

THE NAVY

THE MAGAZINE OF THE NAVY LEAGUE OF AUSTRALIA

**THE RAN
OFFSHORE
COMBATANT
VESSEL**

**THE GROUNDING
OF HMS
NOTTINGHAM
(PART 2)**

**PARRAMATTA
AND AUCKLAND
JUNE 1941**

HILFSKREUZER



ISSN 1322-6231



01

AUSTRALIA'S LEADING NAVAL MAGAZINE SINCE 1938

\$5.95
INCL. GST



PACIFIC 2010 CONGRESS

The PACIFIC 2010 Maritime Congress

27 - 29 January 2010
Sydney Convention and Exhibition Centre, Sydney, Australia

Pacific 2010 Maritime Congress Comprising:
Pacific 2010 International Maritime Conference
Royal Australian Navy Sea Power Conference 2010

Held in association with the Pacific 2010 International Maritime Exposition
Organised by Maritime Australia Limited




Pacific 2010 International Maritime Conference

27 - 29 January 2010

MARITIME INDUSTRY – CHALLENGES,
OPPORTUNITIES & IMPERATIVES

For further information visit
www.pacific2010imc.com



Organised by
Engineers Australia
The Royal Institution of Naval Architects
The Institute of Marine Engineering, Science
and Technology

For further information on the above conference contact:



Tour Hosts Pty Limited
GPO Box 128
SYDNEY NSW 2001 AUSTRALIA
Telephone (61) 2 9265 0700
Fax: (61) 2 9267 5443
Email: pacific2010imc@tourhosts.com.au

Royal Australian Navy Sea Power Conference 2010

27 - 29 January 2010

COMBINED AND JOINT OPERATIONS
FROM THE SEA

For further information visit
www.seapower2010.com

Organised by
Royal Australian Navy
Sea Power Centre – Australia

For further information on the above conference contact:

Navy Events and Marketing
Navy Headquarters
R1-04-C041
Department of Defence
CANBERRA ACT 2600
Email: navymarketing@bigpond.com





Volume 72 No.1

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.

Vice-Presidents: RADM A.J. Robertson,
AO, DSC, RAN (Rtd); RADM DG
Holthouse, AO, RAN (Rtd); Matt Rowe

Hon. Secretary: Philip Corboy,
PO Box 128, Clayfield, Qld 4011.
Telephone: 1300 739 681,
Mob: 0421 280 481,
Fax: 1300 739 682
Email: nla@wxc.com.au

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: CMDR John M Wilkins, RFD*.
Hon. Secretary: Ray Gill JP

Membership Secretary: Ron Lyon

Correspondence:

PO Box 1303, Box Hill Vic 3128
Email: ausnavyleague@mac.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: Mary.Lacey@defence.gov.au

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: Mr Tony Lee.

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

Hon. Secretary: Mrs Christene Hardy,
4 Illawarra Road, Perth, Tas 7300.

State Branch:

Launceston: Mr Tudor Hardy,
4 Illawarra Road, Perth, Tas. 7300
Mrs L Cottrell, 5 Anchorage Street,
Clarence Point, Tas. 7280.

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

Neil Baird, Chairman Baird Publications,
Vice Admiral David Leach, AC, CBE,
LVO, RAN (Rtd), Vice Admiral Sir
Richard Peek, KBE, CB, DSC, RAN (Rtd),
Vice Admiral Chris Ritchie, AO, RAN
(Rtd), John Strang, Chairman Strang
International Pty Ltd.

CORPORATE MEMBERS

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

06 THE RATIONALE FOR THE RAN OFFSHORE COMBATANT VESSEL

By Sean Thornton

11 THE GROUNDING OF HMS NOTTINGHAM (PART 2)

23 PARRAMATTA AND AUCKLAND JUNE 1941

By PO Pete Cannon

28 HILFSKREUZER, GERMAN RAIDER OPERATIONS AGAINST AUSTRALIA AND NEW ZEALAND DURING WORLD WAR II

By Geoff Crowhurst

REGULAR FEATURES

- 02 From the Crow's Nest
- 04 The President's Page
- 16 Flash Traffic
- 22 Observations
- 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 15 February 2010

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 RN's new Astute class SSN ASTUTE heading to sea for the first time on sea trials (see Flash Traffic page 16). (BAE Systems)



THE 'BRONCO FACTOR' FOR THE LHDs

Sometime ago in Vol 70 No 3 of *THE NAVY*, this editorial suggested that Defence could exploit the synergies provided by the RAAF's F-35 JSF purchase (AIR-6000) and the RAN's LHD project (JP-2048 Ph 4A/B) (see, 'Let's not Relearn Gallipoli').

The editorial outlined a plan that said part of the AIR 6000 purchase of JSF could include some STOVL (Short Take Off and Vertical Landing) versions in the second buy under Phase 2B of the project. Phase 2A is set to buy 72 standard USAF variants of the JSF. The STOVL version could then operate from the flight deck of the LHDs.

The new Canberra class LHDs will provide the ADF with the ability to take land forces offshore away from RAAF land based fighter cover. Presently, there are no plans for those land forces to have LHD based air support, other than a limited number of Tiger reconnaissance helicopters (whose primary armament is geared towards reconnaissance/self defence rather than close air support).

Experience has shown that land forces deployed without organic air support are extremely vulnerable. Presently, the best way to support the force with the current JSF model chosen by the RAAF is to find a nation close to the operation that would be willing to host an Australian fighter base. While RAAF JSFs would then be able to provide cover for amphibious operations getting that near nation's basing assistance would be difficult to say the least. To add to the complexity of an overseas amphibious operation a significant land force would then be required to protect that base. Potentially making it unviable in any event and a logistics liability to the supported amphibious operation itself.

Having a capability such as the LHDs means that one day it could be used, and when used will mean the situation is a serious one requiring serious and decisive firepower to act as a force multiplier to the land force deployed. The realities and implications of this are probably still not fully understood by the ADF, and won't be until the LHDs arrive.

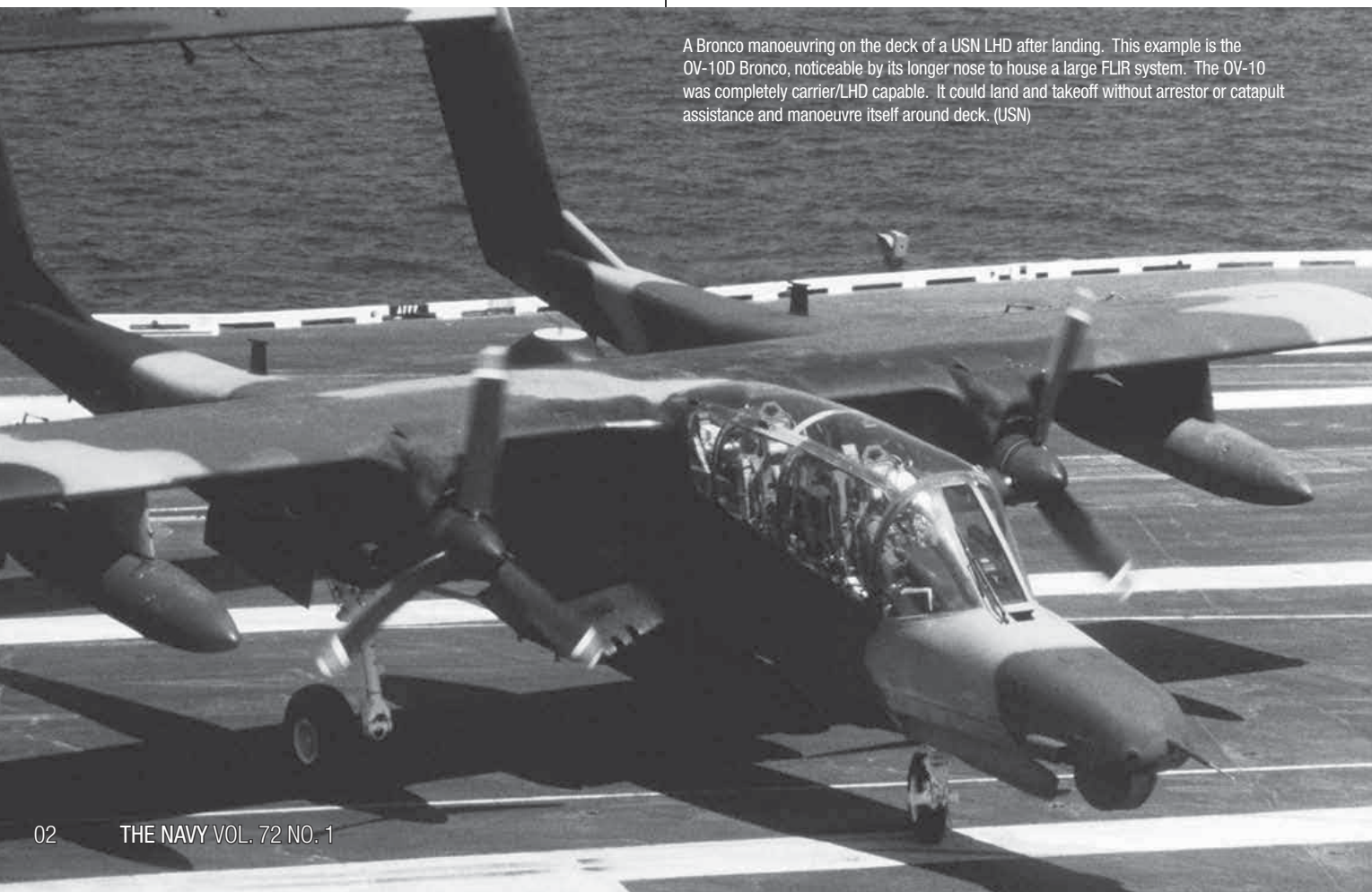
The editorial's suggestion for exploiting JSF synergies with LHD

capabilities was received positively by the main-stream national media and the public at large. Unfortunately, a response either way has not seen from Defence or Government.

The argument for a close air support capability for troops ashore from the LHDs was not intended to provide an air supremacy force for the LHDs but merely close air support at priority call for troops ashore encountering enemy resistance. Anti-air warfare would be provided by the new Hobart class AWDs (Air Warfare Destroyers) either through SM-2 or SM-6 missiles. The AWDs employment of Tomahawk cruise missiles, as announced in the last White Paper, could also have an air defence effect by attacking air bases and destroying aircraft on the ground, or runways and infrastructure required to operate the enemy's air combat capability. The idea for STOVL JSFs for the Canberra class LHDs was exactly along the same lines as the USMC's employment of Harriers from their LHDs, which are usually referred to as 'airborne artillery' for the Marines ashore.

Given the positive reception and the obvious need for such a capability for the ADF it was disappointing that the White Paper, published after the editorial, did not use the wave of media and public support to examine the troop support role for JSFs off the LHDs. However, since then the world's economy has suffered a number of severe 'corrections'. This has also impacted on Australia's Defence in the form of budget restrictions. So in the environment of tight fiscal pressures, Defence's need to save an unattainable \$2 billion p.a., and limited experience of the implications of offshore amphibious operations the need for close air support for Australian troops ashore seems to be being ignored. However, a recent USAF issued requirement for a new close air support fixed wing aircraft may be a solution to the ADF's requirement.

The US Light Attack and Armed Reconnaissance (LAAR) programme is expected to be part of the USAF's FY 2010 budget. The programme calls for a small and relatively cheap fixed wing aircraft to essentially support troops in Afghanistan. One of the lead contenders for this



A Bronco manoeuvring on the deck of a USN LHD after landing. This example is the OV-10D Bronco, noticeable by its longer nose to house a large FLIR system. The OV-10 was completely carrier/LHD capable. It could land and takeoff without arrestor or catapult assistance and manoeuvre itself around deck. (USN)



An OV-10 A Bronco on board the LHD USS NASSAU being towed from one of the LHD's aircraft elevators during the early 1980s. The small size of the Bronco imposed no additional manoeuvring or hangar limitations over and above any helicopter the ship normally embarked. (USN)

close air support aircraft is an updated 21st century version of the very successful Vietnam War era OV-10 Bronco aircraft being developed by Boeing.

The Bronco was developed during the 1960s and was able to operate from rudimentary forward air bases using roads as runways or from the decks of LHDs without catapult and arrestor gear support, given its STOL (Short Take Off and Landing) capability. Its speed was designed to be from very slow to medium, with much longer loiter times than a jet or helicopter.

It had a crew of two, each with their own Zero-Zero ejection seat surrounded by bullet proof glass, and could carry at least 2,400 pounds (1,100 kg) of ordnance, cargo, five paratroops or stretchers. It was stressed for +8 and -3 gs (basic aerobatic ability). It could fly at least 350 miles per hour (560 km/h), take off in less than 800 feet (240m) and convert to an amphibian. Various armaments included four 7.62mm machine guns with 2,000 rounds (as part of the aircraft), and external weapons pylons for rockets, bombs, napalm, 20mm gun pods, Sidewinder anti-aircraft missiles and/or long range fuel tanks.

The Bronco performed observation, forward air control, helicopter escort, armed reconnaissance, gunfire spotting, utility light air transport and ground attack, all of which will be needed by the ADF of the future that operates from the new LHDs far from land based air support.

The Bronco was used by the USAF, USN and USMC and six other international customers, some of whom still use it. The USMC finally retired the Bronco in 1995 after it served in its last war in Iraq (Operation Desert Storm).

The last US version of the Bronco, the OV-10D, was an extensively modified A-model airframe. The D model added a powerful Forward-Looking Infrared night-vision system with a camera mounted in a turret under an extended nose. The D also had bigger engines and larger fibreglass props to improve its STOL and flight performance. Other differences included chaff and flare dispensers midway down the tail booms and infrared-suppressive exhaust stacks to mask engine exhaust heat signatures.

Given the USAF requirement for a new close air support aircraft Boeing has recently put together plans to build a modernised and improved

version of the OV-10 Bronco, called the OV-10X. According to industry officials the plane would maintain much of its 1960s-vintage rugged external design. However, the 21st century modernisations are tipped to include a computerised glass cockpit, a helmet mounted display and cueing system, electronic surveillance sensors, anti-aircraft missile warning and jamming/decoy systems, Link 16, laser designator and smart weapon capabilities, i.e. Hellfire, Maverick, laser guided and/or JDAM bombs. Boeing indicates that international interest in restarting production of the Bronco is growing to compete with other light attack aircraft such as the T-6B Texan II and EMB-314 Super Tucano.

One of the advantages of the Bronco design over a low wing propeller driven aircraft for an Australian LHD is its high wing with high mounted propeller engines. As the Canberra class LHDs come with ski jumps to assist in rolling take offs by fixed wing aircraft a high wing propeller driven aircraft would be able to avoid propeller strike on the ramp. Unlike other single engine light fixed wing close air support aircraft such as the T-6B Texan II and EMB-314 Super Tucano. The Bronco is also already LHD/sea certified.

A Bronco capability would cost significantly less than a STOVL JSF one, but still provide a priority call close air support aircraft with real punch for troops ashore under enemy threat. Its peace operations utility would also be handy with the ability to land and takeoff on roads, carry wounded on stretchers, cargo, conduct surveillance missions and act as an airborne command post/relay.

