

# THE NAVY



THE MAGAZINE OF THE NAVY LEAGUE OF AUSTRALIA



**SINKING SHIPS**

**THE CASE FOR THE 4TH AWD  
HMAS MELBOURNE (IV)**



**THE LCHS - HEAVY LIFTING  
FOR FOUR DECADES**

**WAR IN THE  
SOUTHERN LATITUDES**

ISSN 1322-6231



9 771322 623000

AUSTRALIA'S LEADING NAVAL MAGAZINE SINCE 1938

**\$5.95**  
INCL. GST

THE COMMERCIAL MARITIME AND NAVAL DEFENCE SHOWCASE FOR THE ASIA PACIFIC



# 2013 PACIFIC

**INTERNATIONAL MARITIME EXPOSITION**

**7 - 9 OCTOBER 2013**

**SYDNEY CONVENTION AND EXHIBITION CENTRE, AUSTRALIA**

**[www.pacific2013.com.au](http://www.pacific2013.com.au)**

in conjunction with



**1913 - 2013**

**SYDNEY HARBOUR, AUSTRALIA**

**[www.navy.gov.au/ifr](http://www.navy.gov.au/ifr)**

## AUSTRALIAN SALES TEAM

**Bob Wouda**

T: +61 (0) 3 5282 0538

M: +61 (0) 418 143 290

E: [bwouda@amda.com.au](mailto:bwouda@amda.com.au)

**Penny Haines**

T: +61 (0) 3 5282 0535

M: +61 (0) 407 824 400

E: [phaines@amda.com.au](mailto:phaines@amda.com.au)

**Kay McLaglen**

T: +61 (0) 3 5282 0502

M: +61(0) 417 011 982

E: [kmclaglen@amda.com.au](mailto:kmclaglen@amda.com.au)



Australian Government  
Department of Defence  
Defence Materiel Organisation



Volume 75 No.2

# THE NAVY

THE MAGAZINE OF THE NAVY LEAGUE OF AUSTRALIA

## FEDERAL COUNCIL

**Patron in Chief:** Her Excellency, The Governor General.

**President:** Graham M Harris, RFD

**Senior Vice-President:** Rear Admiral DG Holthouse, AO, RAN (Rtd)

## Vice-Presidents:

LCDR Roger Blythman, RFD,  
John Jeremy

**Hon. Secretary:** Philip Corboy  
PO Box 128, Clayfield, Qld 4011  
Mob: 0421 280 481  
Email: prc@prcorboy.com

## NEW SOUTH WALES DIVISION

**Patron:** Her Excellency, The Governor of New South Wales.

**President:** R O Albert, AO, RFD, RD

**Hon. Secretary:** Elizabeth Sykes  
GPO Box 1719, Sydney, NSW 2001  
Telephone: (02) 9232 2144  
Fax: (02) 9232 8383

## VICTORIA DIVISION

**Patron:** His Excellency, The Governor of Victoria.

**President:** LCDR Roger Blythman, RFD  
**Hon. Secretary:** Ray Gill JP

## Correspondence:

PO Box 2340, Mt Waverley Vic 3149  
Email: ausnavyleague@me.com  
Web: www.netspace.net.au/~navyleag

## QUEENSLAND DIVISION

**Patron:** Her Excellency, The Governor of Queensland.

**President:** Harvey Greenfield.

**Hon. Secretary:** Mary Lacey.  
GPO Box 1481, Brisbane Qld 4001  
Telephone: (07) 3236 9884  
(h); (07) 3233 4420  
(w); 0424 729 258 (mob)  
Email: marylacey39@hotmail.com

## State Branches:

**Cairns:** A Cunneen,  
PO Box 1009, Cairns, Qld 4870  
Telephone: (07) 4054 1195

**Townsville:** I McDougall  
PO Box 1478, Townsville, Qld 4810  
Telephone: (07) 4772 4588

**Bundaberg:** I Lohse, PO Box 5141  
Bundaberg West, Qld 4670  
Telephone: (07) 4151 2210

## SOUTH AUSTRALIAN DIVISION

**Patron:** His Excellency, The Governor of South Australia.

**President:** Dean Watson, RFD

**Hon. Secretary:** Miss J E Gill  
PO Box 3008, Unley, SA 5061  
Telephone: (08) 8272 6435

## TASMANIAN DIVISION

**Patron:** CDRE Malcolm Baird RAN (Rtd)

**President:** Mr Tudor Hardy  
4 Illawarra Road, Perth, Tas 7300

**Hon. Secretary:** Mrs Lorraine Cottrell,  
40 Fleetwood Drive, Speyton, Tas 7310

## State Branch:

**Launceston:** Mr Tudor Hardy,  
4 Illawarra Road, Perth, Tas. 7300

## WESTERN AUSTRALIAN DIVISION

**Patron:** His Excellency, The Governor of Western Australia.

**President:** Mason Hayman  
33 Keane Street  
Peppermint Grove, WA 6011  
Telephone: (08) 9384 5794  
Mob: 0404 949 282

**Hon. Secretary:** Trevor Vincent,  
3 Prosser Way, Myaree, WA 6154

Telephone: (08) 9330 5129  
Mob: 0417 933 780  
Fax: (08) 9330 5129  
Email: chebbie\_rjnt@primus.com.au

## FEDERAL ADVISORY COUNCIL

**Chairman:** Vice Admiral Chris Ritchie  
AO, RAN (Rtd)

**Members:** Mr Neil Baird, Chairman,  
Baird Publications, Rear Admiral Simon  
Harrington RAN (Rtd), Vice Admiral  
David Leach AC, CBE, LVO, RAN (Rtd),  
Vice Admiral Russ Shalders AO, CSC,  
RAN (Rtd), Mr John Strang, Chairman,  
Strang International Pty Ltd

## CORPORATE MEMBERS

The Australian Shipowners' Association  
Hawker De Havilland Limited  
Strang International Pty Ltd

The opinions or assertions expressed in *THE NAVY* are those of the authors and not necessarily those of the Federal Council of the Navy League of Australia, the Editor of *THE NAVY*, the RAN or the Department of Defence. The Editor welcomes correspondence, photographs and contributions and will assume that by making submissions, contributors agree that all material may be used free of charge, edited and amended at the Editor's discretion. No part of this publication may be reproduced without the permission of the Editor.

**Front cover:** The Spanish Armada ship *CANTABRIA* entering Melbourne in the shadow of the LHD *CANBERRA* fitting out at Williamstown Vic. *CANTABRIA* is on loan to the RAN until November to take up the load from *HMAS SUCCESS* which will be unavailable in refit for most of the year. (RAN)

## 05 THE CASE FOR THE 4TH AWD HMAS MELBOURNE (IV)

By Dr Roger Thornhill

## 10 SINKING SHIPS

By William Mathews

## 20 THE LCHs - HEAVY LIFTING FOR FOUR DECADES

By CMDR Greg Swinden

## 25 WAR IN THE SOUTHERN LATITUDES

By Murray Dean

## REGULAR FEATURES

- 02 From the Crow's Nest
- 04 The President's Page
- 14 Flash Traffic
- 30 Hatch, Match, Dispatch
- 31 Product Review
- 32 League Policy Statement

## All letters and contributions to:

The Office of The Editor  
*THE NAVY*  
Navy League of Australia  
GPO Box 1719  
Sydney, NSW 2001  
E-mail to: editorthenavy@hotmail.com

## All Subscriptions, Membership and Advertising enquiries to:

The Hon Secretary  
Navy League of Australia, NSW Division  
GPO Box 1719, Sydney NSW 2001

**Deadline for next edition 5 May 2013**

## PAPER TIGER – DON'T ADD SEA WATER

It's no secret that the acquisition of the Australian Army's Tiger Armed Reconnaissance Helicopter (ARH) under project AIR 87 has been a difficult one, to say the least. The helicopter has gone from controversy to controversy, not a good omen for soldiers relying on it as their only means of organic air support during amphibious operations from Navy's new LHDs.

Most recently *The Telegraph* newspaper carried a story about Tiger pilots refusing to fly the helicopter after engine fumes were detected in the cockpit during a sortie in November, forcing the aircraft to land. This was actually the third time that this had occurred during 2012. So far a 'fix' to the problem has not been published.

The ARH also suffers from a number of other intrinsic issues. Their engines are underpowered for Australian hot and humid conditions (particularly when a full weapon load is required), their range is limited and they are unable to electronically 'link' with the rest of the Australian Defence Force (ADF). To be fair, this is due to their land-centric European battlefield focus where cooler weather, shorter ranges and European data links are the norm.

To highlight this 'duck out of water' metaphor the German Army recently deployed its Tigers to Afghanistan. In order to do so they required a significant upgrade known as ASGARD-F (Afghanistan Stabilisation German Army Rapid Deployment - Full). Even then this hasn't been successful. The reputable media firm *Jane's* published details late last year of a pre-deployment exercise in the US with German Tigers that didn't go well. The article said that the Tiger *"encountered severe difficulties coping with the "hot, high, and dusty" conditions in New Mexico, and German exercise reports indicate the two Tigers were kept from flying on numerous occasions when temperatures exceeded ISA+30°C."*

All of Army's 22 ARH were to have been accepted into full operation service by Army in Dec 2011. However, this is still yet to occur, despite many many changes to the aircraft's in-service date to accommodate the problems it has faced.

Lately it has been rumoured that Army has plans to fund a 'mid-life upgrade' for the ARH in the order of over a \$1 billion, despite the aircraft not even being in service yet. If this is so, then this is madness. Former US President Ronald Reagan once said that "sometimes you need to take the bureaucracy by the throat and say stop what you're doing" (the bureaucracy in this case being Army).

For the \$1 billion plus price tag to get the Tigers into something the ADF could use one day, Army could actually use the money to buy the USMC Bell AH-1Z Viper attack helicopter and acquire more airframes than it currently has in Tigers for the price of the upgrade.

## AH-1 VIPER

The Bell AH-1Z Viper is a twin-engine attack helicopter based on the combat proven AH-1W SuperCobra, that was developed for the USMC to operate from USN LHDs. The AH-1Z features a four-blade, bearingless, composite main rotor system, uprated transmission, and a new target sighting system.

Its two redesigned wing stubs are longer, with each adding a wing-tip station for anti-aircraft missiles such as the AIM-9 Sidewinder (an important addition for the ADF given the lack of fighter protection for amphibious operations from Navy's LHDs).

Each wing has two other stations for 2.75-inch (70 mm) Hydra 70 rocket pods, or AGM-114 Hellfire quad missile launchers. A maximum of 16 Hellfire can be used by the Viper. Unlike the Tiger which can only use eight.

Unlike the Tiger the Viper is fully functional, military off the shelf, with greater offensive capability, endurance, speed and able to electronically integrate into the ADF seamlessly. It requires no update to enter ADF service. It should also be noted that the AH-1Z Viper uses exactly the same engines as the RAN's new Seahawk Romeo (SH-60R). Common engines across two fleets will aid immeasurably in reducing the cost of ownership in the various areas that go together to make up the FIC (Fundamental Inputs to Capacity – such as training, logistics, doctrine, support management etc) and provide better availability rates when deployed to sea with the Navy's new helicopter. So far neither the Tiger or Seahawk Romeo fleets share common components with any other helicopter in the ADF. Acquisition of Viper, rather than a mid life upgrade for the Tiger, seems a no-brainer.

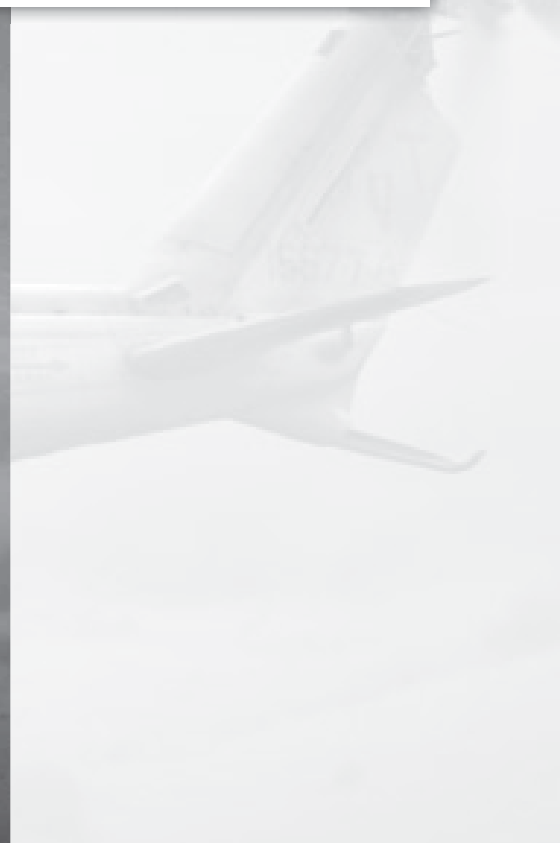
Even more appealing is the fact that the high cost of support for the 22 Tigers could actually go to supporting an even larger number of Vipers for no additional cost. It should also be noted that the Viper is also fully marinised and LHD certified with the USN/USMC, an important distinction for Army if it really is serious about jointness and amphibious operations from our new LHDs CANBERRA and ADELAIDE.

A USMC AH-1Z Viper. Faster, deadlier, cheaper and working. (BELL)



## COMPARISON (bold denotes higher number in that category between platforms)

SPECIFICATION	AH-1Z VIPER	TIGER
Weight empty	<b>5,365kg (11,828 lb)</b>	4,200kg (9,259 lb)
Max T-O weight	<b>8,391kg (18,500 lb)</b>	5,925kg (13,062 lb)
Max fuel weight	<b>1,256kg (2,768 lb)</b>	1,080kg (2,380 lb)
Max payload	<b>2,812kg (6,200 lb)</b>	2,812kg (6,200 lb)
Rate of climb	<b>850 m/min (2,790 ft/min)</b> [max, at S/L]	384 m/min (1,259 ft/min) [max at S/L]
Max level speed	-	150kt (278 km/h; 173 mph)
Cruising speed	<b>160kt (296km/h; 184mph) [max]</b> <b>137kt (254km/h; 158mph)</b>	124kt (230 km/h; 143 mph)
Range	370nm (685km; 425miles) <b>[at S/L, 20 minute reserve]</b>	<b>432nm (800 km; 497 miles)</b> no reserves
Endurance	<b>3 hr 30 min</b>	2 hr 50 min
Comments:	Marinised, semi-automatic blade folding and anti-aircraft missiles.	No marinisation, no automatic/semi-automatic blade folding, no anti-aircraft defence.



## THE CENTENARY OF THE ROYAL AUSTRALIAN NAVAL COLLEGE

In 1909 the Australian Government agreed to the proposal of the First Sea Lord, Admiral of the Fleet "Jackie" Fisher, that Australia should have its own Fleet Unit.

What naval assets Australia had in 1909 were few and of small scale. The decision on a Fleet Unit meant that in just four years Australia would acquire a battle cruiser, cruisers, destroyers and submarines. A great deal of work had to be done and in a remarkably short time.

Australia at that time had few people qualified to command a warship, let alone the major vessels the Navy was soon to obtain. Of necessity many senior positions would for years have to be filled by Royal Navy officers who transferred to or were on loan to the Royal Australian Navy.

At an early stage it was decided that the Royal Australian Navy should train its own officers. This was an important decision that demonstrated the Australian Government's confidence in the long term future of the new RAN. The young cadets of 1913 would become the Royal Australian Navy's senior officers 25 or 30 years on.

A site was chosen at Jervis Bay. A selection process began for the first cadets. However, Jervis Bay could not be ready in time and temporary accommodation was required. Osborne House Geelong became the first Royal Australian Naval College.

On the 1st March 1913 the new College was opened by the Governor-General in the presence of the Prime Minister, the Chief of Naval Staff, many other distinguished guests and the new cadet midshipman, included amongst whom were the future Admirals Collins, Farncomb and Showers.

On the 2nd March 2013 at Osborne House, Geelong, the centenary of the opening of the Royal Australian Naval College was celebrated.

The celebrations began with a march led by the Colour Party, Guard

and Band from HMAS CERBERUS. Then followed Cadets from several Navy Cadet Units. Various ships associations and veterans organisations brought up the rear.

When the march reached Osborne House the ships associations and veterans dispersed while the Guard and Cadets formed up for inspection by the Chief of Navy. This was no doubt the highlight of the day for the young Cadets.

Following welcomes given by the President of the Osborne Park Association and by the Mayor of the City of Greater Geelong Vice Admiral Peter Jones AO DSC RAN spoke on the formation of the College, the role of Osborne House and on the first cadets.

The Admiral was followed by Captain Brett Chandler RAN, the current Commanding Officer of HMAS CRESWELL, who spoke about the present day Royal Australian Naval College at Jervis Bay.

The centenary celebration culminated in an address by Vice Admiral Ray Griggs AO CSC RAN, Chief of Navy. At the conclusion of his address the Chief of Navy unveiled a plaque which acknowledges both Osborne House as the first Royal Australian Navy College and the service of the first cadets at the College. The plaque is to be fixed to the heritage building.

At the conclusion of the unveiling ceremony the many distinguished guests were invited to enter Osborne House to see the display of Naval College memorabilia.

The 2013 centenary celebration was organized by the Osborne Park Association with the assistance of the Royal Australian Navy.

The Association is a local organization formed to protect and promote Osborne House. The Navy League has for many years been concerned to ensure that the naval connection with Osborne House is recognised. To that end it has maintained an involvement with the Association. The League was glad to be able to provide support to the Association for the Centenary celebration.



(from L to R) Fleet Commander RADM Tim Barrett, Chief of Navy VADM Ray Griggs and Chief of Capability Development VADM Peter Jones at the unveiling of a plaque to commemorate the 100th anniversary of the original naval college at Osborne House in Geelong Victoria. (Jane Bird)

# THE CASE FOR THE FOURTH HOBART CLASS DESTROYER HMAS MELBOURNE (IV)?

By Dr Roger Thornhill

**With the Australian warship building industry needing constant work to remain viable, and the RAN's operational tempo potentially increasing to counter the rise of maritime conflict in the "Asian Century", ordering a fourth Hobart class destroyer is starting to make a lot of sense. Dr Roger Thornhill takes up the case.**

On the issue of the much talked about fourth Hobart class AWD (Air Warfare Destroyer) the 2009 Defence White Paper said: "The Government will continue to monitor and assess its capability needs against strategic assessments. As a consequence, the Government will continue to assess the capability need for a fourth AWD in the future against further changes in the strategic assessment and, consistent with that assessment the most rational public investment in further defence platforms."

As time passed since that White Paper the fourth ship seemed less and less likely as the manufacturing window for items to assemble the ships started to close.

However, late last year the keel laying schedule for the class of three Hobart class destroyers building in Adelaide was slipped by the government so far that the window of opportunity for a fourth is now open again.

Added to an obvious strategic need is the need to keep the shipbuilding

yards viable until the new SEA 1000 submarine and/or the SEA 5000 frigate start building. Gaping that specialist warship building capability, which currently seems unavoidable, will prove expensive and very risky to set up again.

