell 407 which has an endurance of up to 15 hours at 20,000ft), could easily alleviate that over the horizon vulnerability, fully exploit the capabilities of the SM-6 missile and more than likely provide an export product.

Both these innovations (or something close to) would be relatively easy and within reach of current Australian industry capability for which Defence's Innovation Hub has been established to enable development and exploitation of.



The unmanned USN MQ-8C Fire Scout can fly at 20,000ft for 15 hrs. Mounted with CEA AESA radar it could alleviate the perennial problem of attacking aircraft using the curvature of the earth to avoid giving a ship/fleet time to react to an ASM strike. It can also be used to assist with targeting the 250km ranged SM-6 anti-aircraft missile to kill the aircraft before they get into firing range. (USN)

## CONCLUSION

When tax payers were told in 2000 that an East Timor Operation levy would be imposed on their Medicare bill they were naturally annoyed as they had always understood that funding for Defence surely included its operations in the exercise of defending Australia's interests.

Leading up to the second Gulf War in 2002/2003, the Howard government wanted to send a significant ADF contribution. The Prime Minister asked about:

- Leopard Tanks? No, too old not enough protection
- F-111s? No, no self defence capability

To the Government's surprise the much-publicised prized possessions of Army and RAAF that appeared on every public relations and recruitment poster were actually useless.

In these instances, who was at fault? Defence for not alerting Government earlier about the funding and capability deficiencies? Or Government for not asking the right questions about funding or capability preparedness for war? Or the Taxpayers themselves for not taking an interest in the defence of the nation and forcing our political class to act?

Either way, Government and the tax payer expects Defence to be able to do what its paid for, and effectively with no unnecessary loss of Australian lives. Afterall, it's their ADF.

Navy, and Defence, need to avoid the strategic surprises to Government and the people that conflict may bring up. If Navy wants to take this journey of enhancement of deterrence, then it will need the Australian population with them. For as the old saying goes, militaries don't fight wars, societies do. So there needs to be more 'buy in' from the community.

As history has shown, first world liberal democracies tend to only ramp up their military spending and posture when it's too late. The way to enable peace and security (and prosperity) is through changing the perceptions of our politicians, senior defence and naval officers and the public.

*Lasting security takes 'the will'.*

Your Navy League will keep pressing this, as Australian lives are too precious to waste to ambivalence and ignorance. ■

## NOTES

[1] Source: 2020-21 Budget Review, Aust Parliament House Library, Research Branch, Phillip Hawkins. ASPI suggests a 21/22 Defence Budget of \$48.6 Billion (2.11% GDP), however this includes other commitments, such as ASD.

# SUBMARINES: AN AUSTRALIAN PERSPECTIVE

## FIX THE PROBLEM, NOT THE BLAME. IF YOU FIX THE PROBLEM, NOBODY GETS BLAMED!

By Geoff Hawkins

I decided to write this paper after I had calmed down about the “talkfest” and various other announcements and politics. I really hate political point scoring when the subject at hand is the safety and war capability (via a particular platform) of personnel in the ADF.

### INTRODUCTION

*Industry and proficiency pave the way to success.*  
- Pliny the younger.

*Vice Admiral Jonathan Mead AO,*

Chief of Nuclear-Powered Submarine Task Force  
Russell Offices  
Canberra  
ACT

*Dear Admiral Mead,*  
Good luck, Sir  
*Geoff*

Everyone is sick and tired of hearing about submarines; however, a back read of *The NAVY* and various other sources suggests perhaps a paper that simply looks at machinery, engineering and performance might be helpful.

In general terms, I examined AUKUS and what that will mean for the ADF. I have watched and read various media outlets and I am still a bit dazed about how quite well-educated people can think “we are getting missiles” without, it appears, much thought about where those missiles will be launched and/or guided from i.e., the platforms or the lack there-of.

So Mr/s triple degree defence expert; strategist; journalist; I hope you don't think that they will be launched from the factory or my backyard!!!

### INTEGRATED

Everything in defence is integrated and mutually dependent. Everything, works as a team or the parts of a well-oiled machine.