Australia has long had a defence policy of self-reliance. The 'raison d'être' of the LHDs comes from the lessons of Australia's lead role in the East Timor and Pacific Island peace keeping operations of the last 10 years. Having the LHDs and the land force they embark only self reliant for a small part of the conflict spectrum without US support is hardly smart or a good return on the taxpayer's investment. If STOVL JSFs are beyond the budget then a cheaper capability in the form of the OV-10X should be seriously considered. Given the vast array of missions the OV-10 has and can perform would anyone really believe that this close air support capability would ever go to waste?

NAVY LEAGUE AGM

The Annual Meeting of the Navy League and of the Federal Council of the League was held in Canberra on 30 and 31 October.

Once again the participants enjoyed a busy and interesting conference. Over the weekend meetings, discussions and briefings were held at the National Press Club, Navy Headquarters, Brassey Hotel and HMAS HARMAN.

On the Friday afternoon we had the benefit of a briefing given by Captain Gordon Andrew, Director, Seapower Centre - Australia. Members of Federal Council look forward to the briefing provided by Navy and appreciate this contribution to our annual conference.

On Saturday a stimulating two hour session was held with Vice Admiral Russ Crane, Chief of Navy. All present thoroughly enjoyed the discussion and exchanges which took place between the Admiral and members of Federal Council.

The short list for the Navy League of Australia Perpetual Trophy – Community Award this year comprised HMAS PENGUIN, Hydrographic Ship Blue Crew, and HMAS KUTTABUL.

This is an award to which Federal Council attaches considerable importance. The aim of the award is to both encourage and to recognise the outstanding community support provided by the ships and establishments of the RAN.

This year Hydrographic Ship Blue Crew was selected as the winner of the award. The ships company of HS Blue Crew is quite small in comparison with Major Fleet Units and tiny compared with some shore establishments. The efforts of the 50 or so members of HS Blue Crew in Cairns, in Brisbane and Southeast Queensland and in the Solomon Islands were considered well deserving of the award. Federal Council was also pleased to note the ongoing support given to Australian Navy Cadet unit TS Walrus.

Our congratulations to HS Blue Crew and very well done HMAS PENGUIN and HMAS KUTTABUL. Each of the two shore establishments can be proud of the contribution they made to their communities.

Many topics were dealt with during the course of the weekend. As might be expected, some topics dealt with the operations of the League, including a review of various properties owned or controlled by the League, our new and developing website and our very successful magazine *THE NAVY*.

Other matters related to issues of concern to the League. These included Australian Navy Cadets and their funding, RAN ship visits to Australian ports, and the future of ADF bases around Australia.

Readers of this magazine will not be surprised to learn that the future submarine project and the question of nuclear propulsion was discussed. So too was the desirability of the RAAF including STOVL aircraft in its Joint Strike Fighter purchase.

MARITIME ESSAY

The Maritime Essay Competition continues to flourish. This year again produced excellent entries in both the Professional and the Non-Professional categories.

The winner in the Professional Category was PO Peter Cannon. This is PO Cannon's second win. Although the judging panel pondered the question of awarding the prize two years in a row to the same contestant, they felt that they could not go past this exciting, well written account of the actions of HMAS PARRAMATTA and HMS AUCKLAND in the Mediterranean in 1941. Well done PO Cannon. We might have to handicap you next year.

Second prize went to LCDR Desmond Woods for his essay on the escape of HMS AMETHYST from the Yangtze River in 1949. This is a tale about an episode of which younger readers may not be aware. Those somewhat older may remember both the event and the subsequent film. Third prize was won by CMDR Greg Swinden who wrote on Australian Naval Brigades. This essay is both a history and an interesting discussion on Naval personnel working and fighting ashore.

The first prize in the Non-Professional category was won by Geoff Crowhurst for a most interesting history of German Raider Operations

(From left to right) The Navy League Federal Council Members; Harvey Greenfield (QLD); Tudor Hardy (Tas); Dean Watson (SA); Mary Lacy (QLD); Matt Rowe (QLD); John Jeremy (NSW); Frank McCarthy (Vic); Trevor Vincent (WA); Graham Harris (Fed President); Philip Corboy (Federal Secretary); Ray Corboy (Vic); Andrew Robertson (Federal Vice-President); David Rattray (SA); Bill Gale (WA); Mason Hayman (WA); Bill Dobbie (NZ); David Holthouse (NSW); Robert 'Otto' Albert (NSW).





(From left to right) Chief of Navy, VADM Russ Crane, Federal President of the Navy League Mr Graham Harris, and Federal Secretary Philip Corboy (background) enjoying a frank and open discussion on the future of the RAN with its most senior officer and leader.

against Australia and New Zealand during World War Two.

Second prize was awarded to Nigel Beeke for his essay on The Sinking of Force Z – The Twilight of the Battleship.

Third prize went to Murray Dear who wrote The Battle of The River Plate – A retrospective View. Murray Dear lives in New Zealand, so it should be no surprise that on the 70th anniversary of the battle he should choose this topic.

The success of the Essay Competition is pleasing. It is to be hoped that next year there will be even more entries than in 2009.

As they do each year, our State Divisions reported to Federal Council on their activities. These reports illustrate the range of activities in which the League is involved. Each Division deserves thanks for their particular contribution to the health of the League.

The next annual meeting of the League will be held in Canberra in October 2010.

GEOFF EVANS

On 9 November 2009 at the 'Heroes Club', Toorak, in Melbourne, a luncheon was held to honour the contribution made by Geoffrey Evans to the Navy League of Australia upon his retirement from the League's executive. The luncheon was organised by Victorian President John Wilkins and enjoyed by 23 members and others.

Geoffrey joined the League in 1949. He was a Federal Councillor of the League from 1950 to 1995. He was Senior Officer Australian Sea Cadet Corps for 20 years. He became Victorian Division President in 1967 and Federal President in 1971. He remained Federal President for 24 years. Following his retirement as President Geoffrey chaired the Advisory Council of the League until last year.

This summary of the positions held gives but a small indication of the work done by Geoffrey for the League. He was throughout a regular contributor to the pages of *THE NAVY* magazine. He participated in

many of the submissions made by the League to Government.

During the luncheon an address by guest speaker, the former Chief of Navy VADM David Leach, who amongst many other comments, revealed that Geoffrey's standing was such that he was referred to as the unofficial fifth member of the Australian Commonwealth Navy Board (ACNB).

60 years is a remarkable length of time to give to any organisation. I was very glad to be able, on the occasion of the luncheon, to thank Geoffrey for his work for the League. To further mark the occasion the Victoria Division of the League presented Geoffrey with the Victoria Division's limited edition Cook Cannon. BZ Geoffrey.

Geoff Evans (standing) speaking about some of the more memorable moments of his time in the League with VADM David Leach to the left. (Jane Teasdale)



THE RATIONALE FOR THE RAN OFFSHORE COMBATANT VESSEL

By Sean Thornton

In the recent Defence White Paper, *Force 2030*, the concept of replacing the RAN's patrol, hydrographic and minehunter small ships with the one hull type reconfigurable for each role when required was presented. The idea behind the concept is to save money, resources and improve capability by exploiting many other synergies particularly in training and maintenance. With some 'help' Sean Thornton takes an exclusive look at the concept.

A recent article in *The Australian Financial Review* (10 Sep 09) has raised concerns about the concept of the multi-purpose offshore combatant vessel (OCV) which was announced as part of the *Force 2030* force structure in the 2009 Defence White Paper. The article quotes that 'long time fan of the surface navy' Hugh White, as suggesting that the ships would be too big and expensive to be built in sufficient numbers, particularly for border protection, and that the mine countermeasure variant would not perform the role as well as specialised mine hunters.

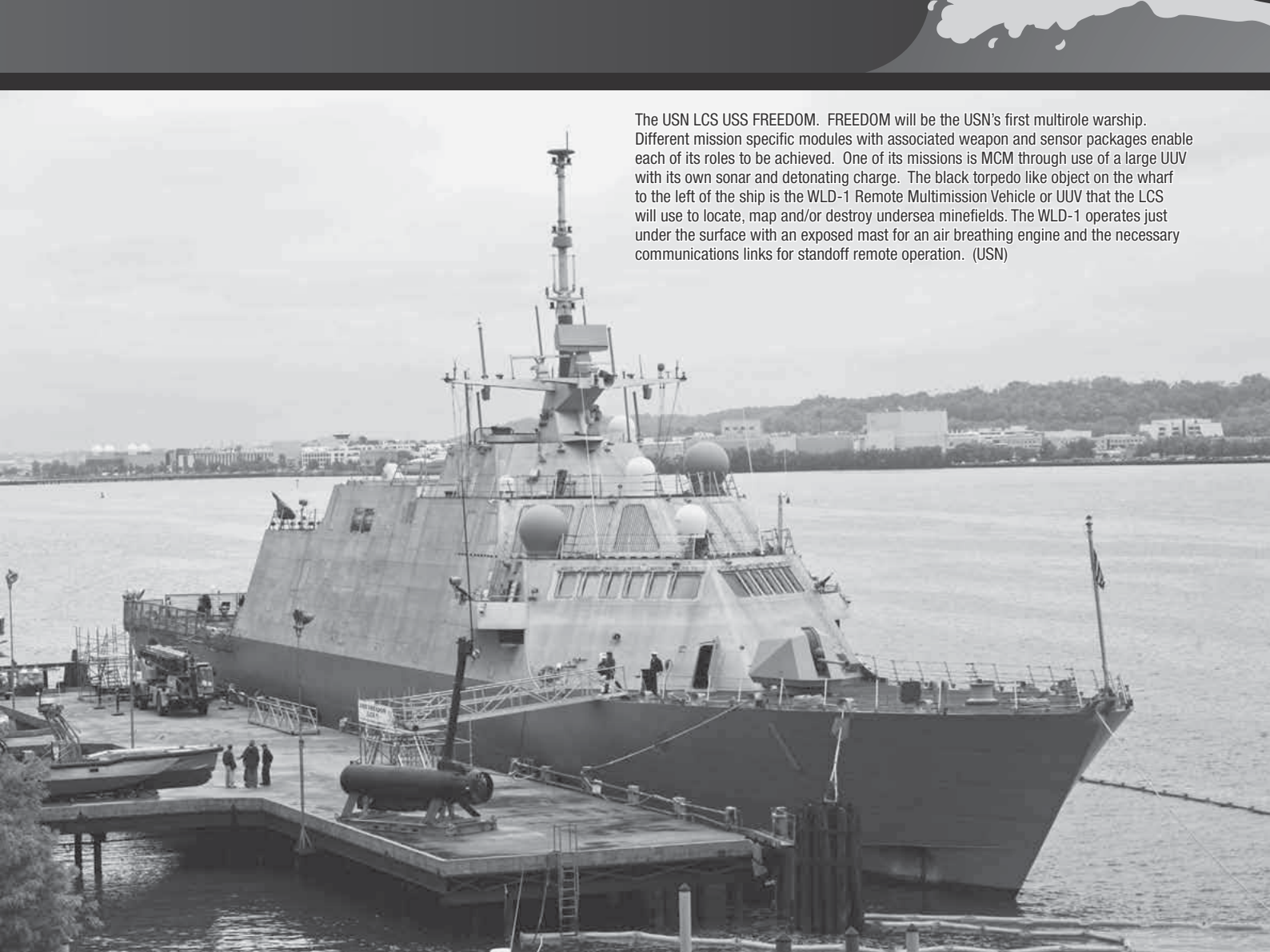
Hugh White's arguments, as detailed by the article's author (Jason Clout) are based on a number of misapprehensions. Some understandable in an observer of limited seagoing experience, but which are shared by many outside the Navy and the maritime profession. It is thus important to dispel, not only in the context of the ADF's planned OCV, but in relation to the other new types which are coming into service, such as

the amphibious ships and the air warfare destroyers.

But before looking at some of the myths it is important to understand what the Government is trying to achieve by introducing the OCV concept. What is clear is that a key driver of the OCV idea is the rationalisation of the current four classes of smaller surface vessels undertaking the border protection, hydrographic and mine counter measures (MCM) roles. Currently there are 26 vessels spread over four classes of ship to achieve these functions. The cost overheads from a training and maintenance perspective are significant and the OCV represents an attempt to limit the cost of ownership through rationalisation into a single class. This is not a revolutionary step. It has been in use for many years in the Danish Navy and is under development in the US Navy with the Littoral Combat Ship (LCS) concept. It is also one that the Royal Navy is considering for its patrol, MCM and survey forces in its future

(From Left to Right) Armadale, Fremantle and Attack classes of patrol boat tied up together. The size difference between each successive class of Australian patrol boat illustrates the growth required to carry out basic national security tasks..





The USN LCS USS FREEDOM. FREEDOM will be the USN's first multirole warship. Different mission specific modules with associated weapon and sensor packages enable each of its roles to be achieved. One of its missions is MCM through use of a large UUV with its own sonar and detonating charge. The black torpedo like object on the wharf to the left of the ship is the WLD-1 Remote Multi-mission Vehicle or UUV that the LCS will use to locate, map and/or destroy undersea minefields. The WLD-1 operates just under the surface with an exposed mast for an air breathing engine and the necessary communications links for standoff remote operation. (USN)

construction program.

The 2009 Defence White Paper importantly notes a significant gap in our current naval order of battle - our ability to effectively conduct lower level offshore and littoral warfighting roles. Despite the prowess of the 'HAMMERSLEY' crew in the TV series 'Sea Patrol', our current minor war vessels are distinctly unsuited to counter insurgency and sea flank support operations in support of an expeditionary joint force ashore, thus necessitating the use of the surface combatant in these roles. The modular nature of the OCV with the potential to fit a viable self defence system such as Rolling Airframe Missile (RAM) and the potential to carry a maritime UAV closes this gap somewhat.

The Navy has long been interested in the concept of multi-roled vessels and, as modularisation of mission systems has become more practicable, now seems like the right time to move. The key to unlocking the benefits in the OCV is changing how one thinks about the conduct of particular functions, in this case MCM and Hydrography. Navies across the world have been inexorably moving away from the 'man in the minefield'

scenario for MCM work. This shift has been supported by the proliferation of unmanned underwater systems both sensors and mine disposal systems. The main cost reduction in the OCV is having a vessel that is designed not to put people into the minefield, thus reducing the need for extremely expensive signature reduction features of a specialist minehunter. Furthermore, the synergies between Hydrography and MCM have not yet been fully tapped in the RAN. Common modular unmanned sensors which can achieve both mine hunting and hydrographic tasks exist today.

The combination of mission flexibility and multi crewing is a powerful one. A quick analysis of the current manning of the four classes of ship to be rationalised reveals there are just over 920 people available to multi-crew the OCV. Using current crew to ship ratios this equates to 30 crews of around 31 personnel (if divided equally), or a range of other flexible approaches using a base crew and mission specific crew construct.

The sceptics have already started to argue that 20 vessels are not enough. Based on a 270 sea day per year availability (similar to

the current Armidale and Leeuwin classes) the OCV provides the potential for around 5,400 days of availability. It is multi-crewing the entire class that unlocks the real potential. A rough breakup of the availability *might* look something like this:

Border Protection -	around 2500 days,
Collective Training -	around 500 days,
Mine Counter Measures -	around 1080 days,
Hydrography -	around 1080 days,
Deployments and Exercises -	around 270 days.