## IT'S A NUMBERS GAME

The last Hobart class destroyer is currently planned commission around 2019 (HMAS SYDNEY), while the last two FFGs will possibly decommission the year before. This means that the RAN will still not achieve the magic number of 14 warships that strategic guidance has identified as required.

Added to this, the first Anzac will be decommissioned six years later - assuming the Gillard Government's failed asylum seeker policies haven't prematurely 'burned them out' early constantly patrolling the North West area of Australia's coastline.



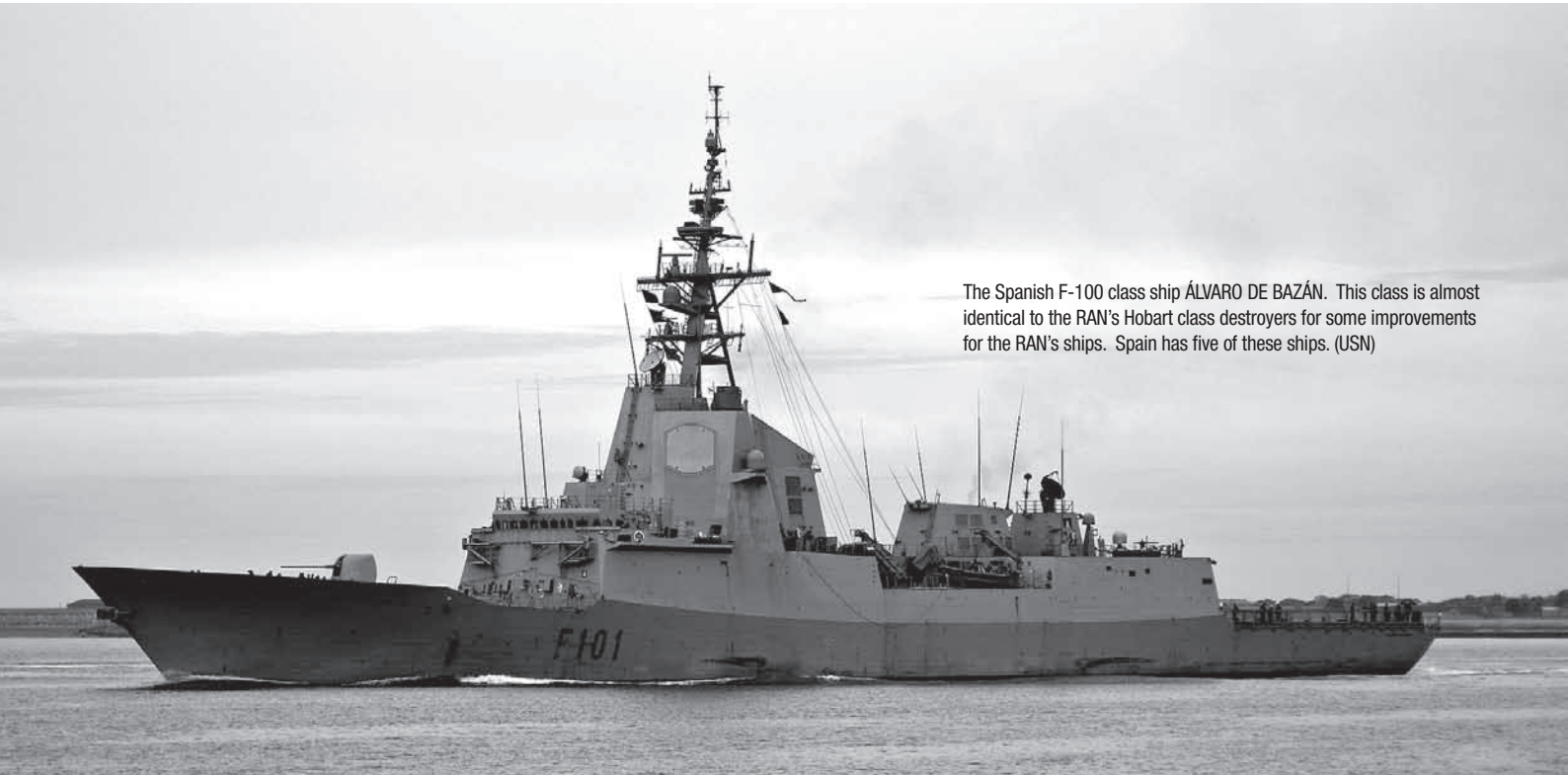
A computer generated image of the first Hobart class destroyer HMAS HOBART. (Defence)

One of the advantages of ordering another Hobart class destroyer now (which would more than likely be named HMAS MELBOURNE (IV) as this name is currently missing from the RAN's future fleet) is that much of the cost has already been spent in the areas of design development; contract fees; shipyard set up; infrastructure development; testing and evaluating the design and so on - in fact nearly \$3 billion was spent before any steel was cut.

Adding HMAS MELBOURNE (IV) will represent a very small cost increase but would give more 'breathing space' to the Anzac replacement project SEA 5000 and potentially provide uninterrupted work for the local naval shipbuilding industry.

sustaining the naval shipbuilding capability as well as providing the best destroyers available.

Modern warship construction is becoming increasingly complex given the electronics overheads. In-service-dates for capability introduction are also getting longer than anticipated. If this is the case with the Anzac replacement (as one could reasonably expect) then a fourth Hobart class destroyer will plug the inevitable capability gap from the last destroyer commissioning to the first Anzac replacement. HMAS MELBOURNE (IV) would represent a MOTS (Military Off The Shelf) solution given the investment and experience of the previous three and thus represent a very 'low risk' project.



The Spanish F-100 class ship ALVARO DE BAZÁN. This class is almost identical to the RAN's Hobart class destroyers for some improvements for the RAN's ships. Spain has five of these ships. (USN)

Given a gap in major warship construction the naval shipbuilding industry will have to close down until a new ship class is ordered. Meaning the infrastructure required will disappear and the Government will have to pay the set up costs again that have already been spent on the Hobart class infrastructure construction.

Added to this, the gap will mean a loss of people skills to build warships resulting in more cost to re-establish those skills. Acquisition of a fourth destroyer would thus save money, which incidentally will stay in Australia.

Nearly a decade ago the Senate's Foreign Affairs, Defence and Trade References Committee initiated a study into Naval shipbuilding in Australia. The idea being to examine if Australia can continue to build its own warships. The committee was well aware of the national economic benefits of local warship construction, given the Anzac frigate construction example. What they found was that the greatest threat to Australia's naval shipbuilding capability is not a lack of skills or resources but a lack of consistency in warship building requirements from Government. Warship acquisition and capability development decisions seem to be made in isolation of the industry. This produces a mismatch as industry will ultimately be relied upon to provide the capabilities being sought. The current SEA 4000 Hobart class destroyer project could thus be reappraised as a means of

## OPERATIONAL USE

Having a fourth Hobart class destroyer will provide more flexibility, capability and redundancy than three. The ADF's strategic plan for Navy is that one Hobart class destroyer can lead a medium sized multi-mission joint task force. Another can lead a small single purpose task force (both situations involving limited to no conflict) and the third can be in refit, workups or transit to rotate one of the others off station and back to Australia.

This 'bare bones plan' does not take into account any potential battle damage, accidents, extreme weather, political concerns or any other external issue that could have a bearing on availability or freedom of action.

One of those factors may be an intense maritime conflict along the lines of the 1982 Falklands conflict which could require all three at once to be deployed at great distance for six months or more. They may also have to undergo unplanned upgrades to meet emerging and unexpected threats.

Another pressure on future Hobart class destroyer availability involves the ships' capacity for command and control (C2). The Hobart class destroyers' strategic, operational and joint tactical command, control



and networking abilities will be unique in the ADF's force structure. Once this capability's effectiveness is fully realised the ADF's senior commanders, and in turn our politicians, will place high demands on their availability. They will become the first choice for almost all domestic security and overseas contingencies, much like the Army's SAS Regiment. Having only three will stretch them and their crews and may eventually result in reduced capability through over use.

As an example, the unique capabilities of the ADF's Amphibious ships KANIMBLA, MANOORA and TOBRUK made them so attractive that they missed many maintenance periods and training schedules resulting in capability failure at a critical juncture. Had the RAN one or two or three more ships there would have been less requirement to overwork them.

While the classes' C2 abilities will make them indispensable for all future operations, it is their Warfighting capability that will also place them in demand. Their sophisticated, capable and effective anti-air, strike, anti-surface and ASW capabilities will be highly sort after by the Joint Commander in traditional state on state/attrition



Gas turbine modules for the first destroyer delivered to Techport. (AWD Alliance)

style conflicts around the world. Of course in the regions surrounding Australia this conflict will have a strong maritime flavour given the enduring geography of our neighbourhood.

So HMAS MELBOURNE (IV) will alleviate many of the pressures on the planned three and provide more sustainable options for Government in all future deployments.

## SEA CONTROL

Fundamental to the exercise of maritime power and use of the sea is the ability to gain and maintain sea control.

Sea control is defined as the condition that exists when one has freedom of action to use an area of sea for one's own purposes for a period of time and, if required, deny its use to an adversary. Importantly, sea control includes not only the sea surface but also the air above, on the water and seabed below.

For the ADF to undertake most of the missions envisioned by the Government, it will need to establish a certain level of sea control in order for its operations to succeed. The Hobart class destroyers will be the vital means by which future Governments will exercise sea control.

The Aegis combat system and SPY-1D(V) phased array radar combination on the Hobart class destroyers will mean they are capable of impacting any airborne threat in the immediate and wider region, both now and into the future. It is also worth considering these capabilities compared to land based air.

A Hobart class destroyer on station 1,500nm from Australia can provide a sustained, survivable air defence presence 24hours a day for months. Land based air power through limited range, air-air refuelling aircraft availability, regular maintenance cycles and pilot fatigue cannot hope to maintain this, even with a forward operating base. More Hobart class destroyers will mean that the RAAF's fighter fleet can be used in other more suitable areas instead of supporting the Navy. Areas such as strike and battlespace preparation rather than flying defensive circles above the fleet.

The Hobart class destroyers will thus complement the ADF's whole of force air defence capability and at times supplement it. Adding HMAS MELBOURNE (IV) to the future fleet will not represent a burden and permit more ADF time on station given the larger numbers of destroyers that can rotate in and out of the theatre of operations.

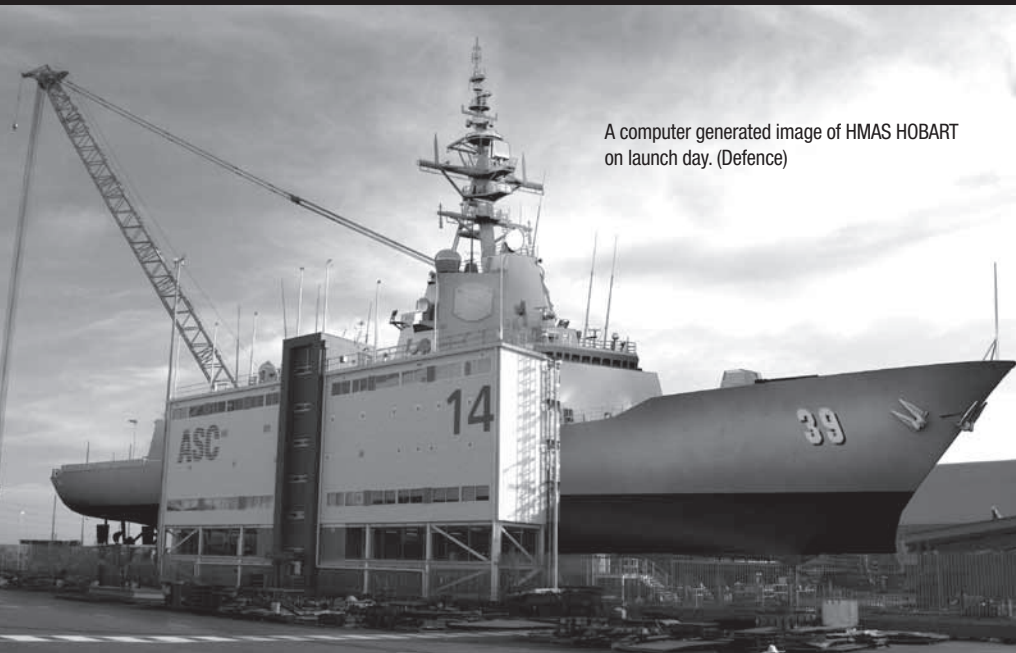
History has shown that land based fighter aircraft used in maritime settings are less sustainable and responsive to the fleet being protected as it moves further offshore. In fact, the further fighters have to travel the less responsive they become and are more likely to be used in striking targets in an offensive manner rather than acting defensively in the hope of neutralising threats to the fleet before they emerge. One could argue that this tenant of land based air employment is the reason for the rise of the aircraft carrier.

It should be noted that each Hobart class destroyer will have more workstations and space for HQ operations and personal than an AEW&C (Airborne Early Warning & Control) aircraft. Its air surveillance and networking capabilities will also be on par if not superior to the AEW&C in some situations. The other advantage is that the persistent nature of sea power will mean time on station can be measured in months, not hours. The destroyer can also protect itself, unlike the AEW&C.

As a major contributor to the air battle this persistence will allow the exploitation of airpower engagement cycles that modern networking capabilities will bring to the future battlespace. Without the ability to exploit this, all current investment in networking could be considered nothing more than an academic exercise and compromise future airpower effectiveness.



First blocks for the second Hobart class (BRISBANE) arriving at the Adelaide Techport building facility recently. (AWD Alliance)



A computer generated image of HMAS HOBART on launch day. (Defence)

## MORE FIREPOWER

Given the inability to quickly reload the Hobart class destroyers' Mk-41 VLS (Vertical Launch System) at sea or in the Area of Operations, missile magazine capacity for the new ships will be an issue. Normal anti-air weapon outfits will consist of missiles such as ESSM, SM-2 and SM-6. These will be used for local and area anti-air protection of troops ashore, ships at sea and vulnerable air assets such as helicopters, air-air refuelling tankers and vital AEW&C aircraft. All of which can shelter under the air defence umbrella provided by the new destroyers.

Having more VLS cells available will mean a more diverse range of weapon types can be accommodated without affecting the core anti-air role. The Hobart class destroyers will have 48 VLS cells. Acquiring HMAS MELBOURNE (IV) would alleviate magazine capacity issues by providing another 48 VLS cells, or a 25% increase in the whole destroyer capability.

It also provides more 'effects' options for the deployed force given the range of different weapons that could be employed.

Missile load out configurations will be important to the in-theatre sustainability of the destroyer capability in future operations. The right mix of anti-air, anti-missile, land attack etc will be crucial to its persistence and ability to support other fleet units, RAAF actions or troops ashore. There are a number of options in the area of weapons that could provide flexibility and options for the commander or political leaders through the Hobart class destroyers.

The anti-ballistic missile SM-3 can provide

theatre wide protection against ballistic missiles targeted at the deployment area or major Australian cities. Acquiring SM-3 for the Hobart class destroyers is becoming more important as China has developed anti-ship versions of two of its intermediate range ballistic missiles. The warheads of these ballistic missiles can be fitted with either a radar or IR sensor to guide the warhead onto a ship from directly above were ship based

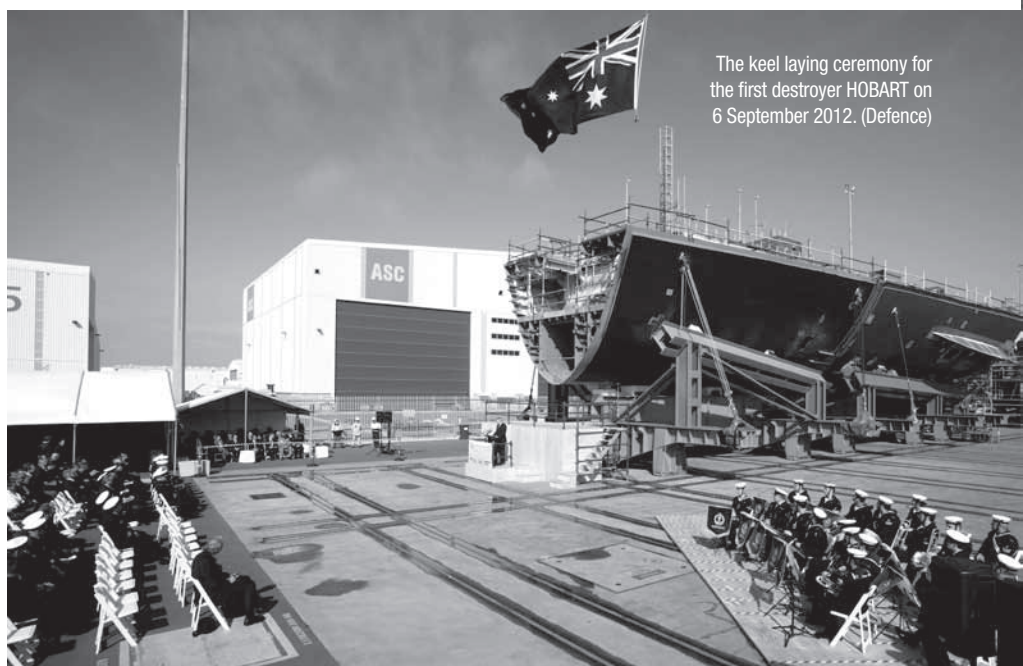
navigation given the SPY-1 radar's ability to detect and track them.

The new SM-6 anti-aircraft missile represents one of the greatest weapons to counter air power threats to the future ADF. SM-6 can provide theatre wide air defence when coupled with an AEW&C or any other external air defence radar data-linked to the destroyer (even radars such as the Jindalee Over the horizon Radar Network - JORN).

SM-6 uses the missile body of the SM-2 but has the fire and forget active seeker head of the air-air AMRAAM (Advanced Medium Range Air-Air Missile). Used correctly the launch ship need never see the target with its own sensors. SM-6 is said to have to capability to shoot down aircraft and cruise missiles at approximately 300 - 400kms.

Computer based experiments run by the USN using an AEW&C aircraft, an Aegis destroyer and SM-6 are said to have produced some "amazing results". The Joint ADF of the future, with its AEW&C Wedgetail aircraft, Hobart class destroyers and SM-6, should be capable of achieving no less – assuming the Navy continues with the 2009 White Paper plan to purchase SM-6.

Added to these air defence capabilities is the



The keel laying ceremony for the first destroyer HOBART on 6 September 2012. (Defence)

air surveillance radars usually do not cover. SM-3 will thus be able to provide protection from this emerging anti-ship threat by engaging the ballistic missile 'down range' (approx 1,500kms – 3,000kms away).

The SM-3 can also be used to destroy enemy satellites in low earth orbits being used by enemy forces for spying, communications or

potential for Tomahawk cruise missile use to accurately attack important strategic land targets at great range. Tomahawk may also be replaced with a more effective weapon during the life of the Hobart class destroyers.