If one part isn't working as it should, the whole is affected, this is especially so in a relatively small Defence force such as the ADF. Its efficiency may eventually drop to a point where it is no longer fit for purpose. If Defence does not work to its optimum efficiency and capability, it means that the defence of Australia becomes an academic rather than practical question. A relatively small Defence force such as the ADF, has far fewer options.

In general terms, the RAN can be considered in terms of two roles:

1. Surface warfare;
2. Sub-surface warfare



Vice Admiral Jonathan Mead AM Chief Nuclear Powered Submarine Task Force.

Both these roles have huge amounts of overlapping tasks for the vessels and crews that are involved in them. All these tasks are of equal importance but may be graded depending on circumstances. It may be possible to agree on two things:

- The fleet must increase – probably double in size of ships and sailors;
- That this needs to happen quickly, before 2030.

### SITUATION

The project, which is on the high end of importance and which doesn't fit this scenario is the *Collins-class* replacement submarine program (previously the *Attack-class*).

The project would not have delivered until 2038, earliest, and the replacement UK/American project may not deliver a new submarine until the 2040s. This will depend on other factors such as – are they being purchased MOTS or built overseas and fitted out here or built here to someone else's design or built here to our design. God help us if it is the latter – that would push it out to at least 2040/2050!!

Currently Australia appears to be going backwards as far as the submarine capability is concerned. If an immediate choice was made and the RAN could be slotted into the production schedule for the RN or USN, it may be possible to shorten delivery time to perhaps 2030/2033, maybe! This may also be too late.

Submarines are a principal part of the defence machine without them the whole may fail. The much talked about LOTE for the *Collins-class* is a mathematical gamble with young lives being put up as collateral for the bet. Technology has improved greatly since COLLINS was designed and built (fabrication started June 1989). We can choose between Air Independent Propulsion (AIP) or Lithium batteries, now. Hydro-dynamics and sensors have also improved.

I am not an engineer – I used to build or repair things that engineers designed. One thing I did learn doing a trade was the phenomenon of work hardening in metals. Anyone who has made their own knife will know exactly what I am talking about. This is where metal, if continually hammered, gets harder and harder, if you don't anneal it during this process it will become more brittle.

All metals have this characteristic (except Mercury because it is a liquid metal). Using copper as an example. Wriggle a piece of copper wire backward and forward over the same point and pretty soon you'll have two copper wires.

A deep-diving a submarine is the equivalent of hammering it over and over again. The hull is submitted to compression and decompression. It is forced through the water which is in fact a stern to bow compression. When descending it is subject to moments of force trying to bend it, and when ascending the same. There are also forces applied when turning. At depth the keel is under more pressure than the fin, surprisingly more in fact.

The pressure hull flexes and moves.

The hull will eventually fatigue and crack. Then you will have an unexplained loss of the boat:

- *KRI NANGGALA (402), commissioned 1981; refitted in 2112 and lost with all hands in 2021.*
- *Or the Argentinian submarine ARA SAN JUAN (S42), commissioned in 1985; undertook a mid-life extension in 2012; and lost with all hands 2017. [1]*

There is a myriad of other things to consider as well, such as shaft seals, tube seals, hatches – the list goes on and on.

Submarine hulls have a life span. The *Collins-class* is reaching its life span. If my information is correct: - HMAS COLLINS was laid down in February 1990, launched August 1993 and completed in July 1996. The final boat, HMAS RANKIN was laid down in May 1995, launched November 2001 and completed in 2003. Given that the boats would



Image of *Attack-class* Submarine Design abandoned in 2021.

have a 25-year life of type, it means that end of life for Collins is 2021 – with the others slowly facing orderly retirement until 2028.

*The first replacement boat should have been laid down in 2014 and completed in 2020.*

Given that engineering processes should have improved and the work force would have had excellent training and experience by then (2020), there would be no reason why eight replacement boats could not have been completed by 2032/2034. Just in time to lay down the first replacement nuclear boat.