This sort of very flexible breakdown is quite reasonable, given Navy's experience to date with Armidale and Leeuwin class availability. The total number of available days represents similar or increased availability over the current fleet in *all* areas and provides dedicated allowances for collective training of the 30 crews, as well as a generous provision for deployments and exercises. Higher transit speeds will increase the efficiency of the OCV, particularly in the border protection and hydrographic roles where the distances involved are considerable. Is it any wonder the OCV proposition is an attractive one for Government? The flexible nature of the class

allows for a surge in particular areas while still being able to maintain minimum skill levels and capability delivery outcomes in others.

MYTHS ABOUT WARSHIPS

The 'myths' of naval capability are ones that are regularly propagated in the strategic debate in Australia. They are based not only on misunderstanding of Australia's strategic circumstances and its geography, but on incomplete understanding of technology and the maritime domain.

Myth One: Cost and Ship Size are Proportionately Related.

Wrong. Cost and size in ships as platforms are not proportionately related. Rather, as size increases, the cost per ton of the platform decreases. The cost drivers of modern warships are not in fact the hull, propulsion or 'hotel services', which represent less than 25% of the total cost of a modern surface combatant, but computers, communications, sensors and weapons. These drivers are also reflected in the sustainment costs. Bigger warships are so much more expensive than smaller ones because they carry so many more of these things and require much more effort to sustain – but they also have so much more warfighting capability.

The idea behind the OCV is a simple one.

A Danish STANFLEX 300. The STANFLEX is one of the most modularised multirole warships in the world. It can be configured for MCM, anti-ship (though the employment of eight Harpoon) and/or anti-air with an eight cell VLS for Sea Sparrow missiles through individual ready to use modules. It has a similar combat management system to an RAN Anzac class frigate. (Cullen Loftus)



The evolution of naval architecture and ship technologies has reached a point where a single design can provide a platform for a wide variety of the different functions and roles needed by the Australian Navy. This means that one building programme can be set in hand, with the associated economies of scale, while the Navy will be able to focus its training programmes, maintenance and configuration

control – all liable to improve efficiency and effectiveness and reduce costs – particularly manpower costs.

What is not intended is that the ships will undertake multiple roles at the same time – the modular design of the OCV will allow for fit-out according to the specialist requirement. It may indeed be that the differing variants will remain in their specialist roles for their entire

The German Navy's new K-130 class corvette MAGDEBURG being launched. While not a modularised multirole warship the K-130 are indicative of the type of firepower that small ships can now bring to the fight for duties such as amphibious operations flank protection against all manner of threats.



service lives, but the commonality between them will give the Navy many benefits – as well as the potential to ‘surge’ into a particular mission if circumstances require.

Myth Two: Bigger hulls don’t make much of a difference.

Wrong. Bigger hulls make a very big difference. Increased size gives much greater flexibility and efficiency, whether or not expensive warfighting systems are fitted. It is no coincidence that, as the border protection tasks of the RAN have expanded, the original patrol boat classes were found to be too small for their work. The 33 metre Attack class gave way to the 42 metre Fremantle class and then to the 56 metre Armadale class.

Bigger hulls have better sea keeping and can confer much greater endurance. Both matter around Australia – our southern seas are amongst the roughest in the world and even our northern waters can present significant challenges. They are no place for small craft. The ‘tyranny of distance’ is the title of one of the most important popular histories of this country and the challenges of extreme distances for much of what we do remain.

Bigger vessels are much more comfortable to live in – the movement of a small patrol boat in even moderate seas can rapidly exhaust a crew – ask any veteran of the tiny Attack class. This means that the crews of bigger ships possess greater inherent personal endurance than those of smaller ones. Bigger ships can carry more people and more equipment – the Armadale class, for example, can launch two large rigid inflatable boats, giving them much greater capacity for boarding and response than the single, smaller boat of the Fremantles. The Armadale class can also deal with and accommodate much larger numbers of people than the Fremantles – vital when facing the



The Hydrographic survey ship HMAS LEEUWIN. In some ways the RAN already has experience with multirole ships. When the RAN was running out of ships for the border protection role the Hydrographic ships were painted grey and used as patrol boats. (Kevin Dunn, FLEETLINE)

potential contingencies of people smuggling, let alone multiple illegal fishing vessels.

It is also true, although more difficult to quantify, that larger ships are more effective at utilising their sensors and systems to develop a comprehensive picture of the battlespace and deploy their weapons than smaller ones. At least a part of this reality results not only from being able to have more people work the problem but from the fact that they have more physical space. In this context, the development of the Singaporean Navy is an interesting case study.

As Singapore has looked to increase its reach and ensure the protection of shipping at increasing distances from the island nation, so its navy has found it necessary to advance progressively from missile boats to small corvettes and now to frigates. This evolution occurred precisely because, as

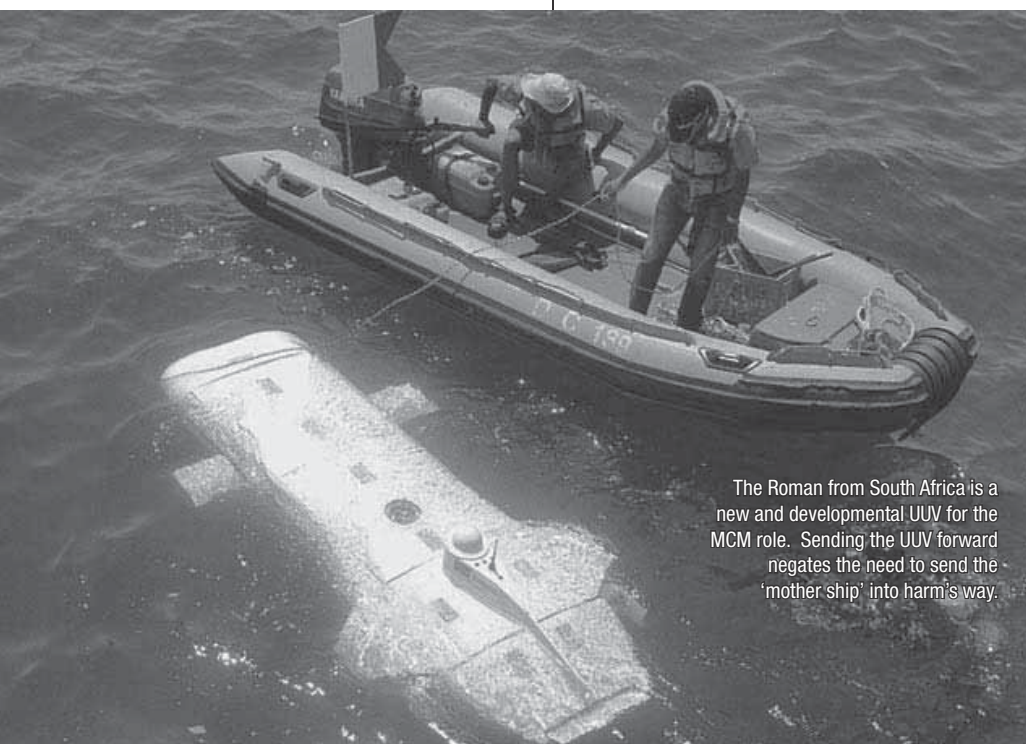
they went further afield from the narrow seas of the Singapore and Malacca Straits, the Singaporeans rapidly appreciated the significant limitations of the smaller craft in terms of endurance, sea keeping and general mission effectiveness.

As already noted, the return on cost in platform terms is greater as the hull size increases. Where the OCV planners will need to exercise discipline will be in limiting computer/communications/sensor and weapon fits to those essential for the tasks that the ships will be undertaking. If there is a growth capacity inherent in the operational design, then this will have the advantage of providing flexibility for changing situations and different tasks. Some of the most successful ships in naval history are those which had substantial growth margins built into them from the first – and, as the life of an OCV can be expected to be more than twenty years, the availability of such flexibility is no small matter

Myth Three: The work of surface vessels in border protection is confined to interception.

Wrong. As the border protection role has evolved, notably in preventing illegal fishing within Australia’s 200 nautical mile Exclusive Economic Zone (EEZ), so the emphasis on needing patrol vessels with adequate sea keeping and long endurance has grown as these vessels patrol the boundaries as a physical deterrent.

Furthermore, the idea of a ‘stand by’ vessel sitting in harbour awaiting a call to action does not reflect the Australian reality. No matter how good the surveillance of our maritime boundaries, the distances are such



The Roman from South Africa is a new and developmental UUV for the MCM role. Sending the UUV forward negates the need to send the ‘mother ship’ into harm’s way.

that a response unit coming from its base will not be on task for many hours (if not days). Indeed, the distances involved are so great and many warning times so short, that even the high speed (and high fuel consumption) surface effect craft which are now at sea elsewhere in the world wouldn't provide the right answer, even if they had the necessary range, which many do not. Australia is a big place. Too often, Australian strategic thinkers have approached its problems with a European understanding of distance. It is time this stopped.

Australian patrol vessels need to be out on the front line of our maritime boundaries, hundreds, if not thousands of nautical miles from their base ports – and they are out on the front line. The OCV will be even better at this than our present ships – and still have a transit rate at least equivalent to the current Armadales in fair weather and better in bad.

Myth Four: Future mine hunters will need to be able to operate inside minefields to conduct their clearance operations.

Wrong. One of the most encouraging recent developments for MCM has been that of unmanned underwater vehicles (UUVs). The new and emerging types remove the need for a mine countermeasure unit to enter a field, allowing it to despatch its UUVs to examine the mines and render them safe or destroy them. The premium for the future MCM vessel will thus be on carrying capacity and endurance – and the MCM configured OCV will also have a much greater transit speed than the current generation of mine hunters. It will, for example, be able to accompany or precede an amphibious task group or get on scene to a mining incident much more quickly. The lesser need to reduce noise and minimise other signatures (such as magnetism) should mean that, hull for hull, the OCV will cost significantly less in real terms than the current generation of mine hunters.

CONCLUSION

What needs to be avoided is the OCV trying to be all things to all people. There will have to be some capability tradeoffs from the specialist capabilities that the RAN has now. These need to be sensibly considered, particularly given the difficult fiscal outlook for the rest of this decade facing Defence. What must also be avoided is trying to maintain established capabilities if they no longer work, or if the cost of ownership is prohibitive. As already noted, the RAN must not try to cram multiple systems into all the new ships, but utilise the modular approach to ensure that each vessel is configured appropriately for the work that it will do. In this context, Navy must also be very careful not to over-egg the size of the OCV. The 2,000 tonne figure mentioned in the White Paper should be taken as the absolute maximum, not as the base planning size. A cleverly designed 1200-1500 tonne OPV style vessel of approximately 75-80 metres in length should be able to carry both mission modules and a light helicopter or UAV. Anything larger than this is going to require significant infrastructure investment, which starts to undermine the efficiencies inherent in the OCV concept.

The OCV is one of the most creative ventures in naval capability that the RAN has ever undertaken. There are risks in the concept, but there are also clear and easily defined benefits. It is an idea whose time has come.

US National Security Cutter USCGC BERTHOLF at sea. With a sophisticated sensor and combat system the new Bertholf class ships of the USCG fill a number of varied roles. It has the space and thus flexibility to make a potent multirole warship with its two helicopter hangers and dry well deck at the stern for launching and recovering numerous craft while on the move.



THE GROUNDING OF HMS NOTTINGHAM (PART 2)

On 7 July 2002 the Royal Navy Type 42 destroyer HMS NOTTINGHAM struck Wolf Rock east of Lord Howe Island at night en route to New Zealand.

The rock is named after the *Wolf*, an ex-Royal Navy gun brig built in 1814, which was working as a whaling ship when on 6 August 1837 it struck an outer reef near Lord Howe Island. She escaped the reef and was thought to be undamaged, but the vessel sank in deep water about 10 miles off the island.

After NOTTINGHAM was stabilised through the efforts of her crew, with assistance from the RAN and RNZN, she was towed back to Australia for rudimentary repairs and deammunitioning, and later taken back to the UK on a ship lift vessel for final repairs.

On 7 July 2003, the anniversary of the grounding, NOTTINGHAM was refloated. In April 2004 she sailed again following the £39m repair and refit. The ship returned to duty in July 2004

Despite the £39M spent on her in 2004, in April 2008, she was placed in a state of "Extended Readiness" at Portsmouth. With her crew dispersed it is unlikely she will sail again before her planned decommissioning in 2010.

The following is a reproduction of the recently released Board Of Inquiry (BOI) report by the RN into the incident. The report was obtained under the UK's Freedom of Information act and has been published on the internet.

HMS NOTTINGHAM being slowly raised from Sydney Harbour onto a ship lift vessel for transport back to the UK for repairs. Notice the missing bow sonar. Most damage was done on the Starboard side of the ship. (John Jeremy)



BOARD OF INQUIRY INTO THE GROUNDING OF HMS NOTTINGHAM OFF LORD HOWE ISLAND 7 JULY 2002

PART 2 - EVENTS IMMEDIATELY AFTER GROUNDING AND CONCLUSIONS

29. MCR Initial Reactions. At the point of grounding the Marine Engineer Officer Of the Watch started all High Pressure Salt Water (HPSW) pumps and the standby diesel generator. The mechanic on rounds in the Forward Engine Room (FER) reported a large flow of water entering the compartment in the vicinity of the starboard stabiliser. Flood alarms in the forward Sewage Treatment Plant (STP) 4/5C, 4/5E Sea Dart Spray Compartment and 4/5K FER sounded in HQ1.

30. Initial Command Appraisal. The Commanding Officer made an immediate appraisal from the bridge (although without any knowledge of damage sustained), and quickly realised that the ship was stuck hard aground. He ordered that the engine be stopped, the Officer Of the Watch complying and then starting the starboard Tyne. As the Command team closed up around the ship, the Marine Engineer Officer piped 'Hands to Emergency Stations' from HQ1 and the Commanding Officer ordered that everyone be issued with lifejackets. The ship was now listing 10-15 degrees to starboard and clearly taking on water forward. Deciding that the ship would founder if they did not move off the rocks quickly, the Commanding Officer took charge of the ship, and rang on full astern, followed one minute later by slow astern on both engines. At the same time, the Yeoman contacted Lord Howe Island and informed them that HMS NOTTINGHAM was aground on Wolf Rock.

31. As the Commanding Officer attempted to manoeuvre the ship off the rocks, the water level continued to rise in the FER, and the routine *eductor* was operated in an effort to stem the flow. Soon after, the control of Tyne power was lost, and quickly transferred to local control although control of pitch was maintained throughout using the MCR (Main Control Room) Power Control Levers.

32. Power Isolation to the Conversion Machinery Room. The ship was clear of the rocks by 2209L, and the first damage sitrep was given to the Command by the Weapon Engineer Officer. He reported that there was a slow flood in the port engine room and free floods in the Sea Dart Spray Compartment and 4.5-inch ammunition magazine. In order to stem the flooding in the Conversion Machinery Room (CMR) 40, the Marine Engineer Officer ordered power isolation without informing or requesting permission of the Command. Instantly, both gyros, steering gear control and shaft and telegraph indication were lost. As the alarms sounded on the bridge, the Weapon Engineer Officer informed the Command that the gyros had tripped, but did not explain that the CMR had been isolated, nor the full implications of this action. Steering control was transferred to the mechanical wheel, and it was decided to stop the ship in the water to the south of Wolf Rock, in order to assess fully the damage and remain within the lee of the island. The Commanding Officer then asked for a suitable place to beach the ship, and ordered hydraulics supplies to be started on the forecastle, giving the option of using the anchor. At the same time Sydney Maritime Co-ordination Centre was informed of the grounding via Global Maritime Distress and Safety System (GMDSS).