With so many weapon choices a mix of each will decrease the capability in each area, i.e. jack-of-all-trades master of none for a single



Three F-100 class together. For the RAN's future operations three will not be enough.

ship. Adding HMAS MELBOURNE (IV) to the future fleet would better enable the RAN to employ a mixed bag of weapons without losing significant capability in any one area. Flexibility presents options and is thus politically and tactically attractive.

## CONCLUSION

A fourth Hobart class destroyer, i.e. HMAS MELBOURNE (IV), makes great industrial, economic, operational and strategic sense.

The calls made on the fleet in recent years have demonstrated the flexibility of the Navy and thus warrant an increase in its size. The results of this were seen in the maintenance issues of the LPAs and the LSH HMAS TOBRUK. This island nation's future strategic security is also becoming more uncertain.

The acquisition of HMAS MELBOURNE (IV) essentially represents a MOTS solution given the effort going into the first three. This low risk low cost approach is favoured by governments.

Of course the ADF could take the bold step and make modifications and additions to HMAS MELBOURNE (IV), given the lessons of the first three, to give her a greater Flagship, C2 and offensive capability. Although this could see her turning into a cruiser more than an 'enhanced' or 'Batch II' destroyer (which may mean a name change from HMAS MELBOURNE to HMAS AUSTRALIA).

Maritime power is critical to Australia's national defence, given our enduring maritime geostrategic circumstances. Fundamental to the exercise of maritime power and use of the sea is the ability to gain and maintain sea control. However, from a surface combatant point of

view, eight frigates with limited capabilities and only three destroyers will be hard pressed to do this.

A fourth destroyer will thus provide further capability for the sustainment of Australian sea control, particularly when in close partnership with the Army and Air Force. The modern surface combatant remains an adaptable, flexible and potent instrument for Government to apply to ensure continuous use of the sea and whenever and wherever sustainable and credible military effect is desired. The acquisition of HMAS MELBOURNE (IV) should be seriously considered for the 2013 Defence White Paper. ■

# SINKING SHIPS<sup>(\*)</sup>

By William Mathews

**In the US as in Australia old naval vessels are in demand for use as reefs, targets, but environmental, cost concerns bring controversy. William Mathews looks at the US experience of old Navy ships being used as reefs and recreational dive sites. The similarities with the Australian experience are striking.**

Eleven months after sinking 26 miles off the US coast of Delaware, the Spruance class destroyer RADFORD's hull is encrusted with mussels, starfish cling to its deck and the tentacles of newly attached sea anemones wave elegantly in the current.

At 135 feet below the surface, RADFORD is performing just as intended. After 26 years of active service, the 563-foot-long destroyer was turned into an artificial reef in August 2011, and now is home to a wide assortment of marine creatures.

From New Jersey to the Florida Keys, from Pensacola, Fla., to South Padre Island, Texas, old US Navy ships now are manned by bluefish and striped bass, red snapper and amberjack, and are a popular destination for people who fish and dive. The aircraft carrier ORISKANY, sunk off Pensacola, Fla., in 2006, is the largest. A dozen Liberty ships sunk off the coast of Texas and five more sunk off Mississippi in the 1970s are among the oldest.

KITTIWAKE, a World War II-era submarine rescue ship sunk in January 2011 off the Cayman Islands, and RADFORD are the newest. The missile range instrumentation ship GEN. HOYT VANDENBERG, sunk in 2009 with its giant missile-tracking radar dishes still aimed skyward, may be the most unusual.

As reefs, the ships' primary purpose is to improve recreational fishing, said Jon Dodrill, environmental administrator for the Florida Fish and Wildlife Conservation Commission. Promoting recreational diving is a secondary objective, and, in most instances, the reefs are succeeding.

They provide "a significant benefit to local economies," Dodrill said.

When the old dock landing ship SPIEGEL GROVE was sunk six miles off Key Largo, Fla., in 2002, scores of former crew members converged to pay their final respects. They spent \$1 million locally renting hotel rooms, buying meals and hiring boats to motor out to witness the sinking, Dodrill said.

In just a few days, two Florida counties earned back the \$1 million they had spent to help get SPIEGEL GROVE ready for reefing, he said.

In 2007, businesses in the Pensacola area earned nearly \$4 million from fishermen and divers who visited ORISKANY, according to a survey by the University of West Florida.

Such success stories have generated substantial demand for old Navy ships to be turned into reefs. But the sinkings also have raised

environmental concerns and sparked legal action. That controversy, as well as budget shortages and the rising value of old ships as scrap, may prevent more from being sunk anytime soon.

"There are at least 10 counties in Florida that have artificial reef sites large enough to accommodate a military ship, and there is interest," Dodrill said. "But the problem is funding."

The crippling recession and the sluggish recovery have left state and local budgets with little or no money to help prepare ships to be turned into reefs. And those costs are going up.

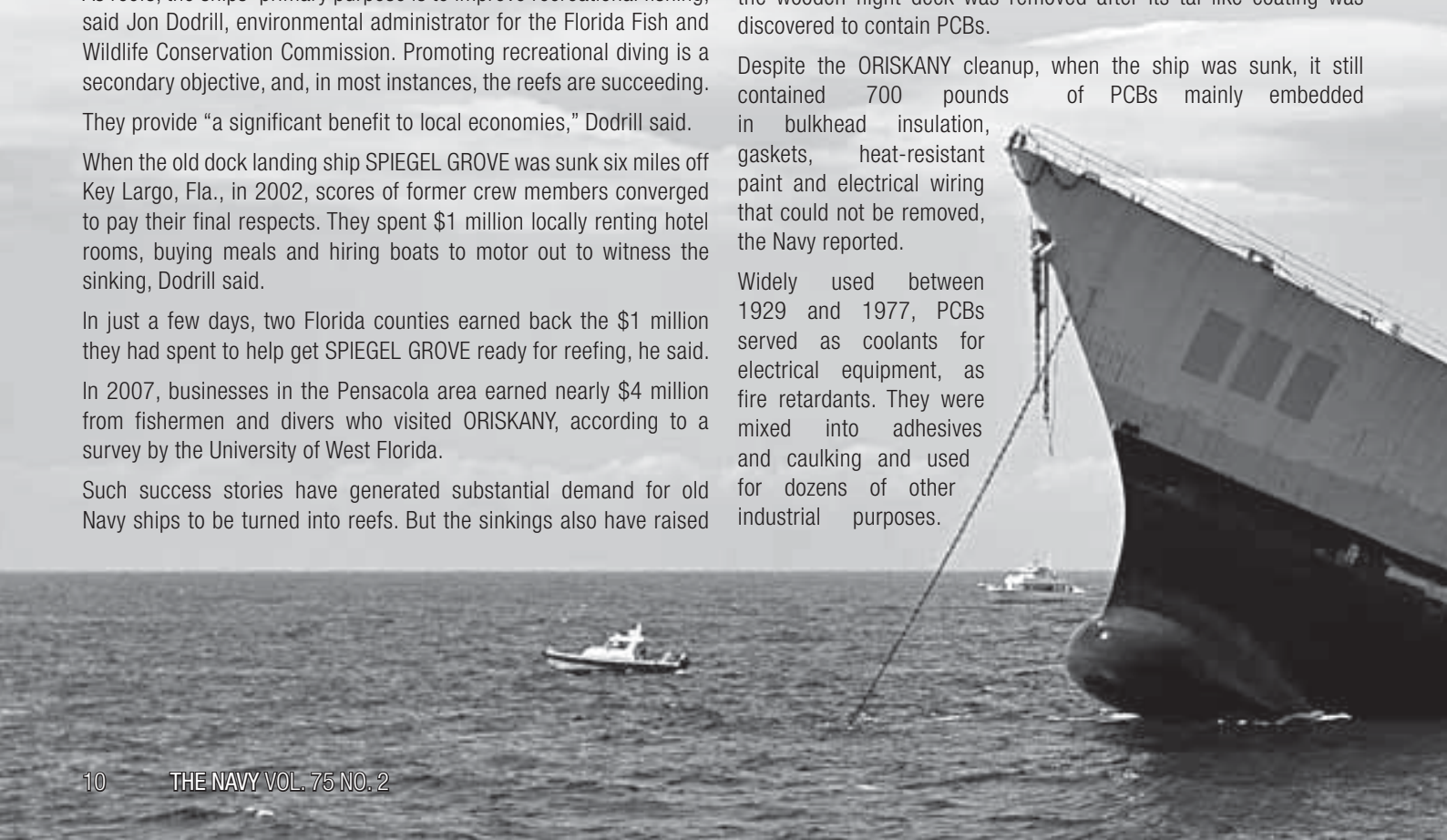
Since 2006, the US Environmental Protection Agency has required that old ships be stripped as much as possible of toxic substances, including polychlorinated biphenyls (PCBs), asbestos, flaking paint, mercury, oil and grease.

It's an expensive process. The environmental preparations alone for sinking ORISKANY cost about \$12 million. Cleaning up HOYT VANDENBERG cost nearly \$6 million. RADFORD was a relative bargain at just under \$1 million.

Miles of wiring containing PCBs had to be pulled out. Crumbling asbestos was removed or sealed, flaking paint was scraped off, oil tanks and pipes were drained and cleaned. On ORISKANY, even the wooden flight deck was removed after its tar-like coating was discovered to contain PCBs.

Despite the ORISKANY cleanup, when the ship was sunk, it still contained 700 pounds of PCBs mainly embedded in bulkhead insulation, gaskets, heat-resistant paint and electrical wiring that could not be removed, the Navy reported.

Widely used between 1929 and 1977, PCBs served as coolants for electrical equipment, as fire retardants. They were mixed into adhesives and caulking and used for dozens of other industrial purposes.



But PCBs were discovered to cause a variety of serious health problems, including cancer, and their production was banned in the United States in 1979.

When ingested, PCBs are stored in fatty tissues where they accumulate over time. Fish that swim in waters polluted by PCBs absorb the toxin. When larger fish eat smaller contaminated fish, the PCB concentration increases. And, eventually, humans may eat some of the larger fish.

Because of pollution concerns, the U.S. Maritime Administration (MARAD), which owns about three dozen old ships including oilers, tankers and cargo vessels, has banned using any ships for reefs if they were built before 1985.

"Vessels built after 1985 are considered free of PCBs above regulated limits," MARAD officials explained in an e-mail.

Florida, which also has PCB concerns, monitors fish that are caught near the sunken ORISKANY. For two years after the carrier sank, "there was an uptick" in PCB levels, Dodrill said.

Many of the fish caught near the sunken ship had elevated PCB levels and some exceeded the 50 parts per billion level that the state set as safe. By 2009, though, mean PCB levels had fallen below the EPA's maximum safe level of 20 parts per billion, Dodrill said.

There also may be a PCB problem with fish caught near RADFORD, although in this case the PCBs might not be coming from the ship.

Long before RADFORD was sunk, PCBs were present in the waters of the Delaware River and Delaware Bay at "1,000 times higher than allowed" by current water quality standards, according to the Basel Action Network (BAN), a Seattle-based environmental organization that has been fighting the disposal of ships by sinking.

PCB contamination is so great in those waters that in 2009 Delaware officials warned pregnant women and children never to eat certain kinds of fish caught there. Others were warned not to eat certain fish from the area more than once a year.

Yet, RADFORD was sunk just 26 miles to the east to increase recreational fishing. Delaware Gov. Jack Markell said RADFORD as a reef was expected to "bring in thousands of fishing and dive trips annually — and bring something else we like to see in our region — jobs."

Some of the same fish species that anglers are warned not to eat when caught in Delaware waters, including bluefish and striped bass,



USNS NIAGARA FALLS in Sydney Harbour during her active career. She was sunk last year as part of the RIMPAC 2012 exercise.

are touted as attractions for fishermen at Radford, said Colby Self, who heads BAN's Green Ship Recycling Campaign.

Artificial reefs, whether old Navy ships or other sunken material, do, indeed, attract fish. The Delaware Division of Fish and Wildlife says reefs "can result in a 400-fold increase in the amount of plankton and small baitfish available near the reef as food for larger fish."

The state has 14 artificial reef sites, including a reef built in 1996 out of 619 decommissioned New York City subway cars. Other Delaware reefs are made from large concrete pipes, old tires and sunken tugboats.

Artificial reefs are important in the mid-Atlantic and along the U.S. Gulf Coast because the ocean bottoms there generally lack rocky outcroppings or natural reefs. Instead, the natural bottom offers vast and desolate expanses of sand or mud that provide little shelter for fish and other marine life.

"When you put an artificial reef down there, it attracts fish," Self said. But there is an ongoing debate about whether that's really beneficial. Reefs become fishing hot spots, which may deplete fish populations faster than if there were no reefs, he said.

Typically, fish are not born on reefs, Dodrill said. Spawning occurs elsewhere. Red snapper, a favourite for fishermen at ORISKANY, for example, spawn over flat, sandy bottoms in 60 to 120 feet of water. ORISKANY sits far deeper, in 212 feet of water.

The fish "spend the first year of their lives elsewhere," and move to the reef as juveniles, Dodrill said. They may hang around the reef for



The former USS ARTHUR W. RADFORD being sunk 26 miles off the US coast of Delaware as an artificial reef.

a year or more before moving on to deeper water, he said.

Sunken ships provide fish with shelter from storms, and places to hide from predators and to find prey.

When currents hit the broadside of a sunken ship, they create upwellings of plankton, which feed small fish, which in turn feed the larger fish. ORISKANY and other reefs become “great feeding stations” where fish can grow and gain weight and length, Dodrill said.

But the fish attract fishermen and “the fishing pressure is pretty heavy,” so much so that any increase in the number of fish “can be offset by heavy fishing,” Dodrill said.

Not all of the ships the US Navy sinks are intended to become reefs.

On July 22, an Mk-48 torpedo fired by the Australian submarine HMAS FARNCOMB struck the former USNS KILAUEA just below the bridge. The ensuing explosion split the 561-foot-long ammunition ship in two, and KILAUEA sank in 15,000 feet of water about 60 miles off the coast of the Hawaiian island of Kauai — about 400 miles from the volcano for which the 44-year-old ship was named.

KILAUEA was the third of three ships sunk during the 2012 Rim of the Pacific exercise. CONCORD and NIAGARA FALLS, both Mars-class combat stores ships, were sunk in the same general area.

The sinkings, which were part of a Navy programme called SINKEX for sinking exercises, were the first since 2010, when the Navy imposed a moratorium on sinkings amid environmental concerns.

SINKEX is at the centre of a legal battle



A diver floats over the bow of the former SPIEGEL GROVE. Divers bring a small economic boon for the region closest to a deliberate wreck site.

between BAN and the EPA over illegal ocean disposal of PCBs.

In a suit filed in the U.S. District Court in San Francisco, BAN and the Sierra Club charge the EPA with violating the Toxic Substances Control Act because it has failed to stop the Navy from sinking old, contaminated ships.

Although it does the sinking, the Navy is not being sued.

BAN wants the old ships to be “recycled” — that is, sent to scrap yards to be dismantled so that valuable materials can be reused and toxic materials can be disposed of properly.

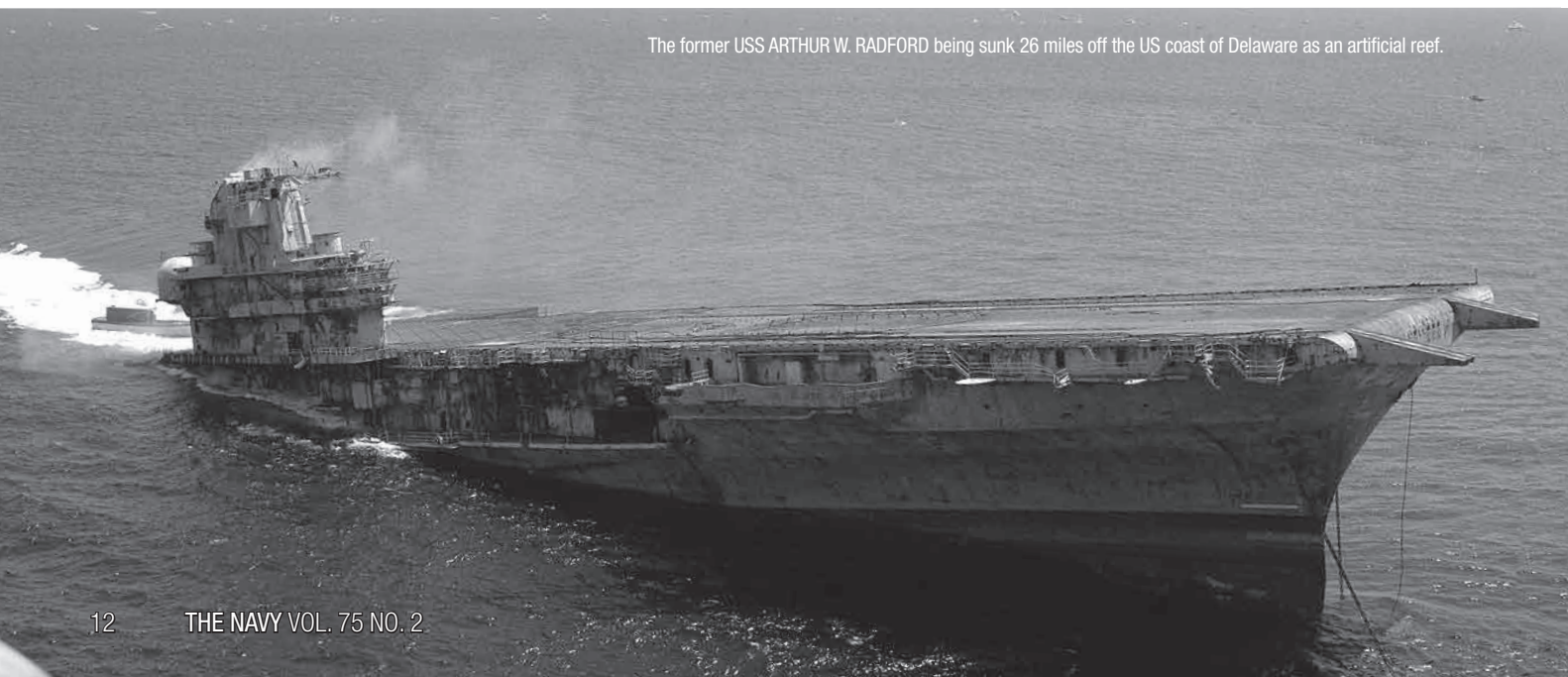
BAN claims that the Navy has “deliberately dumped 600,000 tons of recyclable steel, aluminium and copper at sea over the past decade” by sinking 95 old ships. Not only has the US Navy lost \$600 million worth of

usable materials, BAN says, sinking ships has cost 20,000 jobs directly or indirectly tied to ship recycling.

The US Navy contends that sinking old ships is environmentally benign. For SINKEX, “everything that might harm the environment is removed from the target ship,” the Navy says on its SINKEX website.