If Australia was to start getting diesel electric replacements within the next three years then the *Collins-LOTE* would not be necessary. That would give 15 to 20 years for nuclear to start up and be delivered – 2036 to 2041. The *Collins-replacements* would have to be MOTS to fit that tight schedule.

This is a realistic appraisal of the situation.

## MISSION

The mission can be defined as replacing the *Collins-class* without LOTE as quickly as possible - within 3 years or less so we keep our capability advantage.

Setting the RAN up in the best possible way to have safe, reliable, and capable submarines within this decade while the design, training and background work for the nuclear boats proceeds as quickly as possible aiming for first boats laid down 2030/2032 or before.

## EXECUTION

This will mean that the *Collins-replacement* could be either the Japanese *Taigei-class* or the South Korean *Jangbogo III class*.

Some experts have mentioned the few laid up nuclear *Los Angeles-class* boats that various people have suggested might be leased. Leasing some nuclear boats sounds like a good idea, but I come back to my comments in “situation”. They are laid up for a reason – end of life. The 62 *Los Angeles-class* were commissioned between 1976 and 1996.  $1996 + 25 = 2021$ . That idea is high risk.

This confirms the need to order six (MOTS) diesel electric boats with an option for up to another six if necessary. Older crew members who have no desire to transition to nuclear or who are looking at retirement could continue serving on the new diesel electric boats. Younger crew members (the future) should be starting new boat type/nuclear training ASAP. Inevitably, there may be a mix of the two.



HMAS COLLINS leads Task Group formation Bay of Bengal AUSINDEX 2019 with Indian Navy (Image LSIS Jake Badior).



KSS III submarine ROKNS DOSAN-AHN CHANG on sea trials (ROKN).

## ADMINISTRATION

The main part of the admin will be crew training for the nuclear boats. Having both conventional and nuclear boats might be hard work but it is do-able.

If we are going to build the nuclear boats here, then the option for the second tranche of conventional boats will have to be carefully weighed up.

## COMMUNICATIONS

*Be honest with the Australian people.*

Explain that the *Collins-class*, initially, was not that good an experience either. I remember underwater sound issues and fire control/combat system problems for example. Converting to nuclear is going to be a whole new experience.

The Government needs to talk to the people and involve them and bring them along. It is called Leadership.

Of course, there will be things which are under strict security but nuclear submarines have been around for a long time now. The average person can understand the basics and that will be helpful.

A simple nuclear referendum might be a useful thing – even though it will not affect the boats themselves, it will give the government an idea on how far they can go. And please explain to people what a modular reactor actually is.

## ENGINEERING

**Nuclear Fission** is a process in which the nuclei of heavy atoms are split, under bombardment by neutrons, into two nearly equal parts and a number of additional neutrons. Splitting, or fission, of atoms releases large amounts of energy, mainly in the form of heat. The amount of energy released by a given amount of elements undergoing nuclear fission is many times that which can be released by chemical reaction of substances of the same weight. The two chief fissionable materials used in nuclear reactors and weapons are the isotope uranium235, and the artificially created element plutonium239.

Typically, nuclear reactors harness the heat energy released by nuclear fission to generate steam which in turn powers a steam turbine. The steam turbine can be used directly (through a gearbox) or indirectly, driving a generator which then powers an electrical network or electric motors.

There are other types of reactor such as liquid salt, and the experimental thorium232 sub-critical nuclear reactor. They are beyond the realms of this paper.

The two submarines we are looking at have “modular” pressurized water-cooled nuclear reactors:

- The *Astute-class* have a Rolls Royce PWR 2 which produces steam which drives steam turbines.
- The *Virginia-class* have a General Electric S9G pressurized water reactor which again produces steam which drives steam turbines.

This is basically old technology (steam turbine) coupled to very new, but mature, technology (nuclear reactor) for producing the steam. Instead of burning coal/oil to heat water they are using a nuclear reaction.

*Both reactors are designed to last the design life of the boat without refuelling. 25 to 30 years?*

That is the big point. The down-side is that we have to be able to either: -

- A. somehow reuse the expended fuel, or;
- B. safely store the expended fuel. There will also have to be a safe, covered building where the boats can be dismantled at end of life. The expended fuel will be radioactive.