33. First Full Damage Sitrep. At 2220L the Marine Engineer Officer reported to the Commanding Officer that there was free flooding in C, D, E, F, and G sections on 4 and 5 decks. In addition, 3D messdeck, 3E Sea Dart Quarters and 3E Sea Dart Hydraulic and Power Rooms were flooded to a depth of 7 feet. The FER was flooded to a depth of 5 feet and rising. The Marine Engineer Officer then advised that the ship was not in danger of sinking or plunging. Shortly afterwards and without informing HQ1, the Commanding Officer ordered that the boats, ammunition lockers and ammunition on the starboard side be ditched, in an effort to reduce top weight, - although this was never carried out the flight deck awning was

thrown over board from the hangar roof. The decision was now taken to anchor the ship rather than beaching, although by now, much of the Commanding Officer's decision making time was taken by conning the ship and establishing communications with the tiller flat.

34. Ship Comes to Anchor. The Commanding Officer conned the ship to anchor by 2340L in the vicinity of Middle Beach, and was then able to devote some attention to the Damage Control effort. By this time the hatches to 4G CMR and 4 F Storeroom were dropped as flooding rates could no longer be contained. Secondary flooding was also occurring above free flooded compartments from water passing through cable glands and ventilation penetrations. At 2355L the main computer supplies were lost, however main broadcast and internal communication facilities were restored, allowing an improvement to overall Command and Control.

35. Situation Stabilised. By approximately 2359L the flooding levels had stabilised throughout the ship with the level in the FER steady at 18 feet, just below the level of the hatch coaming. Shoring and pumping operations continued protecting compartments, notably the After Engine Room (AER), and the water level in 3D messdeck had by now reduced to 6 feet as a result of pumping efforts. The ship had settled at a trim of approximately 2.5 degrees by the bow but was in a stable and safe condition.

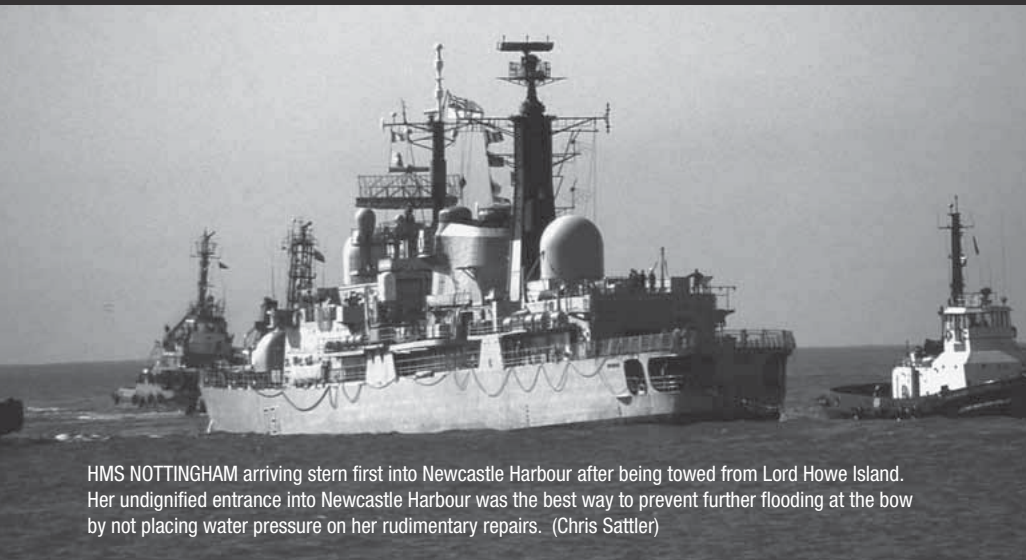
36. Not applicable.

EXTERNAL ASSISTANCE

37. Fleet HQ and WSA. RN Fleet Headquarters was informed of the

HMS NOTTINGHAM anchored off Lord Howe Island after the grounding. Notice how low the bow is in the water. Most of the flooding was located in the bow section where the ship hit Wolf Rock. (RAN)





HMS NOTTINGHAM arriving stern first into Newcastle Harbour after being towed from Lord Howe Island. Her undignified entrance into Newcastle Harbour was the best way to prevent further flooding at the bow by not placing water pressure on her rudimentary repairs. (Chris Sattler)

grounding via INMARSAT 10 minutes after the incident, backed up by hard copy signal one hour later. Following the loss of the CMR, both Mentor and INMARSAT facilities were unavailable. Once safely at anchor, the Commanding Officer and Marine Engineer Officer decided to proceed ashore with the intention of obtaining expert advice from the Warship Support Agency (WSA) and discuss early repair options, including stability considerations and provision of specialist diving support. They finally went ashore at 0342L.

ROYAL NEW ZEALAND NAVY

38. TG 648.1. HMNZS ENDEAVOUR and HMNZS TE MANA (CTG) were formed into TG 648.1 under the Operational Control of the Military Co-ordination Centre (MCC) Australia on 08 July at 0524L, with the aim of providing assistance to HMS NOTTINGHAM.

39. HMNZS ENDEAVOUR. The New Zealand replenishment ship arrived in the vicinity of Lord Howe Island from the east coast of Australia at 09 July at 0200L, and immediately met with HMS NOTTINGHAM's Command Team to discuss how they could assist. Initial priorities were to supply damage control equipment in the form of concrete, timber and steel strapping as well as personnel to assist in limiting the spread of flooding, HMNZS ENDEAVOUR was also able to supply diesel, fresh water, hot food and the use of their domestic facilities. The extra boats also provided transport capability. It was initially expected that HMNZS ENDEAVOUR would remain in the vicinity of Lord Howe Island providing assistance to HMS NOTTINGHAM for a period of 5-10 days.

40. HMNZS TE MANA. The frigate HMNZS TE MANA departed Mackay, New Zealand 08 July at 1750L and arrived at Lord Howe Island on 10 July at 0600L. Giving a welcome boost to the Ship's Company of HMS NOTTINGHAM, HMNZS TE MANA was able to provide additional damage control stores, boats, domestic services and a place of rest.

ROYAL AUSTRALIAN NAVY/AIR FORCE

41. Royal Australian Navy. A detachment from the Royal Australian Navy Clearance Diving Team arrived on 8 July at 0700L and immediately conducted an underwater survey. They confirmed significant underwater structural damage from the stem through A, B, C, D, E, F, G, J and K sections, including the total loss of the FER starboard stabiliser fin. H Section had escaped damage. The full underwater survey was recorded on video. A second diving detachment remained at 4 hours notice in Sydney.

42. Royal Australian Air Force. The Australian Air Force responded quickly to the MCA's request for transport aircraft, in order to move the Australian diving teams, and salvage teams from the UK, as well as additional damage control equipment out to Lord Howe Island.

MAJOR WARSHIP INTEGRATED PLATFORM TEAM

43. The Major Warship Integrated Platform Team (MWIPT) construction representative, (who was also responsible for compiling the ship's post refit stability criteria), arrived at the ship at midday on 8 July, and confirmed that the ship was in a stable condition. There was, however, concern about the degree of damage and particularly of the implications of the stresses imposed as a result of severe distortion of the stem forging, and partial loss of the vertical keel in A and B Sections.

44. Before leaving the UK, the MWIPT had calculated the trim from the damage report sent from the ship. They were pleasantly surprised on arrival at HMS NOTTINGHAM that the trim was less than they had predicted. It was also confirmed that the Marine Engineer Officer's advice to the Command, regarding stability was correct. In addition, the actions taken to limit flooding, particularly onto 2 deck, and the

rapid shoring actions, all contributed towards stabilising the platform and prevented potential further damage from failing bulkheads. As a result of the damage HMS NOTTINGHAM's Certificate of Safety - Structural Strength was formally rescinded on 9 July.

LORD HOWE MARINE PARKS AUTHORITY

45. The Lord Howe Marine Parks Authority conducted a dive on Wolf Rock to ascertain the extent of damage to marine life at the site and to assess if there is any significant environmental damage. Their report concluded that there had been no environmental impact as a result of this incident

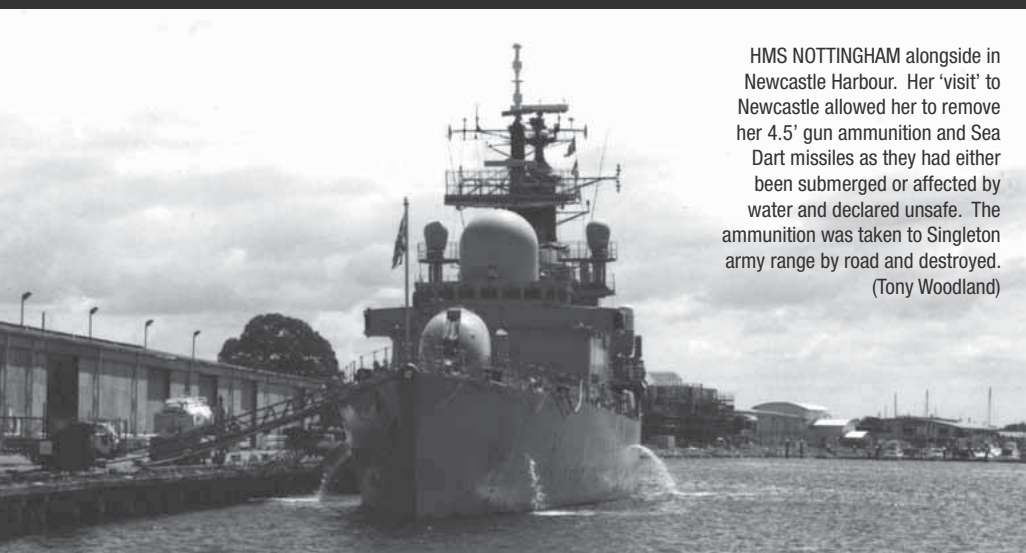
DISCUSSION STANDARDS OF NAVIGATION PLANNING

46. The formulation of a safe navigation plan is fundamental to the safety of operating a Warship at sea. This responsibility is the primary function of the Navigating Officer closely supervised by the Commanding Officer. Given his previous experience of navigating a Minor War Vessel, and Attendance at navigation courses earlier in the year, The navigator should have been capable of carrying out this duty.

47. It has become apparent during the course of this inquiry that the standards of navigation, bridgemanhip and sea sense in HMS NOTTINGHAM were inadequate. The original navtrack to Wellington intended to pass Wolf Rock by 1.5nm however, this feature had not been identified as a danger and subsequently had not been 'hatched' off and clearing ranges constructed.

48. Similarly, from the manner in which the anchorage during the afternoon on 7 July was planned, it would appear that the Navigating Officer's quality and standard of work in pilotage planning were also far from adequate. The omission of basic safety requirements such as comprehensive visual clearing bearings when approaching confined waters, demonstrates a disregard for standard practice, and the safety of the ship. Additionally, the quality of the Navigating Officer's chart preparations and notebook, and his execution of the manoeuvre out of the anchorage, belie a casual approach to his duties, and a lack of understanding of risk.

49. The inadequate standards of navigation planning and chart preparation, contributed directly to the grounding of 7 July and are indicative of a Navigation team that disregarded standard procedures designed to keep a ship safe. Specifically, the failure to produce a navigation plan to achieve a safe departure from the anchorage, the successful recovery of the Lynx and then re-gaining the track to



HMS NOTTINGHAM alongside in Newcastle Harbour. Her 'visit' to Newcastle allowed her to remove her 4.5' gun ammunition and Sea Dart missiles as they had either been submerged or affected by water and declared unsafe. The ammunition was taken to Singleton army range by road and destroyed. (Tony Woodland)

Wellington, are considered to be contributing factors in the eventual grounding of HMS NOTTINGHAM.

PRECAUTIONS WHEN OPERATING IN COASTAL OR PILOTAGE WATERS

50. Precautions taken when operating in coastal waters, and in particular poorly surveyed areas, or operating in close company with other vessels, are designed to reduce the risk of grounding or collision. They are also there to minimise the damage should such an event occur. As with the conduct of planning, HMS NOTTINGHAM appeared to accept an increased risk whilst conducting these manoeuvres which is at variance with established practice and common sea sense.

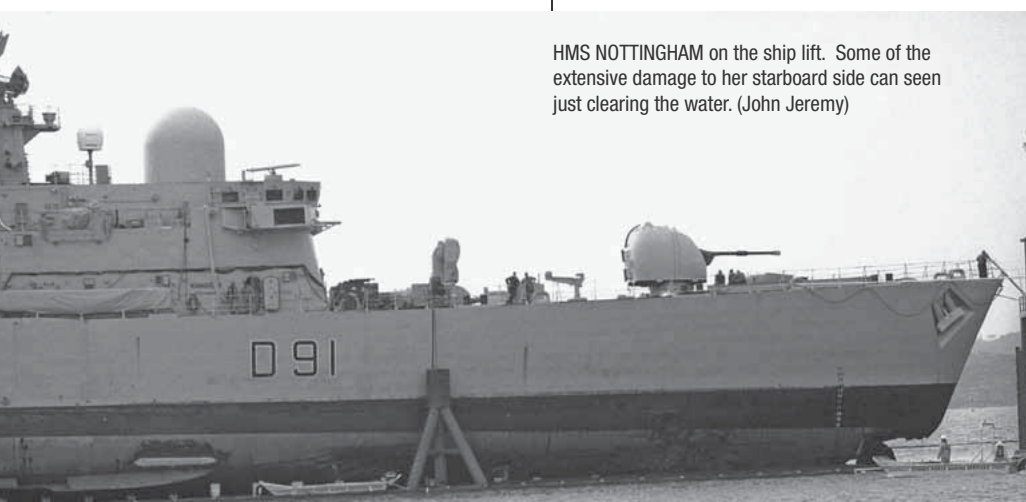
51. On the afternoon of 7 July, the ship anchored within 3 cables of the coast, in an area that was poorly surveyed and was subject to positional inaccuracies, without closing up Special Sea Dutymen. Later that day, the ship departed the anchorage at night again without Special Sea Dutymen closing up, without the Blind Pilotage Safety Officer and without the echo sounder operating. During the re-construction, it was apparent that the ship closed to less than 300 yards of the Limiting Danger Line without anyone on the bridge appearing to notice. .

52. In the 50 minutes leading up to anchorage, the Command team in HMS NOTTINGHAM reduced the Damage Control State of the ship to 3X-Ray, reduced to single engine running and reduced to a single steering motor. All of these decisions were made when the ship was closing the coast, within 2 nm of land and in the proximity of navigational hazards. Although none of these additional factors had any bearing on the grounding, it is again indicative of a team that is willing to take unnecessary risks with the safety of the ship.

53. It has been noted from the Ship's Log that HMS NOTTINGHAM conducted Officer Of the Watch manoeuvres with HMAS WARRAMUNGA on 1 July without any additional precautions apart from increasing the Damage Control State and manning the Tiller Flat.