And MARAD, which manages the Navy’s retired noncombat ships, says that before ships like KILAUEA and CONCORD are sunk, they are prepared “by the Navy in compliance with all applicable regulations and permit requirements” of the EPA.

Nevertheless, Self insists, sinking ships — whether for target practice or to create artificial reefs — violates at least five U.S. and international ocean dumping regulations. The US EPA has simply



The former USS ARTHUR W. RADFORD being sunk 26 miles off the US coast of Delaware as an artificial reef.



The Mars class combat support ship KILAUEA sinking 60 miles off the coast of the Hawaiian island of Kauai after being hit by a Mk-48 torpedo fired by the RAN Collins class submarine HMAS FARCOMB during RIMPAC 2012. Live fire exercises to sink old ships are invaluable for training of crews. (USN)

exempted the US Navy from complying with those laws, he said.

The US Naval Sea Systems Command (NAVSEA) argues that sinking ships is necessary. While much of the Navy's training can be carried out by computer simulation, live-fire training is needed "to ensure that the ship, submarine and air crews we send into harm's way are fully ready," NAVSEA officials said in an e-mail request for comment.

Firing on actual ships "requires that our crews account for dynamic factors like weather and sea state, in addition to the stressing experience of preparing and launching live weapons, and completing the target engagement cycle from end to end," NAVSEA officials said. They declined several requests for an in-person interview.

While environmental concerns have not

stopped sinkings for training or for reefs, economics might.

"The significant cost to properly prepare and sink a vessel as an artificial reef is the primary limiting factor in the number of ships sunk as reefs," MARAD said. "We currently do not have any requests from states for vessels to be used as artificial reefs or from the U.S. Navy for vessels to be deep-sunk as targets."

Moreover, in recent years, scrap metal prices have increased enough that MARAD can sometimes make money by scrapping old ships, Dodrill said. In the past, the agency had to pay to have ships scrapped.

The economics are the same for the Navy. After 12 years of paying to have ships dismantled, the Navy is now selling ships to be dismantled, NAVSEA spokesman Christopher Johnson said.

In early July, for example, the Navy sold the experimental stealth ship SEA SHADOW and a submersible barge to Bay Ship and Yacht Co. of Alameda, Calif., for \$2.5 million, Johnson said. A requirement of the sale is that the radar-evading ship must be scrapped, but the barge may be reused.

In 2011, the US Navy decided to scrap rather than sink four retired aircraft carriers — CONSTELLATION, FORRESTAL, INDEPENDENCE and SARATOGA. Such is the change in mood. ■

(\* ) The article has been reprinted with permission from the Navy League of the United States sister publication SEAPOWERS.

With prices rising for recycled materials selling ships is becoming more economically attractive than sinking them. The US NAVSEA organisation recently made the decision to sell four former super carriers for scrap rather than sink them as reefs and dive attractions. (USN)





## 01 CANBERRA NAMED

The first of the RAN's two new Landing Helicopter Dock (LHD) ships was officially named CANBERRA in a traditional Navy ceremony at Williamstown, Victoria on Friday 15 February 2013.

The new LHD was named by Mrs. Vickie Coates, wife of the late Rear Admiral Nigel Coates AM, RAN, who served a distinguished career in the Navy and sadly passed away in June 2010.

This is the third Australian Navy ship to bear the proud name CANBERRA. NUSHIP CANBERRA has been proudly assigned the "02" pennant number, the same as CANBERRA (II). The RAN's Canberra class LHDs will deliver the most up to date air-land-sea amphibious capability in the world and will greatly strengthen the Australian Navy's delivery of sea power.

The new platforms will be able to land a force of more than 2,000 personnel by helicopter and water craft, along with all their weapons, ammunition, vehicles and stores – this capability is a quantum leap for Navy and the wider Australian Defence Force (ADF).

NUSHIP CANBERRA is due to be accepted into Navy service in the first quarter of 2014. The second LHD is due to be named this time next year for accepting into Navy service in 2016.

## CANTABRIA IN AUSTRALIA

The Spanish Armada Ship CANTABRIA, on 'loan' to the RAN, arrived at the Port of Melbourne on 14 February, just 41 days after departing La Graña Naval Port, Spain on the 3rd of January this year.

In November last year, Chief of Navy, Vice

Admiral Ray Griggs, signed the project arrangement between the Australian and Spanish Navies for the deployment to Australia of the Spanish Armada Ship, SPS CANTABRIA from mid-February until November 2013.

The arrival marks the commencement of CANTABRIA's extended deployment to Australia.

CANTABRIA sailed over 11,000 nm (approx 20,000 km) transiting the Suez Canal as well visiting locations such as Souda Bay, Crete and Diego Garcia.

CANTABRIA's deployment is a result of the excellent relationship between the Spanish Armada and the RAN.

During the deployment CANTABRIA will participate in training and exercises with Australian naval ships and helicopters. The deployment will culminate with CANTABRIA's participation in the Australian International Fleet Review in October.

Many of CANTABRIA's ship systems are the same as the RAN's new Canberra class LHDs and Hobart class Air Warfare Destroyers (AWD). The project arrangement provides an excellent opportunity for RAN personnel to train and familiarise themselves with CANTABRIA before they go on to crew the LHD and AWD.

The Commanding Officer, Commander (ESPN) Jose Luis Nieto and crew, including 12 Australians, were met by the Commander Australian Fleet Rear Admiral Timothy Barrett.

SPS CANTABRIA is a modern Auxiliary Oil Replenishment ship, similar to HMAS SUCCESS, which is capable of supplying fuel, food, stores and ammunition to ships underway.

CANTABRIA was built in 2007 and commissioned into service in the Spanish Armada in 2009. The deployment will allow the Spanish Armada to trial the ship's full range of capabilities, including the operating/maintenance cycle of ships systems, and the logistics and maintenance support mechanisms for the ship.

## RNZN ANZACS TO BE UPGRADED

On 12 November 2012, the New Zealand Government (Cabinet) agreed to upgrade the ANZAC combat systems and authorized the Ministry of Defence (MoD) to issue Requests for Tender (RfTs) for the provision of component and other items to deliver the capability. The series of tenders was then issued to the Combat System Integrators (CSI) who responded to the December 2010 Request for Information (Rfi). The tenders close in late April 2013 and will be submitted through the New Zealand Government Electronic Tender System (GETS) (Reference 38086).

Australia Marine Technologies (AMT) is currently assisting the New Zealand Government in the development of the tenderers.

The scope of the project includes:

- A replacement Combat Management System (CMS).
- New radar suite including IFF.
- A new radar and communications Electronic Surveillance Measures (ESM) suite.
- Infrared search and track/optronics.
- Local Area Air Defence (LAAD) system.
- Anti-ship missile defence (ASMD) softkill.

01 Mrs Vickie Coates and CEO BAE Systems Mr David Allott unveil the name plaque for NUSHIP CANBERRA





- Torpedo detection and decoy.
- New sonobuoy processors.

Of note, the missiles for the LAAD will be outside the CSI scope and the details will be provided in the RfT.

## 02 HMS EDINBURGH LEAVES THE FALKLANDS FOR THE LAST TIME

HMS EDINBURGH, the last Type 42 destroyer to serve in the Royal Navy, finished a six month tour of the South Atlantic Islands during January. She is now due to be decommission in June. Before heading north again Falkland Islands residents were given the opportunity to have a peek on board.

Open days are held on most tours of RN Ships in the South Atlantic said Commander Nick Borbone, CO of EDINBURGH: "They are a good way of showing what the RN is all about. People who have no contact with the sea don't necessarily see the relevance and applicability of maritime forces so it's a good opportunity to show what we do."

Commander Borbone said he has enjoyed his time in the Falklands. This being his second tour he was particularly glad to see the abundance of wildlife over summer.

"I have more photos of penguins than I know what to do with but my family is looking forward to the slide shows when I return home".

Flight Observer Russ Chandler has had the privilege of viewing the Islands by Lynx helicopter: "We've visited Saunders, Pebble Island and the Neck and luckily get to fly every four days or so. We've been lucky too with the weather and there is a professional photographer on board who has captured some great shots of the wildlife," he said.

The next ship to tour the South Atlantic will be HMS ARGYLL, a Type 23 'Duke' class Frigate.

### RAN SEA KINGS SOLD

During January then Minister for Defence Materiel Jason Clare announced that the RAN's remaining Sea King helicopters will be sold to Aerospace Logistics (ASL).

"Aerospace Logistics have over 30 years experience as an international specialist in the supply, refurbishment, exchange, maintenance, repair and overhaul of aircraft parts," Mr Clare said.

ASL will use the Sea King inventory to sustain and support capability of international military and search and rescue fleets.

The ASL bid provided the greatest return to the Commonwealth. "The Sea Kings were known as the workhorse of the Navy, large enough to pick up loads heavier than a Land Rover," Mr Clare said.

"They have played a significant role in naval aviation over the last 36 years."

The Sea Kings were withdrawn from service in December 2011 and are being replaced by MRH-90 helicopters under Project Air 9000 Phase 6.

In September 2011 it was announced that Sea King Shark 07 would be preserved at the Fleet Air Arm Museum in Nowra. Shark 07 was chosen because it has the most operational history of all the Sea King helicopters, having served in the Middle East and East Timor.

Displaying this aircraft for public viewing ensures as many Australians as possible have access to this piece of Australia's aviation history.

The Sea Kings have flown in excess of 60,000 hours in a range of operations both at home and abroad and come to the assistance of many Australians.

In 1994, the Sea Kings were involved in one of the largest fire fighting efforts in Australia's history. The aircraft used water buckets to fight fires raging near Grafton, Gosford, Bulahdelah and Sydney's western suburbs.

The Sea Kings have also been used for rescue operations at sea.

In 1998, two of the helicopters were involved in rescuing yacht crews in disastrous weather conditions during the Sydney to Hobart Yacht Race.

One of the Sea Kings' last operations was to south-west Queensland to provide response and recovery efforts during the Queensland floods.

The contract is subject to International Traffic in Arms Regulations (ITAR) approval.

### DEFENCE HONOURS AND AWARDS TRIBUNAL REPORTS

On 1 March the recommendations of the Defence Honours and Awards Appeals Tribunal Inquiry into unresolved recognition for past acts of Naval and Military gallantry and valour were accepted by the Government and Chief of Navy Vice Admiral Ray Griggs AO CSC RAN.

Eleven former members of the RAN were considered as part of the Inquiry. There were extensive submissions and testimony given to the Tribunal over many months. Chief of Navy (CN) himself gave several hours of testimony last year, as did a number of key serving and former Naval officers who are

02 The last Type 42 destroyer to serve in the Royal Navy HMS EDINBURGH in the South Atlantic. (UK MOD)





also Naval historians.

The Tribunal recommended, and the Government accepted, that none of the thirteen men considered (eleven Navy and two Army) should be awarded any retrospective gallantry awards. CN said that he supported this position – “without the full knowledge of all the factors in play at the time, it is impossible to make a rational and dispassionate decision regarding individual acts of gallantry when we are so far removed from the events of the day, while still maintaining the integrity of the Honours and Awards process.”

He further said “The fact that no member of the RAN has received a Victoria Cross does not mean there has not been extraordinary gallantry in the past - there has - we all know that. The eleven officers and sailors considered in this Inquiry are all heroes to us and they always will be. We already honour many of them in various ways such as through ship names, names of Divisions at Recruit School and building names - we will continue to honour them.”

The Government has accepted the recommendation that the actions of HMAS YARRA (II) on 5 February and 4 March 1942 warrant the award of a unit citation for gallantry. This is currently being processed through the Governor-General.

The third recommendation that was accepted is that Navy continue to honour Sheean, Waller, Rankin, Yarra and Perth through the practice of naming ships in their honour. This does not mean there will always be ships in commission bearing those names, but it does mean they will be actively considered in future naming deliberations.

The Tribunal has had a very difficult task and

has thoroughly considered these issues. They are the independent umpire and the whistle has blown. Their recommendations will not please everybody, in particular the families of these men will be disappointed.

### 03 RAYTHEON RECEIVES FSS AWARD FOR SM-1 MISSILE

Recently US Company Raytheon has been awarded a US\$6.17 million contract by the US Naval Air Warfare Center Weapons Division China Lake to continue Full Service Support (FSS) for international users of the anti-aircraft Standard Missile-1 (SM-1).

SM-1 was retired from the USN inventory in 2003, and the RAN in approx 2010. The new FSS contract provides for the supplies and services necessary for the repair, maintenance and support of SM-1 missiles in service with many international navies - comprising Bahrain, Chile, Egypt, France, Italy, Japan, Poland, Spain, and Taiwan - until the planned 2020 out-of-service date.

Under the terms of the contract Raytheon will provide core support, depot-level maintenance, intermediate level maintenance operations, and technical services for Foreign Military Sales (FMS) customers of the SM-1 line.

Core support tasks include ordnance assessment; reliability, safety, configuration management, and interface control; maintenance of the as-designed configuration; engineering change traceability; product data management; and access to support data.

Depot-level maintenance includes services for repair, maintenance, preparation of non-energetic sections, and upgrades and

installation of SM-1 Block V, Block VI, Block VIA, and VIB assemblies, sub-assemblies, and components. Intermediate-level maintenance includes services for section replacement and recertification of SM-1 Block V, VI, VIA, and VIB missiles.

The FSS contract will use test equipment, maintenance facilities, and a pool of SM-1 missile components provided to Raytheon under a Navy Memorandum of Agreement (MoA). Under this MoA, all surplus US Navy SM-1 assets were transferred to the company for use in support of maintenance and refurbishment process.

The contract will provide some assurance to users that the missile will remain reliable and effective until its withdrawal date.

### 04 FAREWELL SPS PRINCIPE DE ASTURIAS

The Spanish aircraft carrier PRINCIPE DE ASTURIAS has been decommissioned early after 25 years of service in the Spanish Armada. Her early decommissioning, 6 Feb, comes about from the acute financial trouble Spain still finds itself in. It was reported that the ship and associated air wing cost 100 million Euros per annum. Money Spain no longer has.

Many in the Spanish Armada are unhappy with what they see as a hasty decision by the Government to decommissioning her.

The Spanish Govt has decided to sell her for scrap and so far has rejected calls to offer her for sale to another navy.

She is currently laid up and being stripped of all machinery, electronics, sensors and weapons.

PRINCIPE DE ASTURIAS was rather unique

**03** An SM-1MR missile leaves a Mk-13 rail launcher. Raytheon, and the USN will support the SM-1MR to continue as an anti-aircraft missile for some time. (RAN)

**04** The Spanish aircraft carrier PRINCIPE DE ASTURIAS decommissioned and laid up alongside.



as it was born from the 1970's concept of a Sea Control ship. The Sea Control Ship (SCS) was a small aircraft carrier developed and conceptualized by the USN under Chief of Naval Operations Elmo Zumwalt. The concept was almost a through back to the Jeep carrier of WWII in that it had to be cheap and quick to build and larger enough for essentially one task. The SCS was intended as an escort vessel, providing air support for convoys. It was canceled after budgetary cuts to the US Navy.

The design was evaluated as a replacement to the RAN carrier MELBOURNE but rejected in favour of something 'off the shelf' (a change of Govt then cancelled the project when the off the shelf option was removed).

Spain will now rely on its new LHD JUAN CARLOS I, the same as the RAN's Canberra class, for its aircraft carrier capability of ASW helicopters, AEW&C helicopters and multi-role Harrier II fighters.

### DESIGN FOR FLIGHT III ARELIGH BURKES BY END OF 2013

Recently USN reporting indicated that the Preliminary Design Review (PDR) for the Arleigh Burke Destroyer (DDG-51) Flight III would occur by the end of 2013 (calendar year). The USN completed a two year study on the DDG-51 Flight III in September 2012 and has forwarded the ship's capability definition document and concept of operations to the Joint Staff for review.

Currently, the USN estimates that the majority of the DDG-51 Flight III hulls will be the same as Flight II/IIA even though it will employ the new Air and Missile Defence Radar (AMDR), which will be about 35 times more powerful than the current radars systems found on

the earlier flights. The USN is also setting the price at US\$2B per hull.

At the end of the PDR, the USN will have a package that will be offered to shipbuilders to bid on an engineering change proposal that would essentially update the second FY 2016 Flight IIA hull and both FY 2017 Flight IIA hulls to Flight IIIs. From Flight IIA to Flight III about 80-85% of the hull form will remain the same.

In regards to the AMDR source selection, the USN is expected to award a contract by mid-2013. The radar and ship designs have been progressing in tandem with both expected in time for the 2nd FY 2016 hull start.

Major concerns such as ships power, cooling, weight and other margins have been addressed as well as room for future growths to allow for modernisation and capability upgrades as new systems (such as the electromagnetic rail gun) enter the fleet.

The key for this program now appears to be is if the USN can continue to keep the unit cost at around US\$2B as advertised.

### 05 TAIWAN TO GET FOUR EX US FFG

The USN has released Information concerning the decommissioning of its remaining 24 Oliver Hazard Perry (OHP) class frigates (FFG-7). At about the same time Taiwan announced it would take four of those units.

The Taiwanese Navy will replace four of its eight ex-Knox class frigates with the four FFGs. The hulls, USS TAYLOR (FFG-50), USS GARY (FFG-51), USS CARR (FFG-52) and USS ELROD (FFG-55) began transferring on 15 March 2013 when USS CARR was handed over to Taiwan. The remaining three will

be approved by the US Congress during 2013 with transfers taking place in Fiscal Year 2015.

All four units will cost around US\$480M for the overhaul prior to the transfer to Taiwan.

The four new ships will bring Taiwan's force of Perry class frigates to 12 with eight of those being the Cheng Kung class built at Taiwan's China Shipbuilding Corporation (CSC).

It is understood that the AN/SQR-18A(V)2 Tactical Towed Array Sonar (TACTAS) currently found on the US FFGs will be replaced by the later AN/SQR-19 in addition to sensor upgrades prior to the transfer to Taiwan. In regards to the surface-to-air missile capability, the US FFGs have had the Mk-13 missile launcher removed, Taiwan could either have it reinstalled to retain a Standard Missile (SM-1) capability or it could use the ten SM-1MR launch canisters that are now found on their Knox class. It could also maintain its surface-to-surface missile (SSM) capability by utilizing its indigenous Hsuing Feng (HF) II and III anti-ship missiles launched from quad canisters similar to those found on the Cheng Kung class.

### NETHERLANDS DEPLOYS FIRST NFH90

The maritime NATO Frigate Helicopter (NFH) variant of the NHIndustries NH90 helicopter is being deployed on operations overseas for the first time on board the Royal Netherlands Navy's De Zeven Provinciën-class frigate HNLMS DE RUYTER .

DE RUYTER departed from Den Helder on 20 January with an NFH90 helicopter on board to participate in the European Union's Operation 'Atalanta' off the coast of Somalia.