**Nuclear Fusion** or thermonuclear fusion is a process in which two nuclei of light chemical elements combine at high temperature to form a heavier nucleus and resulting release of energy. This process is the reverse of nuclear fission.

Fusion supplies the explosive energy of the hydrogen bomb and is the principle source of energy of the sun and other stars.

Nuclear fusion has many advantages over nuclear fission and is actually a preferred method of creating energy:

1. A practical fusion reactor will operate safely with no danger of explosion and no production of radioactive wastes.
2. Its primary fuel is non-radioactive. It is easily transported and any radioactivity within the site is kept to a minimum.

The fusion process provides for the direct generation of electricity, thus eliminating the costly heat cycle and wasted heat of electric generating plants.



USS LOS ANGELES (SSN 688) enters Los Angeles Port for city visit.



HMS ASTUTE (S119) image Royal Navy.

The possibility of fusing light nuclei so as to release energy in a controlled and useful way is known as “controlled fusion”. It has been shown that fusion occurs when light atoms are heated to very high temperatures [by LASER for instance].

I refer readers of “*The NAVY*” to the paper written by John Rigby & Paul Sawtell – Developing Naval Air Power Projection Capability [2]. The section titled *Possible Future Energy Source* is highly interesting. Further, if you google “tokamak” you will be rewarded with some useful information.

Fusion has a lot of potential advantages over fission. The technology isn’t quite there yet but it needs to be considered when considering the jump to nuclear submarines.

It may very well be the system of choice for both submarines and surface ships by the time we start building nuclear submarines here.

Certainly, if Australia is designing its own submarines, Fusion needs consideration and the government needs to invest in this capability.

## DECISIONS

*To LOTE or not to LOTE that is the question?*

The answer here is pretty straight – it is crew risky and economically unviable to carry out a LOTE on the *Collins-class*.

It is easier, with less crew risk, and cheaper to buy MOTS (Military off the Shelf) from someone that we can trust and rely on. My bet is the Japanese (as part of the QUAD) but South Korea could also be a contender (who have training facilities in Australia and are supplying Army).

Australia will need to service and maintain these boats here in case there is a giant blow up. The RAN will need a minimum of eight to ten of these boats, depending on when the nuclear boats and crew training for them is at acceptable levels.

The first *Collins* replacement will be needed on or before 2024/2025.

## Research Questions

Below are some of the questions Australia needs urgent answers to:

- *Does Australia buy nuclear boats (MOTS)?*
- *Does Australia buy nuclear boats and fit them out here?*
- *Does Australia design, with help from our AUKUS partners, an all-Australian boat, and then build here?*
- *Who supplies the reactor?*
- *Is it us, them, or all the above?*

Each one of these questions pushes the first commissioned nuclear boat further into the future, perhaps as far as 2040/2050. In the meantime:

- *How do we fill the capability gap?*
- *How many submarines do we actually need?*

Is it ten to twelve nuclear boats with double crews or ten nuclear boats and ten conventional boats? (There goes my commonality obsession!!)

- *Are we able to operate two types of boats (nuclear & conventional) simultaneously? Walk and chew gum!!*
- *Where do submersible drones, UUVs, Heavy Lift Mother Ships, and miniature special-forces submarines stand in all this?*

## Will our nuclear boats be:

- designed with a prejudice toward traditional submarine warfare (sea lane raiding, anti-surface fleet attack, and counter submarine warfare), or will they be:
- more general purpose with land attack capability (specific missile VLS fitted) and miniature Special-Forces submarine and drone capable?





## How do we go about training crews initially?

- Do we go via crew exchange, or;
- Do we take a chance and lease four Los Angeles class with crews to train ours?

## Do we take a gamble and accept the risk?

- Is there another way of training?
- Could we build a computer simulator that covers all the areas of concern and train here?

## If we buy a conventional replacement for the Collins-class, should we also buy a heavy lift ship?

- Do we need a couple of “Q-ships” to resupply submarines?