DELEGATION OF CONDUCT

54. Although the Commanding Officer issued conflicting instructions to the Executive Officer and Navigator, and did not clarify his intentions in the Sea Order Book, it is assessed that he left sufficient intentions to enable the Executive Officer and Navigator to both plan and execute the task that he had set. The conflicting orders issued by the Commanding Officer were therefore not a contributing factor in the grounding.



HMS NOTTINGHAM on the ship lift. Some of the extensive damage to her starboard side can be seen just clearing the water. (John Jeremy)

CONDUCT OF THE NAVIGATION

55. In analysing the causes and circumstances pertaining to this incident, it is impossible not to lean towards the failure of the Officer Of the Watch to maintain the correct navigation of the ship. Specifically, he was unaware of the ship's position in proximity to a significant navigation hazard, namely, Wolf Rock. His failure to refer to the chart more than once between sailing at 2057L, and grounding at 2202:38L, and his failure to fix the ship's position at all during this time are contrary to accepted practice. In addition, he failed to supervise an unqualified Second Officer of the Watch.

56. The Officer Of the Watch stated during interview, that he became fully occupied with the recovery and movement of the Lynx helicopter during the 20 minutes leading up to the incident. He further added that he was petrified of damaging or losing the Lynx. Under these circumstances, it is the duty of the Officer Of the Watch to seek assistance from the Navigator, who was present on the bridge. He instead wrongly assumed that the Navigating Officer would conduct or, at least oversee, the navigation for him. These basic tasks are fundamental to the duties of the Officer Of the Watch, and a qualified Officer of his experience, might reasonably be expected to carry out these duties efficiently and conscientiously.

57. Despite that fact that the Navigating Officer was present on the bridge between 2137L and the time of grounding (some 40 minutes), he did not once refer to the chart or offer to assist in the navigation of the ship. Even when the Officer Of the Watch appeared to be fully occupied with the recovery and movement of the helicopter, the Navigator offered no assistance. Indeed the Navigator not only inadvertently distracted the Officer Of the Watch at a crucial time, but also advised him to alter course in a direction that took the ship towards Wolf Rock with no appreciation himself of where the ship was, or the presence of danger.

58. Platform Endorsement. Although not contributing to the grounding, it has been noted that the Executive Officer has not been Platform Endorsed in a Type 42 Destroyer, and therefore was not eligible to take conduct.

59. Electronic Charts. HMS NOTTINGHAM ran aground because insufficient attention was being paid to the safe navigation of the ship by the Officer Of Watch. This was due in part to the fact that he had focused his attention, for some of the time, in the recovery and movement of the Lynx. Although it in no way excuses the actions of the navigation team on the bridge, the rear facing chart table with a curtain drawn around it, was not conducive to monitoring the progress of the ship. Had HMS NOTTINGHAM been fitted with an Electronic Chart display at the front of the bridge, the Officer Of the Watch may have been able to monitor the navigation of the ship and conduct the recovery of the helicopter. The

Admiralty Raster Chart System (ARCS) would still have necessitated a chart change onto the 1:25000 scale chart, however it would have been carried out automatically. A Vector chart system would of course not have the same limitations. It should be remembered however, that there were four Officers on the bridge of HMS NOTTINGHAM in the time leading up to the grounding, including the Officer with conduct and the Officer trusted with the Navigation of the ship. Neither the Executive Officer, Navigating Officer nor the Officer Of the Watch took any interest in the navigation of the ship for 65 minutes before the grounding.

DAMAGE CONTROL

60. The Ship's Company response to the main broadcast alarm was instinctive and prompt enabling Marine Engineering Officer to provide the Command with an outline brief within 5 minutes of the incident. The watertight integrity discipline certainly contributed to limit flooding and with the exception of 3D magazine access hatch, the X-Ray hatches functioned as expected. In the case of 3D hatch, it is uncertain whether it was distorted or whether the 'blow off' kidney hatch had lifted - the result was the 7 feet flood in 3D messdeck.

61. Despite the severity of the flooding, the Ship's Company pulled together in impressive style. Within 25 minutes of grounding all flooding boundaries were established, primary and, in some cases secondary, shoring had taken place and all available pumping systems were being used. The priorities issued by HQ1 were entirely correct. Apart from the FER, main machinery spaces were safeguarded and bulkheads in danger of failing, especially adjoining the Sea Dart Magazine, were quickly attended to.

62. It is of note that the MWIPT ship construction representative and the salvage team leader also stated that the actions taken were prompt and sufficiently robust to prevent further deck and bulkhead failure. It is not possible to say whether the actions taken saved the ship but they certainly prevented further failures which could have been catastrophic.

63. The HQ1 C2 team was calm and decisive throughout. Equipment and manpower resources were well managed and the Marine Engineering Officer's performance was particularly noteworthy as was that of the senior rates at FRPPs. Both CMEM(M)s provided top quality advice and help with shoring. Many junior rates commented that their presence, leadership and good humour provided reassurance in a difficult and dangerous situation and confidence that the ship would survive. In addition all those involved said that the damage control training both ashore and at OST prepared them well for the incident.

64. Propulsion plant reliability was satisfactory and propulsive power was fully maintained. Minor machinery failures were dealt with competently and the transfer of Tyne engine control to the After Engine Room was well practiced and calmly undertaken.

65. The loss of converted power supplies to the bridge instrumentation - gyros, gyro repeat, rudder indicator and shaft indicators - caused considerable confusion during the stage at which the Command was trying to formulate his plans. Because of the lack of rudder indicator response the bridge team assumed that steering was lost although this was not the case, both steering motors ran uninterrupted. Whilst the Marine Engineer Officer informed the Weapon Engineer Officer of his intentions to isolate supplies, formal approval was not sought.

CONCLUSIONS

66. HMS NOTTINGHAM grounded on Wolf Rock because insufficient attention was being paid by the Officer Of the Watch to the safe navigation of the ship and specifically, the position of the ship in relation to navigational hazards. [Paras 22,23,26 and 55]

67. The Executive Officer and Navigating Officer had not ensured that a navigational plan, ensuring a safe departure from the anchorage and catering for changes required for the recovery of the helicopter had been constructed. [Paras 20,23,24,46 and 49]

68. The Navigating Officer issued navigation advice to the Officer Of the Watch without any reference to the chart or knowledge of the ship's position or the proximity of dangers. Specifically, he inadvertently advised him to alter course directly towards a navigation hazard, namely Wolf Rock. [Paras 26, 27 and 57]

69. The ship failed to ensure that correct standards of bridgemanhip, navigation planning and execution were maintained. [Paras 23,26, and 55]

70. This incident has not highlighted any limitations of Royal Navy navigation training. [Paras 23, 26 and 55]

71. Management and execution of the damage control effort was highly effective, the result of which was in limiting the damage and increasing the survivability of HMS NOTTINGHAM. Members of the Ship's Company are worthy of collective praise and possible commendation for outstanding contribution by some individuals. [Paras 60,61 and 62]

72. The damage control training provided at PHOENIX and during OST prepared the Ship's Company effectively to cope with the scale and nature of the damage experienced. [Para 63]

Summer 2005. A repaired and returned to service HMS NOTTINGHAM seen here participating in the Trafalgar 200th anniversary Fleet Review at Portsmouth. (John Mortimer)





01 FIRST AUSTRALIAN LHD TAKES SHAPE

Spanish shipbuilder Navantia has laid the keel for Australia's first Canberra-class LHDs in a ceremony at the company's shipyard in Ferrol, Spain, on 23 September 09.

Three of the four keel blocks for the 27,000 ton CANBERRA (LHD-01) - out of a total of 104 - were erected on the slipway. Steel-cutting on the ship started in September 2008 and the ship is expected to be launched in March 2011.

Following the launch the ship's hull will be transported to Melbourne on the back of a ship for handover to BAE Systems Australia shipyard in Williamstown in 2012.

Work on LHD 02, ADELAIDE, is expected to begin at Ferrol in 2010 and commissioning of the ships will take place in 2014.

The Canberra-class LHD design is almost identical to the Spanish Navy's Strategic Projection Ship JUAN CARLOS I, which was launched at Navantia's Ferrol yard on 10 March 2008 and recently started sea trials.

02 UK AND FRANCE TO COLLABORATE ON ANTI-SHIP MISSILE

The UK and French governments have announced the start of a joint assessment phase to develop systems and technologies for a new helicopter-launched anti-surface missile to replace the British Sea Skua and the French AS-15.

The announcement was made at last year's Defence Systems Exhibition International (DSEi) at the Excel Centre in London, a biannual gathering of the world's largest defence companies.

The weapon is being developed for use initially in the naval environment and to be launched from different helicopters, including the British

Lynx Wildcat and the French NH-90 and Panther platforms.

This co-operative project, which meets the UK's Future Anti-Surface Guided Weapon (FASGW) and the French Anti-Navire Léger (ANL) requirements, is the latest in a long history of co-operation between the two nations on missile projects, which has most recently included Meteor and the Sea Viper (Principal Anti Air Missile System - PAAMS).

The project will begin with an assessment phase expected to last just over two years and will cost £35m, to be shared between both nations. Work will be undertaken in the UK and France, using industries within their respective supply chains.

BRAVERY AWARDS FOR SUB CREW

Three Australian submariners have been awarded Bravery Medals by the Australian Bravery Decorations Council for their extraordinary efforts to rescue shipmates who had been washed overboard in bad weather during a night operation. The medals were announced by Her Excellency the Governor General.

Chief Petty Officer Rohan Pugh, Petty Officer Greg Langshaw and Leading Seaman Steven Rowell did not hesitate to respond when five personnel were washed overboard from HMAS FARNCOMB by a large wave on the night of 19 March 2007. The three Bravery Medallists were members of the recovery party and entered the turbulent water at great risk to themselves to ensure that their shipmates were all safely recovered.

FARNCOMB, a Collins class submarine, was conducting a dived open ocean transit when she surfaced to clear fouling on her casing and propeller. The sailors who were washed overboard were part of a team working to free the obstructions. A full safety assessment had

been conducted but rapidly worsening weather conditions meant their clearing operations were cancelled soon after they started. However, before the fouling party could return to the boat, a single wave washed them into the sea. The recovery teams worked for an hour and a half in extremely difficult weather conditions to recover the men overboard.

Chief Petty Officer Pugh, Petty Officer Langshaw and Leading Seaman Rowell displayed remarkable and selfless bravery in swimming to, supporting and helping bring their shipmates back on-board.

Several other members of the Ship's Company received Commendations from Chief of Navy, Vice Admiral Russ Crane, AM, CSM, RAN, for their actions during the FARNCOMB man overboard recovery.

"All of FARNCOMB's personnel who were involved showed significant fortitude, teamwork and courage to ensure that all sailors were returned to the submarine without major injuries and no loss of life," Vice Admiral Crane said.

"Among them, the courage and actions of Chief Petty Officer Pugh, Petty Officer Langshaw and Leading Seaman Rowell are worthy of the highest admiration from all of us."

The Bravery Medals will be presented at an official investiture ceremony in the near future.

ASC WELCOMES NEW CEO

Australian submarine and shipbuilder ASC has welcomed the appointment of Mr Stephen Ludlam as the company's new Managing Director and Chief Executive Officer.

Mr Ludlam is the President - Submarines for Rolls Royce (UK) and has been appointed to the position following a global executive search.

ASC's Chairman, Vice Admiral Chris Ritchie AO said that Mr Ludlam has exactly the skills and

01A

The keel for Australia's first Canberra-class LHD being lowered onto the slipway at Navantia's ship yard in Ferrol, Spain, on 23 September 09. (Navantia)

01B

The Spanish Navy's Strategic Projection Ship JUAN CARLOS I starting sea trials. (Navantia)



experience needed at ASC at this time in the company's development.

"Stephen has a proven track record as a versatile, senior transformation leader and will bring deep experience in complex submarine systems to the role of Managing Director and Chief Executive Officer." Vice Admiral Ritchie said.

"The Company is entering a new era; construction on the Hobart Class Air Warfare Destroyer is to commence shortly, with recent external reviews reporting that the project is on time, on budget and well prepared for the task ahead."

"Similarly, ASC is putting considerable effort into a renewed focus on the Collins Class submarines to ensure its continued availability as the world's best conventional submarine. Our aim is to implement best practice maintenance and efficiency standards to ensure that the Navy's needs are being met."

Mr Ludlam said that he is pleased to have been selected for the role and is ready for the many and varied challenges and opportunities that face ASC now and in the future.

"I am looking forward to building upon the unique skills and expertise already contained within ASC and to continue to forge a path for ASC in the Australian naval defence industry."

Vice Admiral Ritchie thanked Mr Graeme Bulmer for his significant contribution to ASC during his period as Acting Managing Director and Chief Executive Officer whilst ASC undertook its wide ranging executive search.

Mr Bulmer oversaw ASC's organizational restructure and implemented a number of key initiatives to assist the Defence Materiel Organisation in their drive to cut costs, establish a new maintenance contract and prepare for the future submarine project.

Stephen Ludlam will commence the role in January 2010.

Stephen is 56 years old and holds a Master of Science from Royal Naval College, Greenwich and is a Chartered Engineer and a Fellow of the Institution of Mechanical Engineers.

Stephen has worked for Rolls Royce for 34 years and is currently the President – Submarines, responsible and accountable for Rolls Royce's entire submarine business.

Over the 34 years Stephen has held numerous positions with Rolls Royce as he moved up the management ranks. Stephen has been, among others, the Executive Vice President – Naval Marine Europe, Executive Vice President – Naval Marine, Submarines and the General Manager – Reactor Test Establishment. Stephen is widely regarded as a leading authority in nuclear engineering and implementation of the risk management in major engineering programs.

Stephen is a senior stakeholder in a number of Ministry of Defence strategic change programs; he has strong relationships with the Ministry of Defence and major industry not only in the United Kingdom but also in Europe and the United States.

03 RAYTHEON UNVEILS SPY-5

US company Raytheon has developed a new naval radar, the AN/SPY-5, a multitasking, target-illuminating system for surface combatants that can simultaneously search, detect and precisely track multiple surface and air threats.

The Raytheon-developed SPY-5 is an open architecture, phased-array radar system, providing an advanced self-defence solution for small and large surface ships.

SPY-5's mission capabilities are planned to include low-altitude horizon search; focused volume search; surface search; missile and

surface gunfire control; simultaneous threat illumination; and missile midcourse guidance and terminal homing capabilities previously only achievable through multiple radar solutions. These tasks can be performed simultaneously with a radio frequency phase shifter.

SPY-5 is said to be compatible with all digital combat management systems, and the radar's range, accuracy and beam agility enable the full performance of the Evolved SeaSparrow Missile to be used.

The radar delivers all of the performance benefits of larger, heavier and more costly active array systems while providing full 360-degree azimuth coverage via three 120-degree beam faces.

SPY-5's X-band energy is generated by the proven and widely deployed Mk-73 solid-state transmitter system. Because the system uses transmitters that are already installed, upgrading and modernising many existing systems is greatly simplified and can be accomplished at a relatively low cost.