05 USS CARR (FFG-52) (seen here) is being transferred to the Taiwanese Navy along with three other FFG-7s. (USN)





It will be the first overseas operational deployment of a NFH90 or of a Dutch NH90.

The helicopter will be used for intelligence, patrols, and reconnaissance. The Netherlands will share the lessons learned from the deployment with other NH90 nations.

The Netherlands has ordered 20 NH90s, 12 of which are NFH90s for maritime operations and eight tactical troop transport versions, much like the RAN's MRH-90.

## LITTORAL MISSION VESSEL FOR SINGAPORE

On 30 January 2012, Singapore Technologies (ST) Marine announced that they had been awarded a contract by the Ministry of Defence (MoD) for the design and construction of eight Littoral Mission Vessels (LMV). This number is an increase of two units from the 05 July 2012 announcement stating the requirement for six vessels.

According to a company spokesman, the eight new vessels will be built at the ST Marine Benoi Yard with ST Electronics supplying the core combat systems and combat systems integration solutions.

The new LMV has been described as being 80 metres (262.5 ft) in length and of modular design; allowing for reconfiguration with different mission packages. The driving factor to this approach is the reduction of manning for each vessel to 21 personnel with additional sailors being brought onboard with the mission package.

Mission packages being planned for the new corvette will include anti-air (AAW), likely with the Barak 1 missile, anti-surface (ASuW) with Harpoon anti-ship missiles (ASM) and anti-submarine warfare (ASW) with lightweight

ASW torpedoes and variable-depth sonar (VDS).

The base ship will probably be equipped with a 57mm or 76mm gun, two 20mm guns and two 12.7mm machine guns. It will also have an air/surface search radar and navigation radar as well as electronic surveillance measures (ESM).

Design of the new corvette-sized LMV will begin immediately and will deliver to the Royal Singapore Navy (RSN) beginning in 2016; with all eight units commissioning by 2022 and replacing the Fearless class currently in service.

## 06 USS GUARDIAN 'A COMPLETE LOSS

On 31 January the USN announced that the mine countermeasures (MCM) ship USS GUARDIAN (MCM 5) that ran aground and got stuck on Tubbataha Reef in the Phillipines in the early morning hours of 17 January while transiting the Sulu Sea has been officially declared "a complete loss".

No one was injured during the accident, which punctured the fiberglass-encased wooden hull structure and flooded several sections of the ship.

Two heavy-lift shipborne cranes are on site to help salvage the ship. USN Officials announced that the vessel could not be towed off the reef; then two weeks later announced that it would have to be cut into pieces for removal.

The Sasebo, Japan-based crew of 80 sailors evacuated safely. More than 15,000 gallons of diesel fuel was removed from the ship as salvage teams determined how to move the vessel without causing more damage to the

reef, located approximately 80 miles east-southeast of Palawan Island.

The incident remains under investigation but so far it has been determined that a faulty digital nautical chart supplied by the National Geospatial-Intelligence Agency may have been partly to blame for the grounding with incorrect positional data on the reef being discovered.

Since then the USN has advised all its ships using the charting system to exercise extreme caution as errors of 7,000m have so far been detected. A fix is currently being implemented.

## 07 WILDCAT ON LOOSE

The first production AgustaWestland AW159 Lynx Wildcat destined for the RN has made its maiden flight.

The first flight was conducted from AgustaWestland's facility in Yeovil, United Kingdom. The news of the first flight of a production naval AW159 comes hot on the heels of South Korea's 15 January announcement that it has also selected the Lynx Wildcat for its anti-submarine warfare helicopter requirement.

The RN Fleet Air Arm is destined to receive 28 naval variant Wildcats, to be termed Wildcat HMA.2 in RN service. Wildcat is expected to begin operations with the RN from 2015 onwards.

Prototypes of the Wildcat conducted sea trials in 2011 and 2012.

Speaking of the news, Chief of the Naval Staff, Admiral Sir Mark Stanhope, said: "As a shipborne helicopter, Wildcat will provide commanders with a flexible attack capability that can be deployed to tackle a range

**06** The salvage tug *Vos Apollo* stands by the stricken MCM vessel USS GUARDIAN. (USN)

**07** The first production AgustaWestland AW159 Lynx Wildcat destined for the RN making its maiden flight.



of threats at sea and from the sea. With state-of-the-art sensors, equipment, and weapons, it will be an outstanding asset that will maintain Royal Naval units at the cutting edge of worldwide maritime operations."

### VIKRAMADITYA UPDATE

Indian Navy (IN) officials have said that India will take delivery of the troubled VIKRAMADITYA (ex- ADMIRAL GORSHKOV), a modified Kiev-class (Project 1143.4) aircraft carrier being retrofitted in Russia, by the end of 2013 after it recommences sea acceptance trials this Northern summer following repairs to its engine room boilers.

The carrier's planned induction into IN service on 9 December 2012 - more than four years behind schedule - was postponed after three of the eight boilers that power its four engines broke down during sea trials in September 2012 (see *THE NAVY* Vol 75 No.1 p18).

Ceramic insulation, said to be the cause of the failure of all of VIKRAMADITYA's boilers, has since been replaced and that the Sevmarsh yard in Severodvinsk, which has been undertaking the refit, is awaiting the melting of the winter ice before resuming the vessel's final trials in the northern Bering Sea in May.

Senior IN officials said that before the malfunction VIKRAMADITYA had travelled more than 11,000 nm during 90 days of sea trials. Deck landings and take offs of MiG-29K fighters that comprise the carrier's air group were also conducted during the trials, which took place with a 500-member IN contingent aboard.

## 08 CH-53K GEARS UP FOR FLIGHT TRIALS

Sikorsky has delivered to the flight test team the first prototype CH-53K heavy lift helicopter for the US Marine Corps (USMC).

The first prototype aircraft, referred to as the Ground Test Vehicle (GTV), will now undertake powered ground checks ahead of the commencement in 2014 of a 12-month flight trial campaign by the four follow-on flight test helicopters.

"The primary purpose of the GTV is to shake out the CH-53K helicopter's dynamic systems by thoroughly testing and measuring the performance of the rotor blades, transmission, and engines while the aircraft is tied to the ground," Michael Torok, Sikorsky's CH-53K programme vice-president said.

Sikorsky and US Navy test pilots will undertake the ground-based flight checks to establish whether these systems meet the requirements as set out by the USMC. According to the company, flight test engineers will spend the coming months performing preliminary acceptance tests that include calibrating the GTV's fuel system and attaching measuring devices at more than 1,300 test locations on the aircraft to record temperature, aerodynamic loads, pressure, and vibrations.

By mid-2013, the GTV will be attached to a specially built outdoor platform to hold the aircraft in place when its three engines are powered on - a process known as light-off. Initial light-off test events will be performed without rotor blades, followed by more rigorous tests with the blades attached, a statement said.

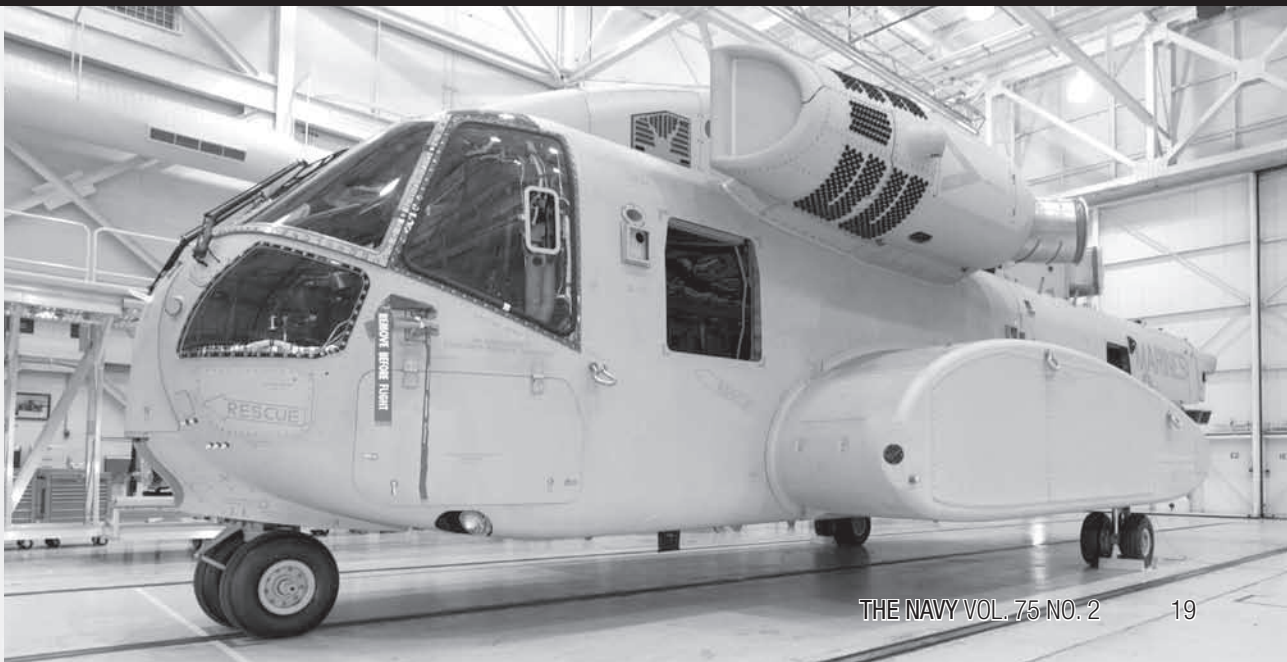
Currently in its US\$3.5 billion system development and demonstration (SDD) phase, the CH-53K programme will ultimately see the USMC take 200 helicopters from 2019 to replace the incumbent CH-53E Super Stallion.

Although the CH-53K will maintain virtually the same footprint as the CH-53E, it will have nearly triple the payload with 12,247 kg over 110 nm under hot-and-high conditions such as those found in Afghanistan. Its maximum gross weight with internal loads will be 33,565 kg compared with 31,638 kg for the CH-53E, and 39,916 kg with underslung loads compared with 33,339 kg for the CH-53E.

In addition, the CH-53K will be fitted with new systems and equipment, such as a 'glass cockpit', fly-by-wire flight controls, upgraded rotor blades with anhedral tips to improve lift and speed performance, a low-maintenance elastomeric rotorhead, more powerful engines, a locking cargo rail system, external cargo-handling improvements, as well as survivability enhancements. Operation and support costs will also be dramatically reduced compared with the current model aircraft.

The helicopter's major fuselage sections are supplied by Aurora Flight Sciences, ITT Exelis, GKN Aerospace, and Spirit Aerosystems. The prototype assembly line is located at Sikorsky's Florida Assembly and Flight Operations facility in West Palm Beach. Ground and flight testing will occur at the Developmental Flight Center at the same Florida site. ■

08 Sikorsky has delivered the first prototype CH-53K Ground Test Vehicle heavy lift helicopter for the USMC to start ground run testing activities. (Sikorsky)



# HEAVY LIFTING FOR FOUR DECADES

## THE NAVY'S LANDING CRAFT HEAVY

By CMDR Greg Swinden RAN

During early December 2012 three of the RAN's long serving Landing Craft Heavy (LCH) HMA Ships BALIKPAPAN, BETANO and WEWAK decommissioned (WEWAK on 11 December at HMAS CAIRNS and BALIKPAPAN and BETANO on 13 December in Darwin).

It is expected within the next two years that their sister ships BRUNEI, LABUAN and TARAKAN will also be paid off. This article will not examine the future LCH replacement (Project JP2048 Phase 5) but will look back over the nearly 40 plus years of service by the BALIKPAPAN class LCHs. Known fondly throughout the fleet as 'shoeboxes' they have quietly and efficiently provided outstanding service to the navy and the nation.

When built the LCHs were expected to have a life span of 15-20 years and retire in the late 1980s. However delays in identifying a suitable replacement meant the LCHs continued in service and frequent plans to decommission then in the 1990s and early 2000s were shelved time and time again. This was fortunate for the ADF as virtually every time the plan to pay off the LCHs was raised an overseas operation or natural disaster occurred and these offered a helpful reminder as to why we have this type of vessel.

### IN THE BEGINNING

The concept of the LCHs began not with the navy; but with the army. In the 1960s the Australian Army possessed a substantial but aging water transport capability consisting of a variety of small water craft, landing craft, tugs and four Landing Ships Medium (LSM). The larger vessels were manned by members of the Royal Australian Engineers - Transport Service (32 Small Ships Squadron). The Royal Australian Corps of Transport (RACT) was formed in June 1973 and then assumed all responsibility for water transport within the Army<sup>i</sup>.

The LSMs were World War II vintage vessels that were purchased in late

1950s from the US Navy which had several mothballed in Japan. The four LSMs (HARRY CHAUVEL, CLIVE STEELE, VERNON STURDEE and BRUDENELL WHITE) all saw extensive service on re-supply runs to Papua New Guinea, Borneo and South Vietnam during the 1960s. By the end of the decade they were due for replacement as were the ALC 50 landing craft.

In 1969 the army ordered eight new 310 ton ocean going LCHs from the shipyard of Walkers Ltd of Maryborough, Queensland (being vessels 61 – 68 built at this shipyard). The eight vessels were all to be named after World War II Australian amphibious landings. Two of the names, LABUAN and TARAKAN, had been previously used for RAN landing ships<sup>ii</sup>.



An early image of six LCH in line astern formation. They served for at least 40 years before the first was decommissioned. (RAN)

#### The eight LCHs<sup>iii</sup> were:

Name	Laid Down	Launched	Commissioned
BALIKPAPAN (L126)	3 June 1971	7 August 1971	8 December 1971
BRUNEI (L127)	9 August 1971	8 October 1971	5 January 1973
LABUAN (L128)	1 November 1971	29 December 1971	9 March 1973
TARAKAN (L129)	12 December 1971	16 March 1972	15 June 1973
WEWAK (L130)	21 March 1972	19 May 1972	10 August 1973
SALAMAUA (L131)	29 May 1972	27 July 1972	19 October 1973
BUNA (L132)	31 July 1972	26 September 1972	7 December 1973
TANO (L133)	3 October 1972	12 December 1972	8 February 1974



HMAS TARAKAN with a full load of 12 M-113 APCs and one 5-ton Mack truck. The LCH's had a very good load carrying capacity. (RAN)

The lead vessel, BALIKPAPAN (which also gave its name to the class), entered army service in early December 1971, painted green and crewed by 13 soldiers with a Warrant Officer 1st Class in command. The contract terms provided that BALIKPAPAN was to be subject to six months operational use before certain design decisions were finalised and the delivery of the remaining vessels was delayed as a result<sup>iv</sup>.

Following the Australian withdrawal from South Vietnam in 1972 the Australian Armed Forces entered a period of strategic uncertainty. The Tange Review of the early 1970s amalgamated the three separate Departments of Navy, Army and Air and created the Department of Defence and the Australian Defence Force (ADF). Among the many changes made during this period was the decision that the navy would operate all sea going vessels and the army would restrict its water craft to harbour vessels and small amphibious vessels such as the LCM-6/LCM-8 and the Lighter Amphibious Resupply Cargo vessel 5 (LARC-5). The army subsequently disposed of its larger vessels. Overall this policy change also added to the delay in commissioning the LCHs.

The follow on seven LCHs were commissioned directly into the RAN and, on 27 September 1974, BALIKPAPAN now painted grey was transferred to the navy. On 14 November 1974 SALAMAUA and BUNA were transferred to Papua New Guinea, along with five Attack class patrol boats, to form the nucleus of the naval arm of the Papua New Guinea Defence Force (PNGDF). SALAMAUA (L31) and BUNA (L32) are still active with the PNGDF but of questionable materiel state and sea-worthiness and hence the current potential to transfer the three recently de-commissioned Australian LCHs to Papua New Guinea in the near future.

The remaining six Australian LCHs were based at HMAS MORETON in the Brisbane suburb of Bulimba (on the southern side of the Brisbane River) and were designated the 1st Australian Landing Craft Squadron. In 1979 LABUAN became the RAN Reserve Brisbane Port Division vessel and remained so until the Port Divisions were disbanded in the mid 1990s. Until the commissioning of the heavy landing ship HMAS TOBRUK in 1980, the LCHs were the ADF's only sea going amphibious capability although one defence commentator described this force as giving the RAN *a well above average amphibious capability for a medium power*<sup>v</sup>.

Sea state is also a vital factor and the weather expected en route will affect what and how much cargo can be embarked. On one occasion LABUAN carried two crated Sea King Mk 50 helicopters and in the late 1970s one LCH assisted the 19 tonne Carpentaria class patrol boat TULAGI in its transit from Sydney to the Solomon Islands by carrying extra fuel for the

## LCH CHARACTERISTICS

<b>Displacement</b>	310 Tonnes (Light) 520 tonnes (full load)
<b>Length (overall)</b>	44.5 metres (146 feet)
<b>Beam</b>	10.1 metres (33 feet)
<b>Draught</b>	2.2 metres (7 feet) when loaded
<b>Speed</b>	10 - 11 kts (sea state dependent)
<b>Range</b>	4830 Kilometres (3000 nautical miles) at 9 kts
<b>Complement</b>	2 officers and 11 Sailors (although extra personnel can be carried if an accommodation module is fitted in the Well Deck). Normally there are no female crew due to no suitable messdeck accommodation but there have been female Commanding Officers and Executive Officers as cabin accommodation is available for them.
<b>Armament</b>	2 x 0.50 machine guns and small arms
<b>Machinery</b>	Twin Screw. When built the LCHs were driven by two General Motors Detroit Diesel engines type 12V-71N. Each developing 340 BHP at 1800 RPM driving through 4.13:1 Reverse Reduction Gear Boxes for maximum propeller speed of 436 RPM. They are now powered by two Caterpillar 3406E Diesel engines.
<b>Radar</b>	Decca 101 (when built), RM 916 (in 1980s). The current radar is the Bridgemaster II C252/8 AG Series.
<b>Echo Sounder</b>	Sperry Marine 5100
<b>Gyro Compass</b>	Sperry Marine (C Plath) NAVIGAT 2100 Fibre Optic.
<b>Fresh Water</b>	45 tonnes (with the ships reverse osmosis desalination system able to produce 1 ½ tonnes per day while underway)
<b>Load Capacity</b>	A typical load could comprise three main battle tanks (i.e. Centurion or Leopard 1) or 13 x M-113 armoured personnel carriers or four x LARC-5 or 23 quarter tonne trucks. 20 foot shipping containers (both dry and refrigerated) can be carried or an accommodation module can be embarked. Ultimately the load out depends on the load/fuel balance such as 175 tonnes of cargo allows a range of 1,300 nautical miles and the reduction in cargo increases the vessels range. Up to 400 troops could be carried but this would often only be a short duration transit from troopship to a port facility or beach.



The LCH HMAS BALIKPAPAN in Dilli Harbour during the Timor operation. The LCHs were indispensable to this operation. (RAN)

vessel<sup>vi</sup>. In 1984 BALIKPAPAN carried RAAF vehicles, equipment and personnel from Brisbane to Penang, Malaysia, a distance of over 5,400 nautical miles.