The crews of nuclear boats have to eat and the boats may need munitions resupply or minor repairs at sea. [3]

Do we consider nuclear fusion as the end goal and work toward it?

These questions need to be answered quickly.

## CONCLUSION

As the Old English, wrongly attributed Chinese, curse has it:

*We [may you] live in interesting times*

A lot of the problems Australia now faces have been caused by a lack of planning. Submarine and surface ship design and construction needs to be an ongoing procedure. A hydro-dynamics lab might be handy. At least now we are having a realistic look at the “tyranny of distance”.

## A PERSONAL VIEW

The Navy League of Australia has been pushing for this decision for 35 years. The Leagues apolitical, logical, engineering and scientific views have at last been vindicated.

It appears that “we” have won a victory, but this is only the end of the beginning. Being a new NLA member, I will leave the celebrations to those that have worked hard for it and are more deserving. Those members with the experience and expertise in particular, need to keep pushing!!

The rest of us need to continue to support and encourage the Navy League of Australia and *The NAVY* magazine as much as possible.

## AFTER THOUGHTS

*’Twas brillig and the slipperly Frogs  
Did gyre and gimble in the waves,  
All mimsy were the bureaucrats,  
And the politicians outraged!*

*Beware the Dragon, my son!  
The jaws that bite, the deals that catch!  
Beware belts and road, and shun  
The furious media match!*

With sincere apologies to Lewis Carroll!!

There are still quite a few people, including some “defence journalists”, who think that a nuclear fission reactor is some kind of giant battery. The engineering will have to be explained.

Perhaps the Chinese consulate in Adelaide should not be overlooking the submarine construction yard? ■



## NOTES

- [1] Neil Baird: *The NAVY* (Vol 83 No 4).  
 [2] John Rigby & Paul Sawtell, *The NAVY* (Vol 83 No 3)  
 [3] See *The NAVY* (2022) Flash Traffic, *NLA Critical Submarine Debate*, Vol 84, Iss 3, (Apr-Jun), pp. 16-18.

## BIBLIOGRAPHY

Colliers Encyclopaedia 1976 (still got it!!) - sections on Nuclear fission & Nuclear fusion  
*Submarine Warfare Today* – Chris Chant - statistics for Astute and Virginia classes  
*Submarines* – Chris Bishop & David Ross  
*Janes Warship* recognition guide  
*How To Defend Australia* – Hugh White  
*The NAVY* – various papers but in particular:  
*Nuclear Propulsion Roadmap for Australia* - Captain Christopher J. Skinner BSc(Eng).MEng SC RAN (Rtd) Vol 81 No 4;  
 Shaping Australia's Nuclear [Submarine] Future - Admiral Peter Briggs AO CSC RAN (Rtd)  
 Vol 81 No 1 *The RAN's Future Submarine: The State of The Debate* - John Stanford Vol 80 No 1  
*A Good Plan Expediently Executed Today Is Better Than A Perfect Plan Executed Tomorrow* - Dr Neil Baird Vol 83 No 4  
 John Rigby & Paul Sawtell paper Vol 83 No3: now I know what a TOKAMAK is. Thanks.

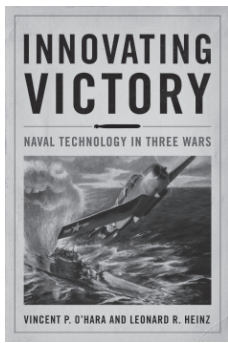
## Some Statistics

### Astute-class

Displacement: 6500t surfaced 7200t dived  
 Dimensions: length 97 m beam 10.7 m draught 10 m  
 Propulsion: one Rolls Royce PWR 2 nuclear reactor supplying steam to two Alstom steam turbines delivering power to one shaft driving one pump jet propulsor.  
 Performance: speed 29 kts dived.  
 Endurance: limited only by consumables  
 Armament: six 533mm tubes for 36 torpedos/missiles.  
 Crew: 98 + 12 spare