US\$93M FOR SM-6

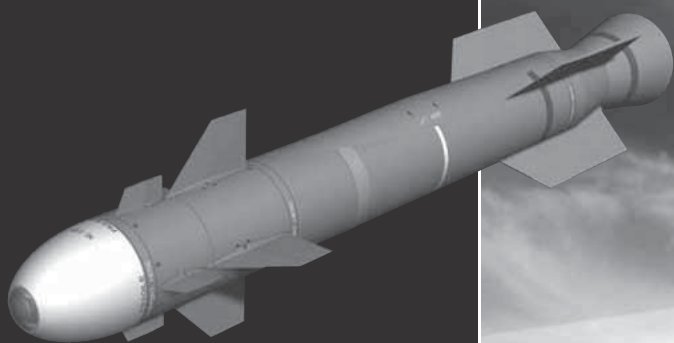
US company Raytheon has won the first of several planned low rate initial production (LRIP) contracts to build Standard Missile-6 systems for the US Navy.

The US\$93 million contract includes the production of missiles and delivery of spare parts and missile containers. Delivery will begin in early 2011.

"Standard Missile-6 has been on budget and on schedule since the programme started in 2004," said Frank Wyatt, vice president of Raytheon's Naval Weapon Systems. "LRIP clears the way for delivery to the warfighter of this integral weapon system."

SM-6 will meet the US Navy's requirement for an

02 A computer generated image of the proposed UK and French FASGW – ANL missile to replace Sea Skua and AS-15. (BAE Systems)



03 A computer generated image of Raytheon's new SPY-5 radar system. (Raytheon)





extended-range anti-air warfare (AAW) missile. The system will provide a defensive capability against fixed- and rotary-wing aircraft, unmanned aerial vehicles and anti-ship cruise missiles out to 200nm.

When combined with CEC (Cooperative Engagement Capability), SM-6 will provide a Navy with an extended battlespace capability against over-the-horizon AAW threats.

SM-6 also allows the use of active and semi-active modes and advanced fuzing techniques.

04 FIFTH TYPE 45 LAUNCHED

Thousands turned out on the banks of the Clyde to cheer on the latest ship to make up the Royal Navy's new Type 45 destroyer class. The destroyer DEFENDER was launched on 21 October 09.

Chief in Command Fleet Admiral Trevor Soar said: "The thousands gathered here today to witness the launch of DEFENDER is testament to the pride Scotland rightly takes in its shipbuilding industry which has seen a resurgence in recent times with the Type 45 build programme and the manufacture of the Aircraft Carriers that they will defend.

"DEFENDER's affiliation with her 'hometown' of Glasgow will ensure these strong links live on and gives the Royal Navy the chance to give something back to the community that worked so hard to deliver her and her sister ships.

"The launch of the fifth ship is an exciting milestone as we draw nearer to the first of class HMS DARING entering into service this year to begin her duties with the Royal Navy."

DEFENDER is the fifth ship of six in the Type 45 destroyer class. Progress is being made on the programme: HMS DARING (ship one) has been commissioned into the Royal Navy and is on her final trials prior to her entering service, planned for

February 2010, minus her ASTER30/PAAMS anti-air missile system due to slippages in the systems acceptance.

DAUNTLESS (ship two) has recently completed two very successful sets of sea trials while DIAMOND (ship three) has just begun her sea trials. DRAGON (ship four) was launched in Scotland at the end of 2008 and DUNCAN (ship six) is under construction in Govan.

05 QUEENS OK

On 25 October 2009, British newspapers began reporting that budget cuts would likely sacrifice one of the Queen Elizabeth class aircraft carriers (CVF), with discussions centred on plans to make one CVF an amphibious command and control vessel. This was reportedly due to the high cost of the Joint Strike Fighter (JSF) that is slated to replace the UK's Harriers as the air wing on the new class.

It would now appear that these reports are not official, and the article misrepresents the actual situation. In fact, there has always been an unpublicised plan to reduce fixed wing embarked aviation air-readiness of one of the CVFs, having it take on a role more in line with that of a helicopter landing ship (LPH). This was due to the increased cost of the JSF that will be needed to replace the Harriers as they quickly approach the end of their service lives.

At a cost of nearly US\$150M each, reduction in the number of JSFs by about half would save the UK around US\$10B in aircraft alone. This does not take into account spare parts, maintenance equipment and personnel.

Although discussions continue on the topic, both carriers of the class will be built to the same standards and will simply deploy with different air assets as the mission dictates. This will allow

one or the other to operate as a fixed wing aircraft carrier should the need arise while the other is going through a refit programme. Additionally, if funding becomes available for more aircraft (either leased or purchased) in the future, the second CVF would be able to be equipped as an aircraft carrier with a full air wing of JSFs.

The option of utilising the second CVF (PRINCE OF WALES) as an LPH would also allow a cost saving when HMS OCEAN decommissions in 2018 as there is currently no funding allocated for a direct replacement. Looking at future construction costs for a replacement of HMS OCEAN, the RN would see an immediate savings of over US\$1B.

Current planning for the CVF calls for the commissioning of unit one (QUEEN ELIZABETH) in 2016, followed by PRINCE OF WALES in 2018, in line with the decommissioning schedule for OCEAN, making this option even more attractive to the RN.

RUSSIA TO CALL WESTERN TENDERS FOR LHD CONTRACT

Russia plans to hold an international tender for the purchase of a helicopter carrier, involving France, Spain and the Netherlands, the country's Navy chief said on 11 September 09.

"I can confirm that negotiations are being held, but there is likely to be a tender," (see *THE NAVY* Vol 71 No.4 p20) Adm. Vladimir Vysotsky said, adding that other countries could also be involved.

He said there were no negotiations with the United States - "for understandable reasons," adding that the US authorities were "highly sensitive" about the transfer of new technology, especially dual-purpose technology.

The admiral stressed, however, that technology transfer was a key condition for buying a helicopter carrier abroad.

04 DEFENDER being readied for her launch. (BAE Systems)

05 The two Queens. Both will be built to the same standard. However, the UK will only be buying half as many F-35 JSFs as originally planned meaning there will not be enough to totally outfit both carriers with a full air complement.



He said the Russian Navy needed a new warship to enhance its combat effectiveness.

It is thought that one ship would be built overseas and up to another four in Russia.

06 ASTUTE ON SEA TRIALS

The first of class Astute nuclear powered attack submarine has left BAE Systems' shipyard at Barrow-in-Furness for the first stage of sea trials designed to prove its capability as the most formidable vessel of its kind ever operated by the RN.

Displacing 7,400 tonnes and measuring 97 metres from bow to propulsor, ASTUTE is significantly larger than the Swiftsure and Trafalgar class submarines that she will replace but requires fewer crewmembers to operate her due to the automated systems on board.

That technology encompasses many innovations designed to improve operational effectiveness while also reducing costs to help achieve the affordability challenges facing the RN. The Type 2076 Sonar system is the most effective in the world, giving ASTUTE a key tactical advantage in locating and identifying other vessels, while the stealth characteristics of the submarine design make it the quietest the RN has ever operated, enabling it to avoid detection and fulfil its role within the 'Silent Service', as submarines are known.

Unlimited power is provided by the pressurised water nuclear reactor that is capable of powering a city the size of Southampton. ASTUTE is capable of remaining submerged and circumnavigating the globe during a 90-day patrol, creating her own air and fresh water from the ocean. ASTUTE is equipped with a digital optical mast system to replace the traditional periscope and this offers low light and infra-red capabilities to enable her

to rapidly capture and analyse visual data, and share it with other fleet assets.

07 UNDERWATER SIDEWINDER LAUNCH SUCCESS

US company Raytheon marked a developmental milestone recently when it successfully demonstrated the underwater launch of a AIM-9X Sidewinder air-to-air test missile shape from a submerged Tomahawk Capsule Launching System. This successful test is a significant step in demonstrating payload flexibility for submarines to deal with ASW aircraft.

Conducted at the US Army's Aberdeen Test Centre, Aberdeen, Md., the test marked the first time an AIM-9X test missile shape has been launched from underwater. It is part of the Littoral Warfare Weapon (LWW) programme managed by the US Defence Departments Navy Program Executive Office of Submarines.

"The Littoral Warfare Weapon program will test and develop increased capabilities as the US Navy continues to expand undersea warfare in the littoral arena," said Michael Del Checcolo, vice president of Engineering, Raytheon Integrated Defense Systems. "This successful launch demonstrates a new degree of submarine self-defence capability against threats our warfighters may encounter from the air."

The missile can either be cued to an airborne threat through the periscope or fired in the direction of the threat leaving the missile to lock on after launch.

HARPOON III CANCELLED

A tight budget and other problems have prompted the US Navy to drop plans to develop and purchase the Harpoon III anti-ship missile. In commenting on the cancellation, Larry Dickerson, Senior Missile Analyst at Forecast International,

said, "While it is a blow to the missile's US market share, it is not a fatal one."

"Even with this decision, Boeing remains a top provider of anti-ship missiles," Dickerson said. Although US purchases will now drop, exports will take up some of the slack. "Boeing will make millions selling the Harpoon II, with some anticipated customers of the Harpoon III instead opting for this earlier version," said Dickerson.

The market for anti-ship missiles is worth US\$7 billion through 2018 and will involve the production of nearly 12,000 weapons, according to Forecast International's "The Market for Anti-Ship Missiles" analysis. MBDA, Europe's missile megacorp, could make more money than Boeing - in the area of US\$724 million.

MBDA is offering further upgrades for its Exocet series to preserve its market share. In addition, MBDA is producing new versions of the Marte Mk 2 and OTOMAT missiles.

The anti-ship missile market is in transition, according to Dickerson. These missiles are slowly evolving, becoming more than just a weapon for use against ships.

"The number of targets these missiles can engage is growing, and they now include those on land," Dickerson said. "Eventually, the anti-ship missile market will cease to be an independent entity, becoming submerged in a larger strike weapons market."

NEW WINGS FOR P-3S

Lockheed Martin has delivered the first set of new production P-3 Orion wings to the company's launch customer, the Royal Norwegian Air Force, on Sept. 25, 09. The milestone delivery ushers in a new era of P-3 life cycle sustainment.

The new production wings are the cornerstone of Lockheed Martin's P-3 Aircraft Service Life

06 The first of class Astute nuclear powered attack submarine leaving Barrow-in-Furness for the first stage of sea trials.

07 An AIM-9X Sidewinder air-to-air test missile shape being fired from a submerged Tomahawk Capsule Launching System.





Extension Program (ASLEP). ASLEP replaces the outer wings, centre wing lower surface assembly, horizontal stabilizer, wing and horizontal stabilizer leading edges and various fillet fairings. All necessary fatigue-life limiting structures are replaced, leading to significantly reduced maintenance and sustainment costs. New alloys are employed that provide a fivefold increase in corrosion resistance. ASLEP is the only solution that removes all current airframe flight restrictions on the P-3.

The RNoAF will receive six life extension kits, two conditional kits and engineering support under the contract. Other ASLEP customers to date include US Customs & Border Protection, Canada and Taiwan. Additionally, the US Navy has contracted with Lockheed Martin for 13 sets of P-3 outer wings.

Australia did consider 're-winging' its AP-3C Orions but instead opted to purchase the new Boeing P-8 Maritime Patrol Aircraft (MPA). This is despite the fact the P-8 is unable to perform the MPA role as well as the RAAF's AP-3C Orions.

THREE MORE FREMM FRIGATES FOR FRANCE

DCNS has signed an order for three new vessels under the European FREMM multimission frigate programme. This brings France's total order to 11 vessels, scheduled for delivery from 2012 to 2022.

The contract confirmation was announced on 9 October 09 by the French Minister for Defence, Mr Hervé Morin, at the launch of France's second multimission frigate in the series, the NORMANDIE.

This amendment to the FREMM multimission frigate contract calls for the development and construction of three additional vessels, two in

air defence configuration and one in ASW, as well as capability enhancements for all frigates in the series and a delivery schedule of one vessel every 10 months.

With this latest transaction, the Marine Nationale (French Navy) now has the entire class of eleven units in various stages of planning or construction and all funded. The class was originally planned as 17 units but six were deleted due to budgetary limits under the revised Military Programme Law (MPL 2009-2014). In addition to the deletion of six FREMMs, the Marine Nationale also deleted the two Batch II units of the Forbin class anti-air warfare (AAW) destroyers. The deletion of the six FREMMs and two follow-on Forbins led to the decision to consolidate the plan to procure nine FREMMs of the ASW variant and two units of the FREDA variant rather than the three variants (ASW, AAW and anti-surface variant (ASuW) envisioned under the initial plan.

The first three units are under construction at DCNS's yard in Lorient. The first unit, AQUITAINE, will be commissioned in 2012 and the entire class will be in service by 2022.

NAVANTIA DELIVERS TUN RAZAK

During last October Spanish shipbuilder Navantia launched the 2nd and last of Malaysia's Scorpene class submarines, TUN RAZAK.

The ceremony was presided over by the Malaysian Chief of Navy, Tan Sri Dato 'Sri Haji Abdul Aziz Jaafar, Malaysian ambassador to Spain, Dato' Mohammad Naimun Ashakli, and Aurelio Martinez, President of Navantia.

The submarine TUN RAZAK was floated out and baptised in a ceremony held at the Cartagena shipyard on 8 October 2008.

08 INDIAN MIGS COMPLETE CARRIER FLIGHT-TESTS

MiG-29K/KUB fighter aircraft destined for India have completed flight-tests from the Russian Federation Navy aircraft carrier ADMIRAL KUZNETSOV.

The Russian Aircraft Corporation (RAC) announced in a press release that the aircraft, which it is building for the Indian Navy (IN), executed landings and launches from ADMIRAL KUZNETSOV on 28-29 September 2009 in the Barents Sea.

India ordered 12 MiG-29K single-seat fighters and four MiG-29KuB twin-seat aircraft in 2004 to form the air wing in the Kiev-class carrier VIKRAMADITYA (ex- ADMIRAL GORSHKOV), which is being converted and refitted for the IN in Russia's Sevmaash shipyard.

Initial training for the first batch of IN MiG-29K pilots has been completed but the arrival of fighters, equipped with multi-function Doppler radar and advanced electro-optic systems, has been delayed to early 2010.

A shore-based training facility equipped with a take-off ramp that replicates the carrier's flight deck has been built by state-owned shipbuilder Goa Shipyard at INS HANSA naval air station, Goa.

FREEDOM TO DEPLOY

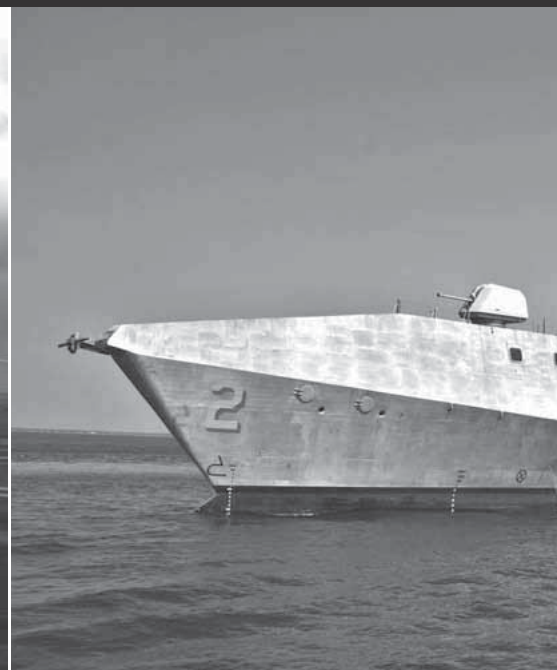
The US Navy announced on October 13, 09, the decision to deploy the USS FREEDOM (LCS-1) in early 2010 to the Southern Command and Pacific Command areas ahead of her originally scheduled 2012 maiden deployment.