## THE 'INTER WAR' PERIOD (1972 - 1999)

Many Australian defence commentators consider the period after the Vietnam War and prior to the East Timor Campaign as the 'quiet time' of the ADF; but not so for the Navy and certainly not for the LCH fleet. Exercises with the Army in Shoalwater Bay were common place and in April 1974 BETANO, BUNA and BRUNEI deployed to Lord Howe Island to prove the ocean going capability of the vessels. In April 2006 BRUNEI repeated this voyage: taking part in the 75th anniversary of Sir Francis Chichesters' visit to the island during his 1931 solo trans Tasman Sea flight from Australia to New Zealand. The LCHs frequently visited Papua New Guinea and on one occasion a 400 nautical mile transit of the Fly River was undertaken.

On Christmas Eve 1974 the city of Darwin was devastated by Cyclone Tracy and within two days the bulk of the RAN fleet was deployed on Operation *Navy Help Darwin*. Among the ships sent to help clean up and rebuild Darwin were five LCHs (only LABUAN then in preparation for refit missed out). Sailing from Brisbane they arrived in Darwin in mid January 1975 and were immediately employed moving equipment and personnel in the devastated area. The ability of the LCHs to deliver equipment, supplies and personnel over beaches and via damaged port facilities made them invaluable for the reconstruction effort.

The LCHs also operated as diving tenders, frequently supporting clearance diving teams deployed around Australia and the South West Pacific where the divers disposed of World War II ordnance and removed coral outcrops which were a hazard to safe navigation. Although this might sound like environmental vandalism the creation of channels through coral reefs, and the removal of coral outcrops, was essential to the survival of these isolated communities and also allowed for the safe mooring of their fishing vessels during bad weather. The LCHs were ideal for this role due to their shallow draft and ability to embark an accommodation module and several tonnes of explosives (e.g. in 1979 WEWAK carried 250 obsolete anti submarine mortar shells which were used to blast a

new boat entrance at Nora Harbour in the Solomon Islands).

On several occasions the LCHs were also used as interim hydrographic ships to augment HMA Ships MORESBY and FLINDERS. In 1978 TARAKAN conducted soundings of Port Clinton, Queensland and this was repeated in 1982 by LABUAN. During the period 1985 - 88 BETANO and BRUNEI were permanently attached to the Hydrographic service for surveys in Northern Australian and Papua New Guinea waters. From 1991 - 95 TARAKAN and BALIKPAPAN were also used as interim survey vessels conducting Operation *Beachcomber* tasks. This consisted of collecting beach and hydrographic information in northern Australia for operational planning - particularly for amphibious exercises. After the opening of new bases in Darwin and Cairns, in the early 1980s, the LCHs were homeported there instead of at MORETON and after TOBRUK was relocated to Sydney this base lost its role in supporting the RAN's amphibious vessels. Eventually two LCHs were based in Darwin and four in Cairns.

On 28 May 1984 BALIKPAPAN departed Brisbane on the longest sea voyage ever conducted by an LCH (over 5,400 nautical miles). Her task was to deliver a variety of air force vehicles and equipment to RAAF Base Butterworth, at Penang, in Malaysia. A small contingent of RAAF personnel was also embarked for this voyage via Cairns, Darwin, Jakarta and Singapore. Once this equipment was delivered, on 23-35 June, BALIKPAPAN returned to Australia via Singapore, Benoa, Darwin and Cairns before arriving in Brisbane on 7 August 1984: once again proving the ocean going capability of the LCHs.

In August 1985, as part of economic rationalisation, three LCHs (BALIKPAPAN, TARAKAN and WEWAK) were decommissioned and placed in reserve in Cairns. With LABUAN supporting RAN Reserve training only two LCHs were available for service. TARAKAN (known fondly as Trash Can) was re-commissioned in 1988 and BALIKPAPAN (or Balik<sup>viii</sup>) in 1990 although only as a RAN Reserve training vessel for the Darwin Port Division. WEWAK, however, languished in dry lay up in Cairns until late 2000 when



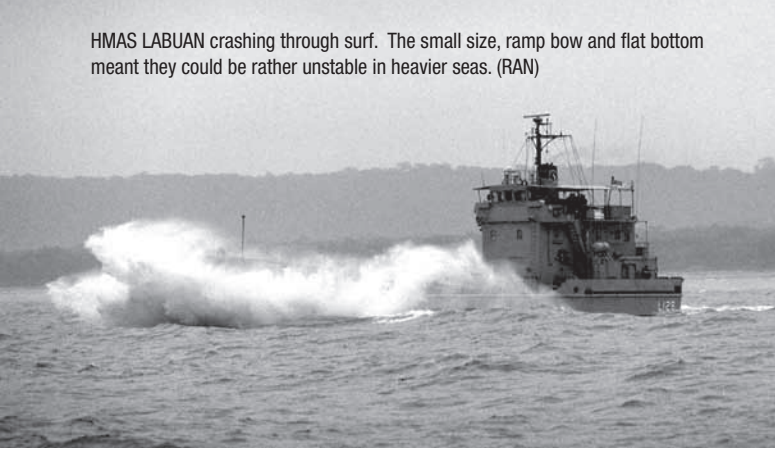
HMAS BRUNEI on the beach in Dilli unloading a large truck with a full load of water jerrys. (RAN)

she was reactivated; after much maintenance and repair as she had been a steady source of spare parts to keep the other five vessels functioning. She was re-activated in order to ensure the continued support to the ADF on operations in Bougainville, East Timor and the Solomon Islands.

During the 1990s the LCHs were involved in frequent amphibious exercises with the Australian Army. The annual *SQUADDEX* in Queensland waters was the main activity but they also regularly took part in exercises



HMAS LABUAN crashing through surf. The small size, ramp bow and flat bottom meant they could be rather unstable in heavier seas. (RAN)



*Tasman Link, Swift Eagle, Initial Landing, Kakadu and Tandem Thrust.* They have also been used for target towing as the large Mk-5 catamaran target can be deployed from the tank deck. Exercises with the PNGDF were also conducted on a regular basis as well as other diplomatic and constabulary tasks.

From May 1992 until April 1993 TARAKAN assisted the Great Barrier Reef Marine Park Authority during Operation *Clamsaver* which saw her relocate over 7,500 clams from Orpheus Island to Grub Reef to alleviate overcrowding and a potential starvation issue due to lack of nutrients for the clams. In November 1997 LABUAN and TARAKAN were deployed to northern Papua New Guinea as part of Operation Sierra to provide drought relief assistance. Again the ability of the LCHs to get into shallow waters, and remote areas, to deliver humanitarian stores and equipment was displayed.

The 'shoeboxes' also helped secure Australia's fishing grounds through the removal of 'ghost nets'. These were discarded nets, that had been abandoned by fishing vessels, which then drifted across our northern waters killing all sea life that became entangled in them. The LCH was an excellent platform to deal with these nets. The ghost nets were hauled in over the bow door and stored on the tank deck for later disposal ashore, but it was hard and difficult work in northern climates with the often overwhelming smell of decomposing fish.

## OPERATIONS IN BOUGAINVILLE, EAST TIMOR AND THE SOLOMON ISLANDS (1997 – 2006)

In late 1997 the long running civil unrest in Bougainville (between the Papua New Guinea Government and break away factions on the island of Bougainville) appeared to have been settled by discussions held in New Zealand. As a result of these talks a cease fire took effect and an Australian-led Peace Monitoring Group (PMG) was set up on the island. This task became known as Operation *Bel Isi II*. The re-supply of the PMG and also the movement of equipment and personnel to remote locations around the coastline was a major difficulty and only so much could be done using air assets. By early 1998 the LCHs were conducting regular re-supply runs from Cairns (particularly provisions, vehicles and bulky stores) to the main PMG base at Loloho<sup>viii</sup>.

Additionally the LCHs carried out coastal patrols and moved PMG personnel, who needed to conduct regular patrols, together with vehicles, stores and equipment to isolated and under developed locations around the coast. Most of Bougainville was poorly developed and the ravages of a decade of civil war had also take its toll on the islands limited infrastructure

such as roads, airfields and ports. All six LCHs carried out these re-supply and patrol tasks over the six years (1997 – 2003) that Operation *Bel Isi II* was in force.

Then in 1999 Australia took command of the International Force East Timor (INTERFET) to restore law and order in East Timor. Fighting had broken out following the UN monitored referendum in which the people of East Timor had voted overwhelmingly in favour of autonomy from Indonesia. Pro-Indonesian militia gangs opposed the referendum decision and commenced killing pro-autonomy supporters and conducting wide scale destruction of villages and towns.

Operations *Stabilise* and *Warden*<sup>ix</sup> began on 16 September 1999 and once again the LCHs were heavily involved in moving personnel, vehicles, stores and equipment throughout East Timor. This was particularly vital for the re-supply of INTERFET forces in the Oecussi Enclave on the north coast of the island of Timor. The enclave was physically separated from the main portion of East Timor and the roads in and out had to cross Indonesian territory. While some supplies and personnel could be flown in the bulk of the logistics support came by sea via the LCHs and later



HMAS BETANO delivers soldiers from 1 RAR to the beach during amphibious Exercise SEA LION 2012. (RAN)

civilian vessels. This work continued after the UN Transitional Authority East Timor (UNTAET) came into force on 20 February 2000 and Operation *Tanager* was declared. The LCHs were also useful in moving displaced East Timorese civilians and returning them to their home towns.

East Timor was another poorly developed area and during the wet season the roads were often impassable. The LCHs were kept very busy providing logistics support to INTERFET forces particularly in the southern portion of Sector West through Suai. Often the LCHs would beach at Suai in order to offload fuel and food, but there were times when the weather was too rough and they were unable to beach themselves due to the risk of broaching and being washed ashore. All of the LCHs were involved in the operations in East Timor in 1999-2000 and are entitled to the Campaign Award *East Timor*. This support to East Timor was concurrent with the re-supply and patrol work being carried out in Bougainville and the LCHs were worked exceptionally hard. This was the major reason that WEWAK was re-commissioned on 2 April 2000 after being in dry lay up for 15 years and by mid July 2000 she was serving in East Timor.

There was, however, to be no rest for the LCHs. In 2003 Operation *Anode* was initiated to support the Regional Assistance Mission Solomon Islands (RAMSI) to restore law and order in the Solomon's after the almost complete breakdown of government authority. Once again the LCHs were

involved in re-supply missions from Australia and also moving personnel, vehicles, equipment and stores around the under developed island chain.

The LCHs also supported the later operations in East Timor. In May 2005 BALIKPAPAN was briefly deployed to East Timor as part of Operation Spire (logistics support to the ongoing UN mission) and in May 2006 BALIKPAPAN and TARAKAN deployed to East Timor (Timor Leste) for Operation Astute which was to stabilise the political situation after an attempted military coup. These two vessels helped offload troops, vehicles, stores and equipment from the three large amphibious ships (HMA Ships KANIMBLA, MANOORA and TOBRUK) as the port facilities in Dili Harbour were insufficient to enable alongside offloading to be undertaken easily.



HMA Ships BALIKPAPAN (closest to camera with two ISO containers onboard), BENALLA and PIRIE enter Darwin Harbour in formation on completion of Exercise TRITON THUNDER 2012. Not all loads carried by the LCHs were army vehicles. Many times cargo and even Clearance Divers on EOD missions were embarked. (RAN)

## THE NEW CENTURY (2006 – 2012)

Throughout the early years of the 21st Century the LCHs continued to work hard during various exercises – particularly Exercises Sea Lion, Croix Du Sud and Sea Eagle where they operated with KANIMBLA, MANOORA and TOBRUK. Natural disasters and humanitarian tasks, however, were to become the major focus. On 20 March 2006, Cyclone *Larry* hit Cairns and caused extensive damage. The day before WEWAK and LABUAN had retreated up Wahday Creek and tied up to the extensive mangrove system in order to ride out the storm. Once the cyclone had passed they were joined by TARAKAN and became part of the ADF contribution to Operation *Larry Assist* transporting personnel and essential supplies from Townsville to Mourilyan Harbour thus bypassing the flooded road system. Once again the LCHs proved their versatility in operating in remote, under-developed and flooded areas.

In February 2011 Cyclone Yasi crossed the north coast of Queensland causing extensive damage. BRUNEI and TARAKAN were deployed for Operation Yasi Assist and moved heavy lift vehicles, stores and equipment from Townsville to Mourilyan Harbour which was then used to support clean up operations at Tully and Mission Beach. The LCHs also operated in the South West Pacific and South East Asia. During Exercise *Pacific Partnership* 2010 LABUAN and TARAKAN were deployed to assist in moving medical/dental personnel and construction stores to remote locations, often unreachable by road or air, to enable clinics to be conducted and building projects to be completed\*. The following year BALIKPAPAN and BETANO supported Exercise *Pacific Partnership* 2011.

In June-July 2012 TARAKAN was deployed to Papua New Guinea to assist with Government elections. Her task was to carry personnel and bulky stores to remote coastal areas that were difficult to reach by road and did not have adequate airfields or helicopter landing sites. Once again the LCHs proved their worth in delivering the goods where often vehicles and aircraft can not go.

The LCHs have also been part of Operation Resolute (border protection duties) conducting occasional oil rig patrols in northern waters as well as inserting and extracting army patrols in obscure and out of the way places around the Australian coast.

## CONCLUSION

Since 1972 the LCHs have been quietly plodding along, at 11 knots, carrying vehicles, cargo and personnel to the remote areas of Australia, South East Asia and the South West Pacific. They have supported a wide variety of military, diplomatic and constabulary operations and been employed on tasks well outside their original design such as operating as diving tenders, target towers and interim survey ships. Australia has well and truly got its money's worth from these solid and dependable work horses. It can only be hoped that their replacements are up to the task as they have big 'shoe (boxes)' to fill. ■

- i In 1973 the RACT assumed all the water transport and amphibious responsibility for the Australian Army from the Royal Australian Engineers (RAE) and the Royal Australian Army Service Corps (RAASC). The RAASC was disbanded in 1973.
- ii The RAN operated six ex Royal Navy Landing Ship Tank (Mk 3) during the period 1946 – 1951. These were HMA Ships LABUAN, LAE, TARAKAN, LST 3008, LST 3014 and LST 3022.
- iii The Laid Down and Launching dates are taken from J.A Concannon's *Shipbuilding at Walkers Limited*, published on 2009 by the Maryborough District Family Historical Society and some dates differ from other publications.
- iv There was also generally a two month delay between the date of the vessel being handed over to the RAN and the actual commissioning date (e.g. BETANO handed over on 27 November 1973 but not commissioned until 8 February 1974).
- v Graeme Andrews *Fighting Ships of Australia, New Zealand and Oceania*, Reed Books, Sydney, 1980.
- vi Hawker de Havilland (Sydney) built a number of Carpentaria class patrol boats for Pacific and South East Asian nations during the late 1970s as part of Defence Cooperation Program. The 19 tonne TULAGI was assisted in its passage to the Solomon's, in April/May 1979, by WEWAK which pre-positioned 200 litre drums of fuel en route for the patrol boat.
- vii Not all warships get a nick-name and some are often politically incorrect such as BRUNEI being well known as Brown Eye.
- viii HMAS BRUNEI made the first re-supply run to Bougainville arriving on 24 February 1998.
- ix Operation Stabilise was the ADF operation in East Timor as part of INTERFET and Operation Warden was the broader ADF involvement in the 1999 East Timor deployment which included logistics support from Australia.
- x Exercise *Pacific Partnership* is a US led humanitarian exercise which has been conducted annually since 2006. The concept is to provide medical and dental clinics as well as complete construction tasks in under developed parts of South East Asia and the South West Pacific.



# PERILOUS TIMES IN THE SOUTH PACIFIC

By Murray Dear

**Murray Dear examines the early stages of World War II in the South Pacific in this second place entry for Navy League of Australia essay competition 2012.**

Germany's Pacific empire ceased to exist during World War I. Australian and New Zealand forces seized German New Guinea and Samoa respectively while Japan took the German naval base at Tsing Tao plus the Mariana, Caroline and Marshall Islands north of the equator.

These Pacific acquisitions, later legitimised by League of Nations mandates, effectively determined the starting positions for the great Pacific War which commenced on 7/8 December 1941. Stung by economic sanctions imposed for its aggressions against China, Japan commenced hostilities with simultaneous attacks on American and British forces at Pearl Harbor, Malaya, Singapore, the Philippines, Hong Kong, Guam, Wake Island and Shanghai.

While war with Japan was expected, the scale of initial Japanese successes came as a major shock to the Australian and New Zealand governments. It was quickly recognised that the South Pacific was in danger of being overrun by Japan with the two Dominions facing a threat of invasion by a rapidly advancing enemy.

## 24 SENTAI

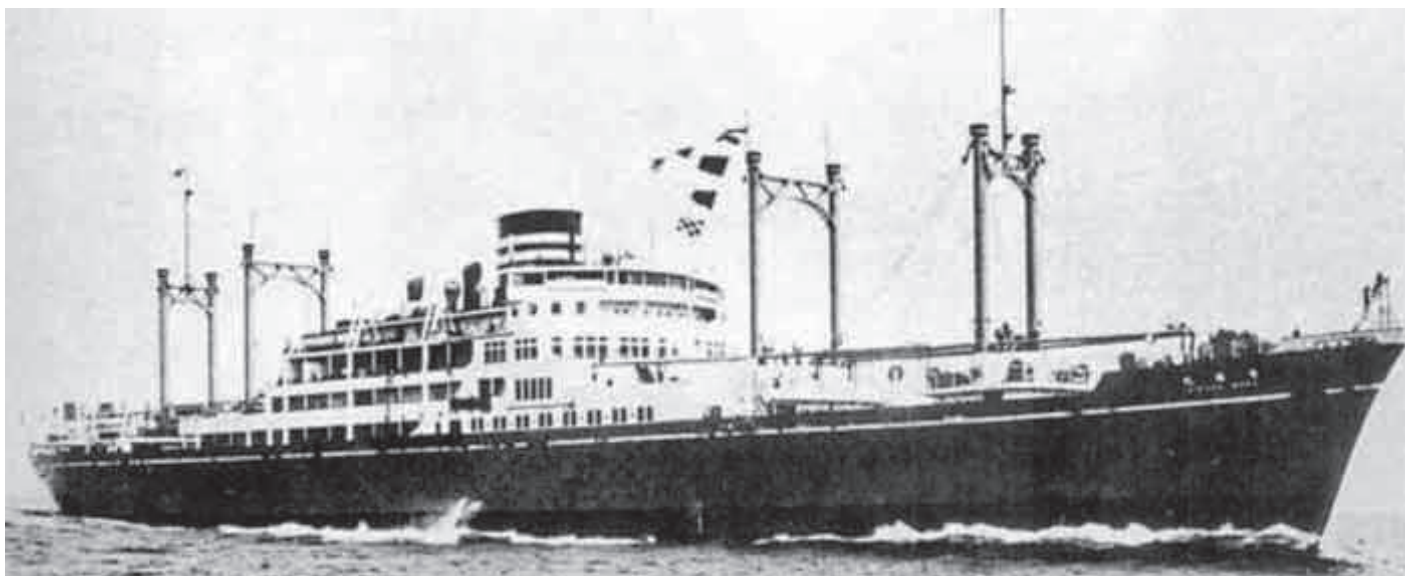
On the outbreak of war, 24 Cruiser Squadron (24 Sentai) comprising the auxiliary cruisers AIKOKU MARU and HOKOKU MARU immediately commenced commerce raiding operations in the South Pacific. The 10,500 ton sister ships had been laid down in 1939-40 as 21.5

knot passenger-cargo motor vessels. When built they were given strengthened decks for gun mountings and special heavy duty booms to handle floatplanes. They were converted to auxiliary cruisers during October and November 1941 and had sailed southeastward from Jaluit Atoll in the Marshall Islands on 26 November. On the same day Vice Admiral Chuichi Nagumo's carrier strike force, the Kido Butai, got under way for Pearl Harbor.