### Virginia class

Displacement: 7800t dived  
 Dimensions: length 114.9 m beam 10.4 m draught 9.3m  
 Propulsion: one General Electric S9G nuclear reactor supplying steam to two steam turbines delivering power to one shaft driving a pump jet propulsor.  
 Performance: speed 34 kts dived  
 Endurance: limited only by consumables  
 Armament: four 533mm tubes for 26 torpedos/missiles + 12 VLS tubes for 12 missiles.  
 Crew: 134



**INNOVATING VICTORY**

**Naval Technology in Three Wars**

By Vincent P. O'Hara and Leonard R. Heinz

U.S. Naval Institute: 15 April 2022

ISBN-10: 1682477320

ISBN-13: 9781682477328

Hardcover: \$50.00

Vincent P. O'Hara is an independent naval historian and author. He holds a history degree from the University of California, Berkeley. Leonard R. Heinz is a financial services lawyer and author with an active interest in military and naval history. He holds a history degree from the University of Pennsylvania. Both authors live in California.

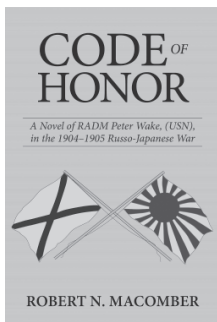
The authors consider four waves of profound technological change occurring in the twentieth century. Their first wave starts in the mid-nineteenth century as coal-fired steam engines replaced sail, armour was developed, guns and mines were improved, torpedoes appeared, and radio was introduced culminated in the Russo-Japanese War. The second wave started in 1905 and ran through World War I, when naval warfare became three-dimensional with the development of practical submarines and aircraft. The third wave, lasted through the end of World War II, moved naval warfare fully into the electromagnetic spectrum of radar and sonar; revolutionising the collection and use of information, and guided weapons. The fourth wave is under way.

The authors recognise that way navies integrate new technology varies according to differences in national culture, resources, force mixtures, priorities, policies, perceptions, and missions. They note that "a navy never has an advantage over all opponents in all technologies. Victory can hinge on a Navy's ability to quickly apply a new or superior technology directly against a weakness of its opponent on one hand while mitigating the enemy's technological advantages on the other". They recognise that this innovation is human and therefore to do with the knowledge (culture) of the workforce and its knowledgeability.

Topically, they recognise that advantages in torpedo technology night optics, and fighting in the dark, unrecognized by the Americans, allowed the Japanese navy to win tactical victories in the night battles fought in the Solomons, despite U.S. advantages in radar (technology).

An essential summer read – particularly in this time of change. The authors correctly conclude:

*In the end, it is not about machines and tools; it is about the [sailors] who use them and the way they are used. Technology is not the weapon, the tool, or the platform; it is the application of knowledge expressed through the use of that weapon, that tool, that platform.*



**CODE OF HONOR**

**A Novel of RADM Peter Wake, USN, in the 1904-1905 Russo-Japanese War**

By Robert N. Macomber

U.S. Naval Institute: 15 April 2022

ISBN-10: 1682477843

ISBN-13: 9781682477847

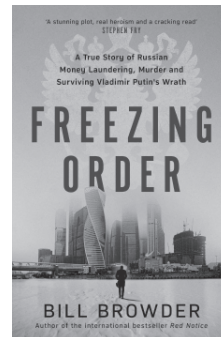
Hardcover: \$42.50

Robert N. Macomber is an award-winning author, lecturer, Department of Defense consultant, and accomplished seaman. He lives on an island in southwest Florida, where he enjoys cooking foreign cuisines from his books and sailing among the islands.

The Peter Wake series is a reminder both of constancy and that change is the real constant, at the same time providing a reminder of where we have been – a record that charts both successes and failures in the tradition of the great maritime series. An American Hornblower.

Peter Wake is the sailor's sailor, now a Rear Admiral working essentially for what would become Naval Intelligence. Never the oxymoron of its military counterpart. There are echoes of today. An aggressive Japan setting the conditions leading to the invasion of China and WW2; a British Empire recovering from the losses and shaming of two Boer Wars, facing an emboldened Germany; a United States, recovering from a bitter Civil War, suspicious and hostile to all Empires (including the British), about to burst onto the world stage and the American Century, 1917-2016.