According to Navy leaders, littoral combat ships (LCS) are needed now to close urgent warfighting gaps.

"Deploying LCS now is a big step forward in getting this ship where it needs to be – operating

08 An IN MiG-29KUB on the deck of the Russian aircraft carrier ADMIRAL KUZNETSOV. (RAC MiG)

09 The future USS INDEPENDENCE (LCS-2) during earlier sea trials. (USN)



in the increasingly important littoral regions," said Adm. Gary Roughead, chief of naval operations. "We must deliver this critical capability to the warfighter now."

The FREEDOM will have an immediate impact on fleet readiness and global reach as an asset with unique combat capabilities and the ability to meet littoral tasking not previously seen in the modern cruiser or destroyer fleet.

"The Navy plans to build a considerable number of littoral combat ships which will form the backbone of our future fleet," said Adm J. C. Harvey, Jr., commander, US Fleet Forces, charged with executing the early deployment. "The sooner we integrate them into our fleet, the sooner we can incorporate them into the order of battle. This deployment offers a golden opportunity to learn by doing. Employing the USS FREEDOM in theatre two years ahead of a normal timeline allows us to incorporate lessons that can only be learned in a deployment setting more quickly and effectively in the LCS fleet integration process."

09 LCS 2 COMPLETES ACCEPTANCE TRIALS

The future USS INDEPENDENCE (LCS-2) successfully completed acceptance trials during Nov 09, after completing a series of graded in-port and underway demonstrations for the US Navy's Board of Inspection and Survey (INSURV).

Acceptance Trials are the first opportunity for INSURV to test the ship and its systems.

During two days underway, the ship completed demonstrations of the combat systems suite, steering, anchoring and propulsion. The ship achieved a top speed of almost 45 knots during the full power demonstration.

"INDEPENDENCE performed extremely well during trials," said Littoral Combat Ship (LCS)

Programme Manager Rear Adm. James Murdoch. "LCS-2 conducted two outstanding days at sea. We look forward to delivering this critical asset to the fleet."

The ship was presented to INSURV with high levels of completion in production and test. The official results of the trials, including the type and number of trial cards, are currently being reviewed by the USN.

Members of the LCS 2 pre-commissioning unit were on board INDEPENDENCE during trials to see how their future ship would perform.

"It's going to change the way we do things, particularly in the surface force," said Cmdr. Curt Renshaw, INDEPENDENCE Blue Crew commanding officer. "This ship allows us the flexibility to complement almost all the pillars of the Maritime Strategy."

"This is a significant milestone for the surface warfare community and the Navy at large - the impact that FREEDOM and INDEPENDENCE will have on the fleet will be immediate. We are another step closer to having this important capability as part of the surface force, and I applaud the team effort - Sailor, civilian and contractor - that went into making this happen," said Vice Adm. D.C. Curtis, commander, Naval Surface Forces.

Acceptance trials are the last significant milestone before delivery of the ship to the Navy. The ship's commissioning is scheduled for January 16 in Mobile, Alabama.

10 HMS SCOTT DEPLOYS TO ANTARCTIC

The RN's advanced deep water survey ship HMS SCOTT deployed in November 09 in the pouring rain from Devonport, Plymouth, to the Antarctic for the first time.

HMS SCOTT will be patrolling and surveying the Antarctic and South Atlantic. This is the first time

HMS SCOTT's state-of-the-art sonar suite has been deployed to the Antarctic and it is hoped her work will help deepen understanding of this little-known part of the world and the marine environment.

The ship's other aim will be to maintain the United Kingdom's presence in the region, namely the Falklands, during Austral summer 2009/2010.

HMS SCOTT will be deployed to fulfil, amongst other tasks, the role usually undertaken by the Royal Navy's ice patrol vessel, to patrol and survey the Antarctic and South Atlantic maintaining sovereign presence with defence diplomacy and supporting the global community of Antarctica.

The RN's normal 'Ice Patrol' ship, HMS ENDURANCE is still laid up in the UK after a freak accident off Chile nearly sank her. The UK MoD is still deciding whether to repair, replace or scrap the 'Ice Patrol' role altogether.

10 The RN's advanced deep water survey ship HMS SCOTT departing Devonport, Plymouth, to the Antarctic for the first time. (RN)





THE BOAT PEOPLE

Many years ago – in March 1983 to be more precise – Melbourne's evening newspaper THE HERALD published an article, submitted by this writer in his capacity as the Navy League's Federal President, which the paper headed, rather drastically, "If Someone Wants to Take Our Land". The article was on the subject of defence and was promoted by the long-running and often acrimonious debate on whether or not to replace the aircraft carrier MELBOURNE: It discussed prevailing community and political-party attitudes to defence and referred to two schools of thought – one containing those who favoured collective defence (co-operating with other nations), the other those who opted for continental defence with or without allies – 'Fortress Australia'. As policy the latter now appears to have been discarded.

Among other things the article went on to say:

"Australia and its dependencies, covering an enormous land and sea area and with miniscule population, are as vulnerable and reliant upon 'friends' as any country in the world.

The second thing to be said is our occupancy of this great land will not go unchallenged forever.

If for no other reason, the ever-increasing world population makes it inevitable that one day others will think, rightly or wrongly, they could make better use of our space than we do.

The need to look and plan a long way ahead, not only security measures of course, but development of the country in every direction, has never been more pressing"

Localised wars – Vietnam, Iraq and Afghanistan to mention only three – as well as growth, overcrowding and wretched living conditions in many lands have made Australia and similarly well-endowed countries even more attractive destinations which people can be expected to use any means to reach – including by sea in small boats when necessary.

Australia may want an orderly immigration process but seems unlikely to achieve it; leaving aside other forms of unauthorised entry by small craft, the occupants often including women and children, continue to arrive in the country's vicinity and can be expected to do so for some time to come. While the present number appears to be within the interceptive capacity of the navy and customs, it is possible to wonder what would happen if a large number arrived at the same time. It is inconceivable that Australian seamen would use force in circumstances short of war to try and turn the boats back.

Given the probability that for whatever reason people will continue to arrive off the Australian coast in small, often unseaworthy craft, it will be Australia's problem to solve and not the responsibility of other countries, although their assistance could be expected. Despatching the people in intercepted boats to remote islands for processing, there to languish for months is not a satisfactory answer; instead it would be better to resume the customs screening on the mainland where all the facilities are readily available.

The boat people have not come "to take our land" but they have confirmed its vulnerability from the sea.

ALL THOSE CHIEFS

Over a number of years the writer has noted the growth in the number of senior officers – Captains, Commodores and Flag Officers – now measured in scores and seemingly out of proportion to the size of the navy – ships in commission etc. Possibly the same could be said of others services and Public Servants.

It could also be said the large number of senior people is necessary to cope with technological developments and the complexity of modern warfare. But development is continuous and successive generations of young officers have quickly adjusted to changed and changing circumstance. Fortunately a normal balance prevails at sea and Commanders and lesser ranks still command ships.

THE LOSS OF 'MALU SARA'

The October- December 2006 'Observations' included an account of the Australian Transport Safety Bureau's (ATSB) investigation and report on the loss of the small Department of Immigration and Multicultural and Indigenous Affairs (DIMIA) vessel MALU SARA and the death of its five occupants in Torres Strait a year earlier.

This tragedy has been followed by further investigations, a Coroner's Inquiry and the issue of two supplementary ATSB reports, together with widespread changes involving DIMIA and other organisations aimed at improving rescue-at-sea procedures.

The ATSB is to be praised in its persistence in these matters.

NOTICE IS HEREBY GIVEN THAT AN

EXTRAORDINARY GENERAL MEETING OF THE NAVY LEAGUE OF AUSTRALIA



WILL BE HELD AT

**7th Floor, 175 Macquarie Street, Sydney,
on MONDAY 8 FEBRUARY 2010, 5.30 PM**

for the purpose of considering, and if thought fit, passing
the following resolution as a special resolution:

RESOLUTION: That the Articles of Association be amended by deleting Articles 73-77 inclusive and substituting the following new Articles :

THE FEDERAL ADVISORY COUNCIL

- 73(a)** The Federal Council will establish a Federal Advisory Council ("Advisory Council") to advise the Federal Council from time to time on any matter referred to it by the Federal Council which the Federal Council considers to be pertinent to the objects and policies of the League. The Advisory Council may also advise the Federal Council from time to time on any matter which the Advisory Council considers important in furthering the objects and policy of the League.
- (b)** The Federal President or any Federal Vice-President may also at any time refer a matter to the Advisory Council for advice.
- 74** The Advisory Council shall not exceed six in number. Its members shall be appointed by the Federal Council from persons considered by the Federal Council to have the necessary experience to enable them to fulfil their role. One member of the Advisory Council shall be appointed by the Federal Council as the Advisory Council's Chairman.
- 75** Each member of the Advisory Council shall be appointed for an initial term of two years and may be re-appointed for further two terms of two years each. The total continuous term of a member of the Advisory Council shall not exceed six years.
- 76** A member of the Advisory Council may resign his appointment at any time by notice to the Federal Council. The Federal Council may at any time by notice to the member cancel his appointment as a member of the Advisory Council.
- 77** The Federal Council shall provide the Advisory Council with such secretarial support as from time to time it reasonably requires.

**By order of the Federal Council
Philip Corboy – Honorary Federal Secretary**



PARRAMATTA AND AUCKLAND JUNE 1941

By Petty Officer Peter Cannon

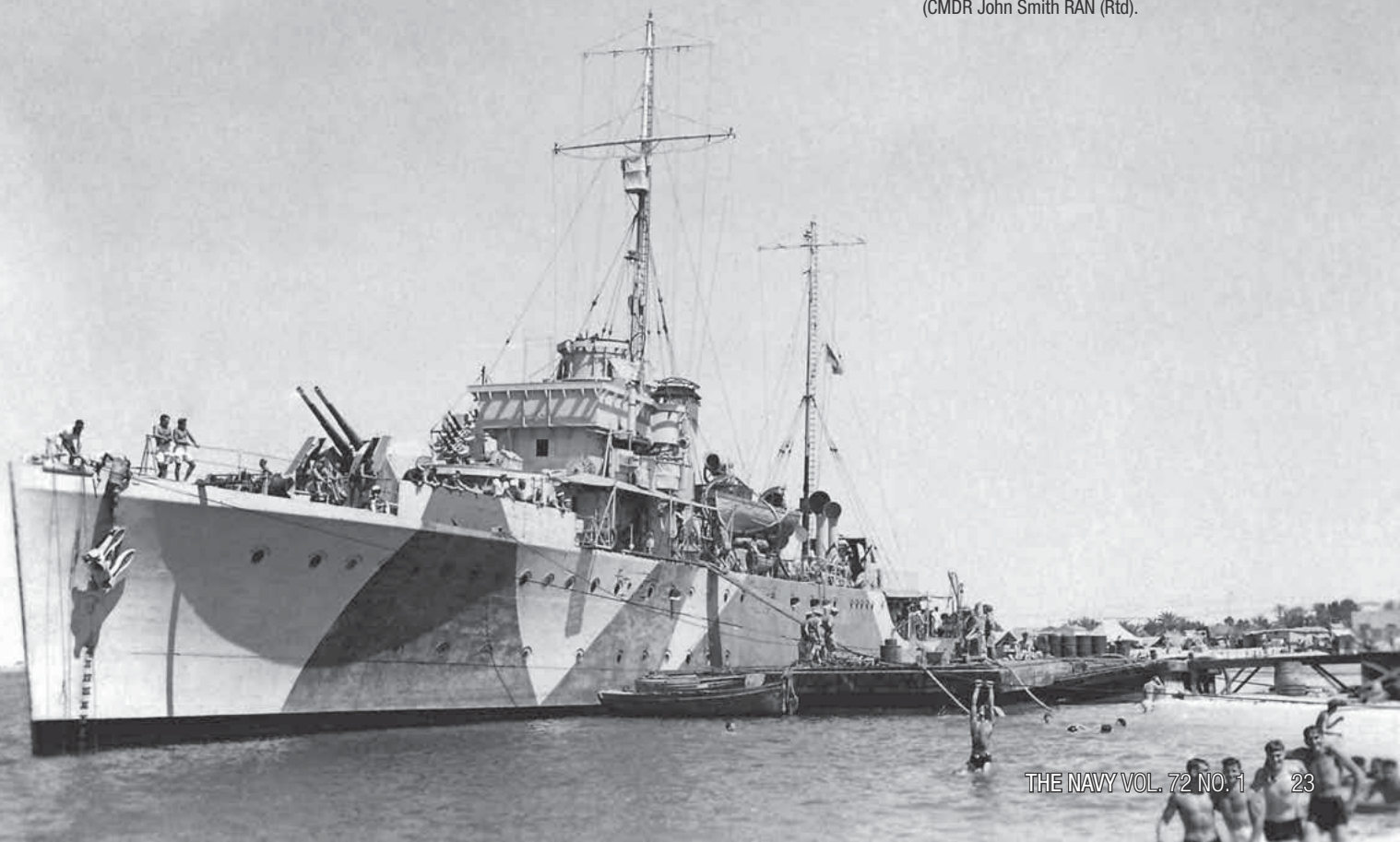
Petty Officer Peter Cannon, in this his 1st place 2009 Navy League of Australia Professional Essay Competition entry, details the courageous battle by two Allied ships, HMAS PARRAMATTA and HMS AUCKLAND, in the Mediterranean during World War II.