Each ship's armament consisted of four 150mm (5.9 inch) guns of Russo-Japanese War vintage, two 80mm anti-aircraft guns and four 25mm machine guns. Twin 530mm (24 inch) torpedo tubes were mounted and a Type 94 (Jake) floatplane was carried for scouting purposes. 24 Sentai was commanded by Rear Admiral Moriharu Takeda in HOKOKU MARU and he reported directly to Combined Fleet Admiral Isoroku Yamamoto.

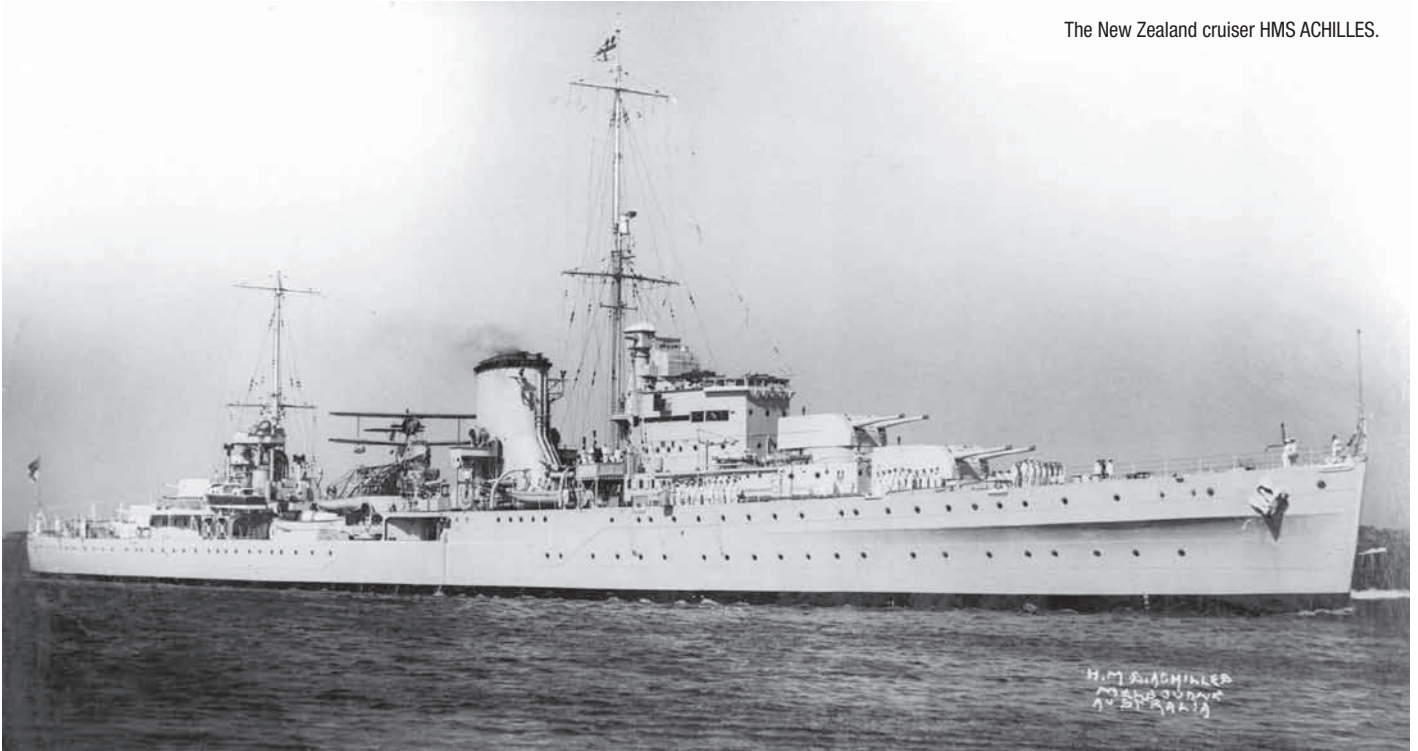
The ships initially searched sections of the United States-Samoa, Panama-Fiji and Panama-Sydney sea lanes and on 12 December a merchant ship was sighted in the evening twilight. The SS *Vincent* had almost reached the mid-point on its voyage from Sydney to the Panama Canal when it was stopped by HOKOKU MARU with a shot over the ship's superstructure. Being a slow old freighter of only limited value the *Vincent* was sunk with the crew being taken prisoner.

It wasn't until 31 December that another victim was sighted by AIKOKU MARU's floatplane. Under charter to the US Army, the SS



The Japanese Armed merchant cruiser AIKOKU MARU. On the outbreak of war, 24 Cruiser Squadron (24 Sentai) comprising the auxiliary cruisers AIKOKU MARU and HOKOKU MARU immediately commenced commerce raiding operations in the South Pacific. The 10,500 ton sister ships had been laid down in 1939-40 as 21.5 knot passenger-cargo ships.

The New Zealand cruiser HMS ACHILLES.



*Malama* was carrying military vehicles and freight from Honolulu to Wellington. The floatplane then appears to have crashed into the sea on its return flight. The next morning the HOKOKU MARU's floatplane was launched and after locating the *Malama*, fired two short bursts across the ship's bow. Upon intercepting *Malama's* distress calls, Takeda ordered the floatplane to return and be armed with bombs. The floatplane reappeared in the early afternoon and after the master received a signal to "Abandon ship", he ordered the *Malama* to be scuttled. The crew was subsequently picked up by the raiders.

On 19 January, 24 Sentai received an order to return to Truk in early February. This was achieved without incident although it was later determined that the raiders had narrowly avoided contact with two American carrier groups. With only two victims, Sentai 24 had not been particularly successful and no further Japanese raiding operations were conducted in the Pacific during the war.

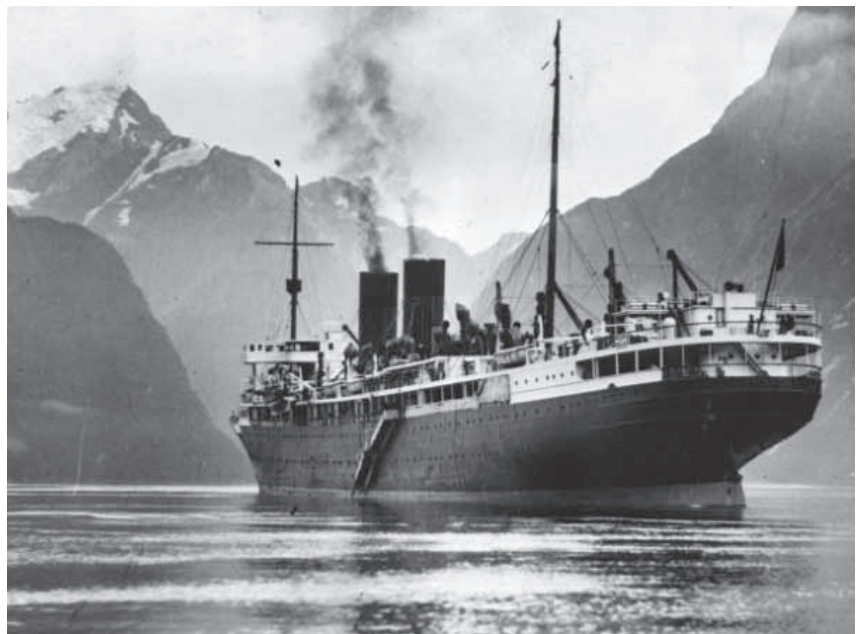
## DEFENDING THE SOUTH PACIFIC

At midnight on 18 December 1941 the New Zealand cruiser ACHILLES left Auckland to cover an important American convoy in the New Caledonia – Brisbane area. This convoy, comprising seven merchant ships escorted (wisely) by the US heavy cruiser PENSACOLA, had sailed from Honolulu on 29 November for Manila. The ships were carrying 4,600 American servicemen as well as 90 aircraft, guns and supplies. The convoy had been diverted to Brisbane where the troops and their equipment were to be used in "aiding the Allies of the USA." The ACHILLES met the convoy at midday on 19 December and the CANBERRA and PERTH joined the escort seven hours later. This troop convoy was to be the first of many in the defence of the South Pacific.

It was not clear to the Allies where Japan would strike first in the South Pacific. New Guinea, Fiji and Samoa were all considered prime targets and troop convoys to these areas needed to be provided with strong

naval escorts. New Guinea was Australia's responsibility and a convoy carrying 4,250 Australia troops and equipment aboard the *Aquitania*, *Sarpedon* and *Herstein* sailed from Sydney on 28 December 1941. This convoy, escorted by AUSTRALIA (Flagship), CANBERRA, PERTH and ACHILLES arrived safely at Port Moresby on 3 January 1942. While initially derided as "chocolate soldiers" these troops were to serve with great distinction at Kokoda.

New Zealand was responsible for Fiji's protection and the island's weak defences were strengthened by a second infantry brigade carried in a series of small convoys from Auckland. One of these convoys, comprising the armed merchant cruiser MONOWAI and the Bass Strait steamer *Taroona*, was attacked by the submarine I-20 shortly after departing Suva on 16 January 1942. All four torpedoes fired at the MONOWAI missed and when the submarine surfaced, a brief gun action ensued. No hits recorded by either vessel and after



The MONOWAI (later armed merchant cruiser )in NZ's Milford Sound 1933.

Vice Admiral Chuichi Nagumo.

the I-20 crash dived, MONOWAI and *Taroona* hastily departed at full speed southward through the narrow Mbengga Passage. The New Zealand troops sent to garrison Fiji subsequently served as 3 NZ Division in the Solomons campaign.

The American authorities gave high priority to reinforcing the 7th Marine Defence Battalion at Pago Pago, American Samoa. The 2nd Marine Brigade was ordered to depart San Diego on 6 January 1942 for Pago Pago in a convoy comprising troopships LURLINE, MATSONIA and MONTEREY plus naval auxiliaries LASSEN, JUPITER and KASKASKIA. The convoy was escorted by Rear Admiral Frank Jack Fletcher's Task Force 17 (TF17) comprising carrier YORKTOWN, heavy cruisers LOUISVILLE and ST. LOUIS plus four destroyers. Distant cover was provided by Rear Admiral William F. Halsey's TF8 comprising carrier ENTERPRISE, heavy cruisers NORTHAMPTON, CHESTER, SALT LAKE CITY and SAN FRANCISCO plus nine destroyers.

On 11 January, I-20 lobbed a few shells at the US Naval Station, Pago Pago intensifying American fears of a forthcoming invasion. The landing of the reinforcements and their equipment was achieved without incident. Halsey and Fletcher were then ordered air raids on the Gilbert and eastern Marshall Islands which placed these two powerful forces athwart the westward route of 24 Sentai. About mid afternoon on 25 January, Halsey's force crossed some 450 miles ahead of 24 Sentai's projected track and Fletcher crossed about 300 miles ahead of Takeda's force during the midwatch on the 26th.

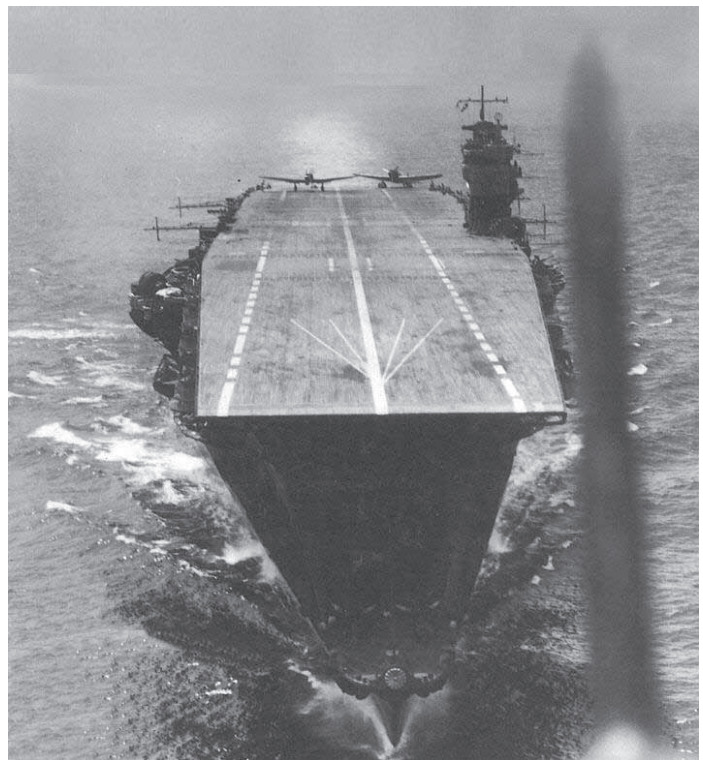
While these movements were taking place, a secret operation called the Bobcat Project was underway to establish an American naval fuelling station and airbase on the island of Bora Bora in French Polynesia. On 17 February 1942 five transports and their escorts arrived off Bora Bora with 4,000 naval personnel and a defence garrison of 3,900 troops. High priority was given to the security of this project and eight 180 mm (7.2 inch) coastal defence guns, formerly mounted on US Navy pre-dreadnought battleships, were installed to defend the island from any Japanese attack. The Japanese never discovered the existence of this naval tank farm and apart from the rusting remains of the coastal artillery, the most lasting legacy of the American occupation was a significant enhancement of the local gene pool.

## JAPAN MOVES SOUTHWARD

From their base at Truk and recently captured naval facilities on Guam, Japanese assault forces gathered to seize Rabaul and Kavieng in the Bismarck Archipelago. Vice Admiral Inouye's Fourth Fleet comprised 41 transports, six minelayers, fifteen gunboats, two tenders and sundry small craft. Protecting this invasion fleet was the South Sea Force comprising:

- **6 Cruiser Squadron**  
Heavy cruisers AOBA, FURUTAKA, KAKO, KINUGASA
- **18 Cruiser Squadron**  
Light cruisers TATSUTA, TENRYU, KASHIMA
- **6 Destroyer Flotilla**  
Light cruiser YUBARI and twelve destroyers of the KAMIKAZE and MATSUKI classes
- **7 Submarine Squadron**  
Depot ship JINGEI and sixteen submarines

Once Rabaul and Kavieng had been secured, the South Sea Force was to remain in the area to cover future offensive operations and to respond to any Allied counter attacks.



The Japanese carrier AKAGI. She was Nagumo's flagship in support of the Kido Butai force. She was laid down as an Amagi-class battlecruiser but converted to an aircraft carrier while still under construction to comply with the terms of the Washington Naval Treaty. Following Japan's renunciation of the treaty in late 1934, the ship was rebuilt from 1935 to 1938 with her original three flight decks consolidated into a single, enlarged flight deck and an island superstructure on the port side of the ship, which was an unusual arrangement; the only other carrier to share this feature was a contemporary, the HIRYU. The port side was chosen as an experiment to see if that side was better for flight operations by moving the island away from the ship's exhaust outlets.

Operating in support of this force was the Kido Butai. Under Nagumo's command were the carriers AKAGI (flagship), KAGA, ZUIKAKU and SHOKAKU, battleships HIEI and KIRISHIMA, heavy cruiser CHIKUMA and light cruiser ABUKUMA leading the First Destroyer Flotilla.

At midnight on 22 January the Japanese assault began. Defending Rabaul were an infantry battalion supplemented by 100 local volunteers, two six inch coastal defence guns, a two gun anti aircraft battery and 22 Wirraway aircraft operating from two airstrips. There was also a small naval base staff stationed at Rabaul but no warships.

All local resistance was quickly crushed by the powerful Japanese invasion force. Faced with the prospect of engaging Japanese Zeros with his vastly inferior Wirraways, Wing Commander Lerew signaled to the Australian Air Board "Nos morituri te salutamus (We who are about to die salute you)". This was not well received.

By 23 January Rabaul and Kavieng were in Japanese hands. Commander Fuchida, the leader of the Japanese air attack on Rabaul, noted "the employment of the Nagumo Force in this operation struck me as wasteful and extravagant. If ever a sledgehammer had been used to crack an egg, this was the time."

After a brief unsuccessful sortie searching for Halsey's force following his attack in the Marshall Islands, the Kido Butai deployed westward to support offensive operations in the Netherlands East Indies area culminating in an air attack on Darwin on 19 February. This was to be followed by an Indian Ocean deployment in April which resulted in the destruction of several Allied warships and air attacks on Ceylon.

## ANZAC FORCE

On 25 January 1942 the Combined Chiefs of Staff at Washington directed the establishment of an ANZAC Area under the command of Vice Admiral Herbert Leary USN. The western boundary of ANZAC Area and eastern boundary of ABDA Area was a southern extension of the border between Australian administered New Guinea and Netherlands New Guinea. The ships initially assigned to ANZAC Force were:

- **RAN**

Heavy cruisers AUSTRALIA and CANBERRA, light cruiser ADELAIDE, armed merchant cruisers WESTRALIA, KANIMBLA and MANOORA, destroyers STUART and VOYAGER, eight BATHURST class anti-submarine vessels.

- **RNZN**

Light cruisers ACHILLES and LEANDER, armed merchant cruiser MONOWAI

- **USN**

Heavy cruiser CHICAGO, destroyers LAMSON and PERKINS

- **RN**

Light carrier HERMES

On paper, ANZAC Force appeared a match for Japan's South Sea Force but on closer inspection this was not the case. CANBERRA was undergoing a refit at Sydney, ADELAIDE was undertaking escort duties in the Indian Ocean and HERMES was soon to be sunk off Ceylon with its escorting destroyer HMAS VAMPIRE by the Kido Butai. ANZAC force also lacked destroyers and had no submarines. The tasks assigned to ANZAC Force, in co-operation with available air force units were:

1. Cover the eastern and north-eastern approaches to Australia and New Zealand
2. Protect shipping, including coastal vessels
3. Support the defence of islands in the ANZAC Area
4. Co-operate with ABDA naval force, US Pacific Fleet and Australian and New Zealand local defence forces

The ANZAC Squadron which assembled at Suva on 12 February comprised AUSTRALIA, ACHILLES, LEANDER, MONOWAI, CHICAGO, LAMSON and PERKINS. Admiral Leary's staff transferred from CHICAGO to MONOWAI which then sailed for Melbourne. Rear Admiral John Grace RN assumed command of the squadron which sailed from Suva on 14 February.