Wake is sympathetic to the British and the Russians working to support both; while tackling the Germans (the Tangier incident); maintaining his marriage; and frustrating the Japanese. Intrigue a plenty and some loyal romance – not the author's forte. Notwithstanding, Wake retains his humanity and humility to chart a gripping path to his next command. One senses his final ride may culminate in U.S. entry to WW1, and Wake being brought back from retirement. A fun maritime romp and summer read.



**FREEZING ORDER**

**A True Story of Russian Money Laundering, Murder and Surviving Vladimir Putin's Wrath**

Bill Browder

Simon & Schuster, 22 April 2022

ISBN: 9781398506084

Hardcover: \$50.00

Bill Browder is the founder and CEO of Hermitage Capital Management, the largest investor in Russia until 2005. After his young Russian lawyer, Sergei Magnitsky, was beaten to death in a Moscow jail, Browder made it his life's mission to go after his killers and make sure they faced justice. Including the introduction of the Magnitsky Act adopted by over 34 countries.

Paraphrasing Sun Tzu and Clausewitz:

*to know one's enemy, one must first know one's self.*

Unravelling before us is the illiberal nightmare and culmination of kleptocratic gangsterism, unveiled in the murderous attack on Ukraine. As manifest in the shonky deals that led to the Russian state being represented by criminals and thugs. The tragedy of Army conscripts abandoned to die in Ukraine because of the endemic corruption of a corrupted regime – rotting from the head down. With a side-line in nuclear weapons.

This is compulsive reading for anyone wishing to understand Russia as it fails today – cast out from Europe and befriended only by plutocrats and illiberals in a no limits chase to the bottom. The tragedy of Russia as Churchill's "riddle, wrapped in a mystery, inside an enigma" remains.

This book is frightening in its unravelling of Putin's Russia as it ravel before us. The concern and questions remain: "how does the war in Ukraine end?" Somehow, having responsibility for Putin – the West needs to find a way to restore nobility to Russia and its people. This book may provide a roadmap for fighting back against Russian crime and corruption – but we have yet to chart the path to peace. Perhaps the next chapter?





# THE NAVY LEAGUE OF AUSTRALIA ANNUAL MARITIME AFFAIRS ESSAY COMPETITION



## TOPICS:

- 21st Century Naval Warfare
- Australian Naval History
- Australian Industrial and Merchant Navy Maritime Strategy

## CATEGORIES:

A first, second and third prize will be awarded in each of two categories:

**Professional category**, which covers Journalists, Defence Officials, Academics, Naval Personnel and previous contributors to *The NAVY*; and **Non-Professional category**.

Essays should be 2,500-3,000 words in length and will be judged on accuracy, content and structure.



## PRIZES:

	1ST PLACE	2ND PLACE	3RD PLACE
Professional	\$1,000	\$500	\$250
Non-Professional	\$500	\$200	\$150

Essays should be submitted in Microsoft Word format on disk by:

**Post to:** Navy League Essay Competition  
Box 1719 GPO, SYDNEY NSW 2001

OR

**Emailed to:** [editorthenavy@hotmail.com](mailto:editorthenavy@hotmail.com)

Submissions should include the writer's name, address, telephone and email contacts, and the nominated entry category.

The Navy reserves the right to reprint all essays in the magazine, together with the right to edit them as considered appropriate for publication.

**SUBMISSION DEADLINE:**

**Saturday 19 August 2023**

Prize-winners announced in the January-March 2024 Issue of *The NAVY*.



**HATCH:**

Royal Navy Commissions Experimental Vessel XV PATRICK BLACKETT (X01) named after wartime Naval Officer physicist and Nobel Prize Winner for Physics in 1948.



**MATCH:**

Indian Prime Minister Narendra Modi Commissions Indian Built Aircraft Carrier INS VIKRANT (R11) 2 September 2022.



**DESPATCH:**

USN Decommissions USS VELLA GULF (CG-72) Aug 22 with intent to decommission 39 Warships in 2023 reducing USN to 250 ships.