## THE CRUISE OF I-25

While the ANZAC Squadron gathered at Suva, the Japanese submarine I-25 had commenced a long range patrol in the South Pacific. I-25 carried a Yokosuka E14Y (Glen) floatplane to undertake reconnaissance flights over Allied harbours. The strength and whereabouts of Allied naval forces in the South Pacific needed to be determined before resuming offensive operations in the area.

The submarine departed Kwajalein on 5 February and was off Sydney by the 14th. On the night of 16 February whether conditions had eased and a reconnaissance flight was made over Sydney Harbour. This was to be followed by flights over Melbourne and Bass Strait. Although the aircraft was sighted, it was not challenged.

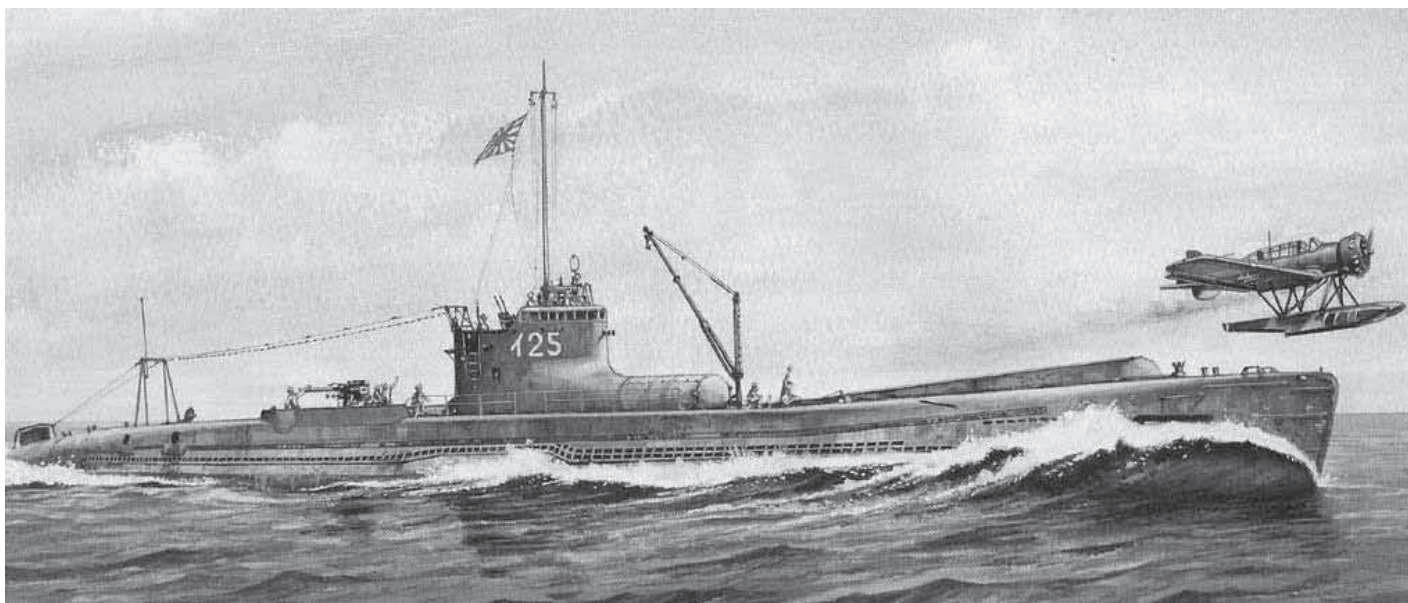
The floatplane was damaged while being recovered from the flight over Melbourne and this was repaired as I-25 crossed the Tasman on the surface. An inter-island ferry was sighted but not attacked as the submarine passed through Cook Strait. Reconnaissance flights were made over Wellington and Auckland Harbours, again without discovery.

Sailing northward from New Zealand, I-25 arrived off Suva on 18 March and a reconnaissance flight was made that night. What appeared to be an Allied cruiser was sighted and just then the floatplane was caught in the beam of a searchlight. A sham morse code response was flashed back by the aircraft's observer and remarkably this was accepted and acknowledged.

By 30 March, I-25 was refueling at Truk and the submarine reached Yokosuka on 4 April. The patrol had achieved little apart from exposing the lack of defence preparedness at Australian and New Zealand ports. The subsequent midget submarine attack on Allied warships in Sydney Harbour on 31 May benefitted from the intelligence gained during the cruise of I-25.

## CARRIER OPERATIONS

At noon on 16 February, the ANZAC Squadron met TF11 comprising carrier LEXINGTON, heavy cruisers INDIANAPOLIS, MINNEAPOLIS, PENSACOLA, SAN FRANCISCO and ten destroyers under the command of Vice Admiral Wilson Brown. The Admiral planned to attack Rabaul with carrier aircraft, US heavy bombers based in Northern Queensland and a naval bombardment by a cruiser and two destroyers. The ANZAC



A painting of the I-25 on patrol launching her reconnaissance float plane.



Vice Admiral Chuichi Nagumo.

Squadron was detailed to escort the oiler PLATTE, an order which was not well received by Admiral Crace. TF11 was located on 20 February by three Japanese flying boats of which two were shot down by LEXINGTON's aircraft. Later that afternoon TF11 was attacked by eighteen twin engined bombers, incredibly without any escorting fighters. Sixteen bombers were shot down for the loss of two American fighters. With the element of surprise lost, the mission was abandoned and TF11 withdrew to the south-east.

TF11, reinforced by the carrier YORKTOWN, was about to make a second attempt on Rabaul when news was received on 8 March that there had been a Japanese landing at Salamaua in the Huon Gulf. Admiral Brown immediately decided to attack this invasion force and headed into the Gulf of Papua while Admiral Crace patrolled south of the Louisiade Archipelago with AUSTRALIA, CHICAGO, two destroyers and an oiler.

In the afternoon of 10 March, 104 aircraft were launched from the two carriers and

flew over the Owen Stanley Range to attack the unsuspecting Japanese force. Two transports, a minelayer and a minesweeper were sunk and another seven ships, including the cruiser YUBARI, were damaged for the loss of only one aircraft.

While these two operations had achieved only modest results, the carriers and their aircrew had gained valuable combat experience which would be put to good use in the forthcoming Coral Sea and Midway battles.

## CONCLUSIONS

There can be little doubt that Australia and New Zealand were ill prepared for Japan's aggressions in the South Pacific. A bold and determined assault on Port Moresby in January, bypassing Rabaul and Kavieng, would have in all probability succeeded. The only two American carriers in the South Pacific, ENTERPRISE and YORKTOWN, were far to the east covering the reinforcement of American Samoa. It is quite likely that Nagumo's four big carriers and two battleships would have swept all Allied warships encountered before them.

The Japanese Navy lacked a true two ocean capability and major offensive operations in the South Pacific effectively ceased for three months while the Kido Butai ranged westward attacking Darwin and Ceylon.

This three month hiatus bought the Allies a valuable commodity – time. When the Japanese returned to seize Port Moresby in early May, an Allied naval strategy had been developed and warships concentrated to counter the threat. Port Moresby was to remain in Allied hands as a base for the New Guinea counter offensive.

The South Sea Force and ANZAC Force (minus the New Zealand cruisers) were to face each other twice, in the Coral Sea and Savo Island battles. By the conclusion of the Guadalcanal campaign, several of the ships from both of these forces had been sunk.

While the ANZAC Force was only short lived (ANZAC Area was divided into two operational commands in late April 1942), it formed the genesis of what was to eventually become the US Navy's Seventh Fleet. ■

## DISPATCH: HMA SHIPS WEWAK, BALIKPAPAN AND BETANO DECOMMISSIONED

On 11 December 2012 Navy personnel and dignitaries gathered at HMAS CAIRNS to farewell the Balikpapan class Landing Craft Heavy (LCH), HMAS WEWAK.

The ship was decommissioned after almost 40 years of service moving large amounts of cargo, personnel and equipment from larger ships to shore.

As friends and family looked on HMAS WEWAK's Commanding Officer Lieutenant Luke Weston and the ship's company farewelled their ship in a traditional Navy decommissioning ceremony.

"HMAS WEWAK has served for almost 40 years, conducting countless operational deployments and making a vital contribution to Navy's delivery of secure Australian waters," Lieutenant Weston said.

"It was my honour and pleasure to command her and it is with great fondness that we say farewell today."

HMAS WEWAK's decommissioning brings an end to nearly four decades of essential logistic support, not only to the Australian Defence Force but also to the broader civilian communities of Australia and the South Pacific. The high tempo of her commitments reflected her motto, Do Not Yield.

Later on 13 December 2013 Darwin Navy personnel and dignitaries, including Commander Australian Fleet, Rear Admiral Tim Barrett AM, CSC, RAN RAN, The Right Worshipful the Lord Mayor of Darwin Ms Katrina Fong Lim, Federal Member for Solomon Mrs Natasha Griggs MP gathered at HMAS Coonawarra to farewell two more

Balikpapan class LCHs, HMAS BALIKPAPAN and HMAS BETANO.

BALIKPAPAN and BETANO served with distinction for 41 years and 38 years respectively, conducting countless operational deployments and making a vital contribution not only to Navy's delivery of secure Australian waters but also Humanitarian support both her an overseas.

at high tempo in support of Navy operations at home and abroad.

"Commanding HMAS BALIKPAPAN has been an absolute career highlight and it is with great fondness that I farewell her today," Commanding Officer Lieutenant Justine Archer said.

HMAS BETANO Commanding Officer Lieutenant Christopher Cockerill also



Crew of the former HMAS WEWAK depart the ship during the decommissioning ceremony. (RAN)

As friends and family looked on the ships' Commanding Officers and companies farewelled their ships in a traditional Navy decommissioning ceremony.

Both Commanding Officer's expressed "great pride" at commanding their respective vessels and recounted the long and distinguished history of both vessels which have operated

expressed his fondness towards the ship saying, "Command is a privilege and I am extremely proud of the professionalism of my ship's company. We are extremely honoured to have had the chance to be a part of the final chapter of BETANO's long and distinguished history of service to the nation," he said.

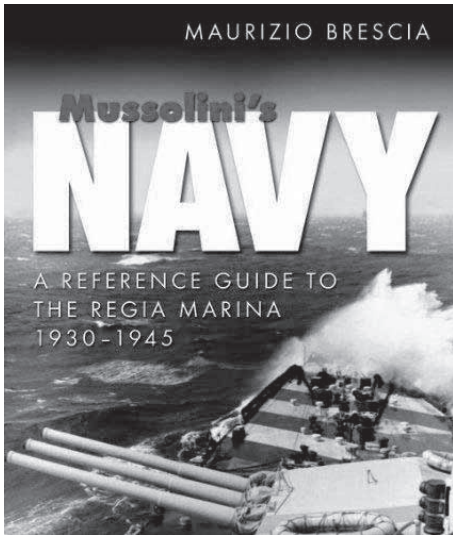
Eight LCH vessels joined the First Australian Landing Craft Squadron between 1971 and 1975. Each LCH was named after an amphibious assault of World War II. HMAS WEWAK was named after the amphibious assault on Wewak, Papua New Guinea, that took place on 11 May 1945 with the landing of 6 Division units by the corvettes HMA Ships DUBBO and COLAC and by US LSTs. HMAS BALIKPAPAN was named after the final landing of the Pacific War by the Australian 7th Division in Borneo on July 1945. HMAS BETANO was named after the amphibious landing at Betano in Timor on 23 September 1942.

All of the Balikpapan Class LCH ships are due to be decommissioned during the next two years. HMA Ships BRUNEI, LABUAN and TARAKAN are programmed to decommission in the last quarter of 2014.



The crews of HMA Ships BALIKPAPAN and BETANO lower the Australian White Ensign for the last time as they decommission the vessels. (RAN)





**Mussolini's Navy: A Reference Guide to the Regia Marina 1930-1945,**

By Maurizio Brescia  
 Seaforth Publishing, Barnsley, UK, 2012  
 192 pages  
 Hardcover  
 ISBN: 1848321155  
 Reviewed by VADM Peter Jones

For one of the larger and most distinctive of the world navies, it is has been unfortunate that there has not been a commensurate number of books dealing with the Italian Navy. In comparative terms the Royal Australian Navy has been better served not only in its published histories but also in the manner that its archival material and other primary sources have been preserved and made accessible for historians.

The reasons for the Italian situation lie not just in the arguably uneven performance of the Regia Marina in World War II. There have been a comparatively small number of naval historians researching this rich seam. Fortunately for the Italian Navy and all those interested in naval history this situation has steadily turned around since the 1990s. Works such as *The Italian Navy in World War II* by James Sadkovich have been important in this regard.

Maurizio Brescia's latest book is a major achievement and a milestone in the renaissance of Italian naval history. Dr Bescia is a highly regarded author on the Italian Navy. This book is the latest high quality book from Seaforth Publishing dealing with the Italian Navy. Another of their books is Erminio Bagnasco and Augusto de Toro's comprehensive review of the Littorio Class battleships that was reviewed late last year by *THE NAVY*.

In 240 pages Brescia's deals remarkably well with the history, infrastructure, ships, aircraft, personnel and uniforms of the Regia Marina. The strengths of Brescia's book are its authoritative treatment of the subject matter, his own excellent line drawings and the clarity of the photographs. For Australian readers most of the

photographs will be new to them. The Italians have built some of the most graceful warships ever to sail the seas and this book does full justice to them. Some of the most interesting photographs are those of warships that survived the war and were extensively modified to bridge the missile age. The shot of Terrier missile armed cruiser GARIBALDI is fascinating.

While the book gives a good overview of the operations, it does not set out to be the authoritative operational account of the Regia Marina. Not all minor actions are included. A case in point is the night Battle of the Strait of Otranto in November 1940 in which the elderly torpedo boat FABRIZI fired a torpedo at HMAS SYDNEY (but missed) as it valiantly but vainly attempted to defend a convoy from a powerful cruiser and destroyer force. Equally not all the engagements of the motor torpedo boat are included. In part this is due to significant work still required to research the Italian naval archives in Rome. In short that definitive account remains to be written. This does not detract from Mussolini's Navy which stands on its own merits.

Brescia's latest book is a gem and is thoroughly recommended.

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 indispensable 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, and the shipping and transport industries.

The strategic background to Australia's security is changing and in some respects has become less certain. The League believes that Australia should pursue the capability to defend itself, paying particular attention to maritime defence. 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 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 New Zealand, PNG and the South Pacific Island States
  - Supports close relationships with ASEAN, Japan, South Korea, India and China.
  - Advocates the acquisition of the most capable modern armaments, surveillance systems and sensors to ensure that the ADF maintains technological advantage over forces in our general area.
  - Advocates a significant deterrent element in ADF capability 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, recognising that this means in conjunction with allies and economic partners.
  - Endorses the control of coastal surveillance by the ADF, and the development of the capability for the patrol and surveillance of all of Australia's ocean areas, its island territories and the Southern Ocean.
  - Welcomes Government initiatives concerning the recovery of an Australian commercial fleet capable of supporting the ADF and the carriage of essential cargoes to and from Australia in times of conflict.
- As to the RAN, the League,** while noting the 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 concept of a Navy capable of effective action in war off both the east and west coasts simultaneously and advocates a gradual 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 general area.
  - Believes that the level of both the offensive and defensive capabilities of the RAN should be increased and is concerned to see that the substantial surface and sub-surface capability enhancements contained in the 2009 Defence White Paper should survive the forthcoming 2013 review of Defence capability; in particular a substantially strengthened submarine force, 3 Air Warfare Destroyers (AWDs), 2 landing ships (LHDs), 8 new frigates (Anzac class replacements), a large strategic sealift ship, 20 offshore combatant ships, 6 heavy landing craft and substantial numbers of naval combatant and ASW helicopters.
- Strongly supports the acquisition of large, long range and endurance, fast submarines and, noting the deterrent value and huge operational advantages of nuclear powered submarines and their value in training our anti-submarine forces, urges the continued consideration of nuclear power as an option for those vessels.
  - In order to mitigate any industry capability gap following the completion of the AWD program, recommends bringing forward the start date of the planned future frigate (Anzac replacement) program, recognising the much enhanced capability projected for these ships.
  - Urges that decisions to enhance the strength and capabilities of the Army and Air Force and to greatly improve the weaponry, and the intelligence, surveillance, reconnaissance, cyberspace and electronic warfare capabilities of the ADF be implemented.
  - Notes the potential combat effectiveness of the STOVL version of the JSF 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 and support vessels in the Navy's order of battle, and recognises the fundamental importance of a stable and continuous shipbuilding program for the retention of design and building skills and the avoidance of costly start up overheads.
  - Supports the efforts by Navy to rebuild the engineering capability to ensure the effective maintenance and sustainability of the fleet.
  - Advocates the retention in preservation (maintained reserve) of operationally capable ships that are required to be paid off for resource or other economic reasons.
  - Supports a strong Naval Reserve and Australian Navy Cadets organisation.
  - Advocates a strong focus on conditions of service as an effective means of combating recruitment and retention difficulties.
- 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.
  - While recognising budgetary constraints believes that, given leadership by successive governments, Australia can defend itself in the longer term, within acceptable financial, economic and manpower parameters.

The People's Liberation Army Navy destroyer Changzhou departing Sydney on 22 December 2012. (John Mortimer)



An MH-60R Seahawk with eight AGM-114 Hellfire missiles assigned to Helicopter Maritime Strike Squadron (HSM) 73 flies in front of the littoral combat ship USS Freedom (LCS-1), now sporting a new camouflage pattern reminiscent of WW II destroyers. FREEDOM, the lead ship of the Freedom variant of LCS, and her Seahawk have, for the first time, deployed overseas to South East Asia. (USN)





## THE NAVY LEAGUE OF AUSTRALIA

# SIXTH ANNUAL MARITIME AFFAIRS ESSAY COMPETITION 2013

The Navy League of Australia is holding a fifth maritime essay competition and invites entries on either of the following topics:

### TOPICS

- 20th Century Naval History
- Modern Maritime Warfare
- Australia's Commercial Maritime Industries

### CATEGORIES

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

**Professional**, which covers Journalists, Defence Officials, Academics, Naval Personnel and previous contributors to *THE NAVY*; and

**Non-Professional** for those not falling into the Professional category.

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

### PRIZES

- **\$1,000, \$500 and \$250** (Professional category)
- **\$500, \$200 and \$150** (Non-Professional category)

### DEADLINE

20 September 2013

Prize-winners announced in the January-March 2014 issue of *THE NAVY*.

Essays should be submitted either in Microsoft Word format on disk and posted 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.