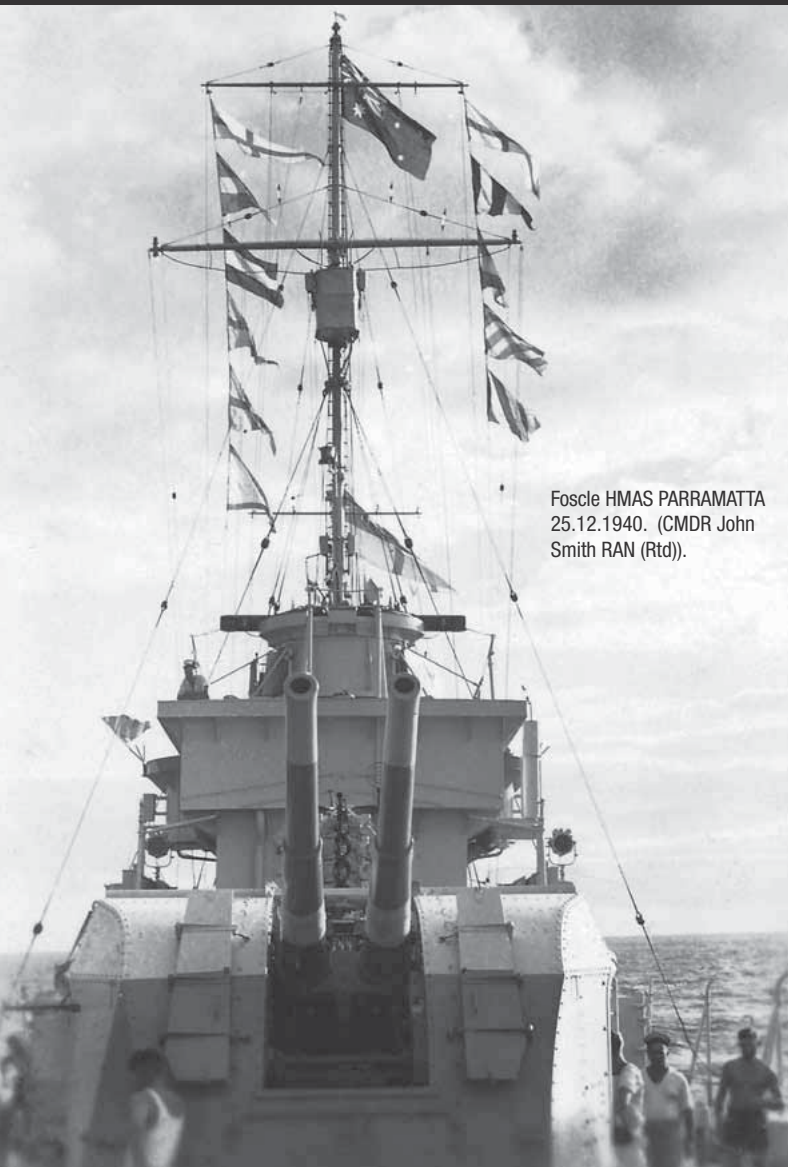
Sunday 22 June 1941 saw two escort sloops of the Mediterranean Fleet, the British HMS AUCKLAND and Australian HMAS PARRAMATTA, sail from their base at Alexandria in Egypt. Their mission was to escort a 758 ton British tanker, *Pass of Balmaha*, to the Cyrenaican port of Tobruk, in what is now Libya.¹ The tanker carried a much needed cargo of petrol for Tobruk's besieged garrison desperately holding out against Rommel's undefeated *Afrika Korps*. Ships of the Inshore Squadron were the only means of resupply from Egypt on what became known as the Tobruk Ferry Service and were forced to run the dangerous gauntlet of Axis air power. Indeed the entire striking power of the German and Italian air forces based in North Africa at that time were employed in reducing Tobruk and interdicting its supply line.

Morning on the 24th found the convoy nearing Tobruk. The sea was smooth, visibility perfect, and the temperature climbing. AUCKLAND, an Egret Class sloop under the command of Commander Mervyn Thomas DSO, RN was steaming ahead of *Pass of Balmaha* with PARRAMATTA in station astern of the tanker. The Australian ship

was commanded by Lieutenant Commander Jefferson Walker RAN. At 0840 local (all times are given as time zone Charlie) a single reconnaissance aircraft was sighted to the west and momentarily fired upon by AUCKLAND. 25 minutes later the ships were surprised by a single Italian Savoia-Marchetti SM79 Sparviero bomber flying in from the direction of the sun astern and dropping a pair of bombs which hit the sea 50 yards ahead of PARRAMATTA. AUCKLAND engaged the retreating aircraft but PARRAMATTA's rangefinder was temporarily put out action by flying spray. Her three 4-inch guns, one twin dual purpose mount forward and a single weapon aft, remained silent. Peace and quiet prevailed for another two and a half hours until the Italian Air Force again appeared with three more S79s, one flying so as to draw defensive fire while the other two swept in low on PARRAMATTA from each quarter for a torpedo attack. The Australian gunners succeeded in convincing these pilots to drop their weapons early with accurate 4-inch shell bursts. Observing the track of the torpedo to starboard, Walker swung the ship under full helm towards the threat and watched it pass astern through his wake.² The track of the port torpedo remained unobserved but the British

HMAS PARRAMATTA at Mersa Matruh 1941.
(CMDR John Smith RAN (Rtd).)





Foscle HMAS PARRAMATTA
25.12.1940. (CMDR John
Smith RAN (Rtd)).

spotted it aimed at the tanker. It also missed. As fast as they had arrived, the enemy disappeared, one thought to have been damaged by gunfire, to leave the convoy alone for almost two hours before a single Italian bomber; another S79, appeared. It flew in from the south at 6,000 feet and straddled PARRAMATTA with a stick of four bombs, the Australians being considerably lucky not to have been hit.³ Four hours later at 1736, AUCKLAND sighted another, more ominous air threat. Dive bombers.⁴

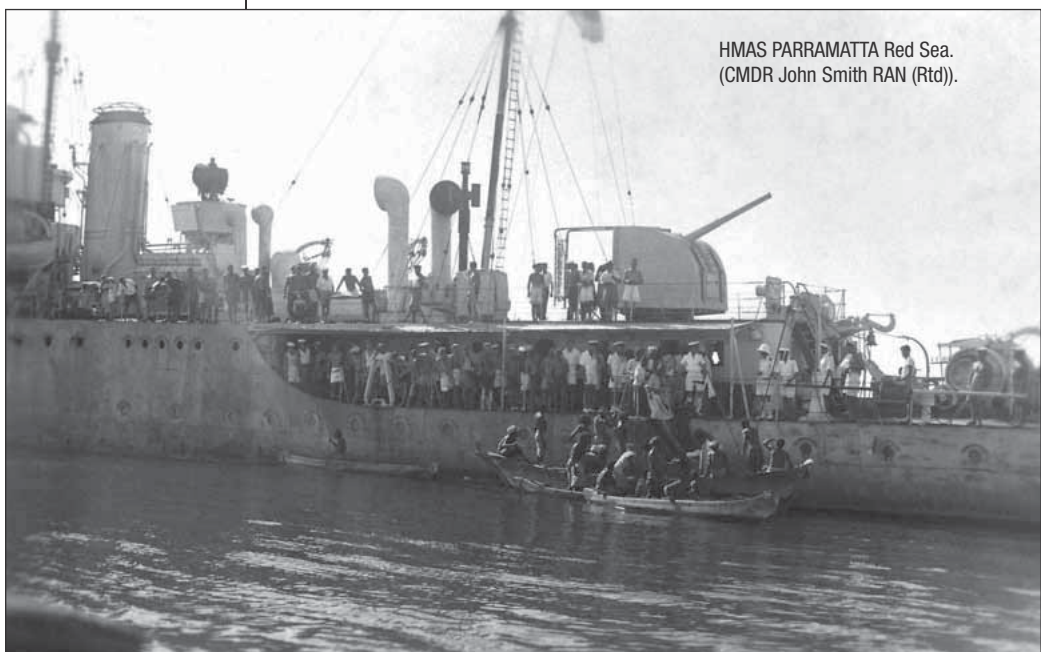
The first Axis formation of approximately 16 ship-killing Junkers Ju-87 Stuka dive bombers was spotted flying at 14,000 feet distant at 10 nautical miles and was engaged as soon as it entered extreme 4-inch gun range. Second and third formations of 16 aircraft were spotted soon after, all three bearing roughly south east of the ships and flying west to work their way around into the afternoon sun before turning to attack.⁵ Total Axis dive bomber strength in Libya consisted of German Stuka Wing 1's Number 1 Group and Stuka Wing 2's Number 2 Group along with a small number of Italian Stukas of 97 Group's 239th Dive Bombing Squadron.⁶ Over the previous five months, the German units had enjoyed considerable success against the Mediterranean Fleet. They were well practised and deadly accurate. After being sighted approaching Tobruk during the morning, the tiny convoy had now attracted the

attention of this entire force.⁷

Against this attack, the sloop's high explosive 4-inch shells were mechanically fused based on a predicted time of flight to their targets to explode close enough and inflict lethal damage or at least put off the pilot's aim.⁸ Their guns were designed to be trained, elevated and fired quickly but at high elevations the loaders encountered difficulty in manually ramming the heavy fixed ammunition home which slowed the rate of fire.⁹ Unfortunately British warships of all types were highly vulnerable to attacks by modern dive bombers, their anti-aircraft fire control systems having been designed with earlier threats in mind and totally unable to cope with an aircraft diving on a target ship at high speed.¹⁰ The ship's survival primarily depended upon avoiding the deluge of bombs, aided by their close range machine guns as the chances of hits with the 4-inch weapons were extremely poor.

AUCKLAND now became the enemy's primary target, her powerful main armament of four twin 4-inch mountings being pitted against roughly two thirds of the bombers while the remaining aircraft concentrated upon PARRAMATTA and *Pass of Balmaha*. Both ships opened up with heavy gunfire as fast as the weapons could be loaded, but the Stuka pilots weren't nearly as easy to put off as the earlier torpedo bombers and attacks came in with terrifying precision.¹¹ With large numbers of dive bombers available, *Luftwaffe* tactics were to attack with a continuous succession of aircraft diving from all points of the compass in an effort to overwhelm an enemy's defences. The bombers reached their roll over point and winged down into a 70 – 80° dive, their two prop-driven sirens adding a nerve-shattering howl to the experience.¹² As the screaming aircraft dived upon the sloops, machine gunners on both vessels joined in the barrage. PARRAMATTA was fitted with a four barrelled mounting of 0.5-inch Vickers machine guns in 'B' Position below the bridge while AUCKLAND mounted hers amidships.¹³ The Australians had also fitted a single captured Italian Breda 20mm gun down aft to augment their inadequate A/A defence. At least one .303-inch machine gun was mounted on the bridge and there may have been others.¹⁴

Several bombs landed close off PARRAMATTA's starboard bow. Walker later wrote that he was constantly near blinded as he and the bridge staff were showered with spray from near misses.¹⁵ AUCKLAND meanwhile was reeling from the main assault, soon incurring concussion and splinter damage from near misses in quick succession as she manoeuvred desperately to escape. At 1750 a German pilot managed to hit the British ship with a heavy bomb which either struck, or penetrated adjacent to, Y Gun on the quarterdeck, killing its crew and many others instantly. The hit was devastating, the stern section above the waterline being blown to pieces. The resulting damage caused the ship to immediately lose speed and swing 180 degrees to starboard at 10 knots despite the rudder being jammed at 30 degrees to port.¹⁶ From PARRAMATTA, the British ship disappeared in a pall of brown smoke and when she emerged, was



HMAS PARRAMATTA Red Sea.
(CMDR John Smith RAN (Rtd)).



Twin 4-inch HMAS PARRAMATTA. (CMDR John Smith RAN (Rtd)).

steaming towards them. Walker put his helm hard over to avoid her. As AUCKLAND passed down the starboard side, she was down by the stern and a wreck abaft the mainmast but her two forward gun mounts still aimed skywards and continued a rapid fire as more dive bombers pressed home their attacks for at least another quarter of an hour.¹⁷ The damage had knocked out AUCKLAND's gunnery director but the 4-inch gunners carried on in local control until the end of the attack.

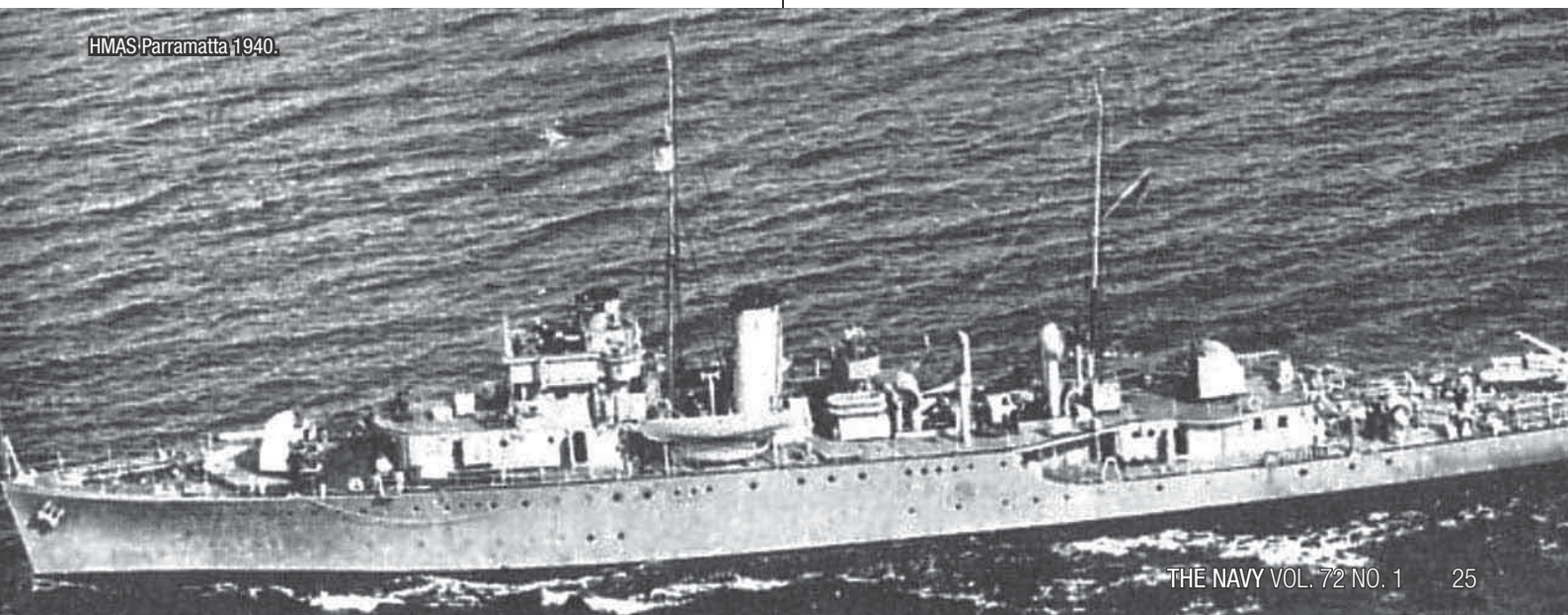
However her fate was sealed when the stricken ship was quickly hit by a further salvo of three German bombs, one piecing through the deck of the bridge to explode as it passed out the ship's side below, a second through the skylight to the sickbay while the third detonated somewhere amidships. The ship was still underway but developing a heavy list to port with the deck edge only just clear of the water. It was obvious to all on AUCKLAND's bridge that the ship was mortally hit and Commander Thomas quickly gave the order to abandon ship.¹⁸ The sloop came to a stop blowing off steam from the boilers while smoke from the fires burning within her drifted away down wind.¹⁹ Her crew then set about getting the ship's boats manned and swung out along with tending to the wounded as best they could. The First Lieutenant supervised the hurried destruction of any secret and confidential documents held aboard. Sailors launched the ship's whaler and 14-foot dinghy but the motor skiff sank immediately due to shrapnel damage. Along with the boats, all of the Carley and Denton rafts aboard were jettisoned as well as any equipment that would float as survivors started going over the side. The heavy fires below decks hampered efforts to conduct a thorough search of all compartments, but it was considered unlikely that any living

men were left aboard by their shipmates.²⁰ Neither PARRAMATTA nor the lumbering tanker had received any hits and the enemy aircraft drew off for their airfields having expended their ordnance. *Pass of Balmaha* was ordered by Walker to stand to seaward while PARRAMATTA closed the sinking warship and stopped to windward of the men in the water before launching both her whalers and skiffs along with floats and lifebelts.

With the British sailors working to abandon ship and in the water, an enormous internal explosion enveloped the dying sloop and lifted her slowly and steadily at least six feet out of the water. Clouds of escaping steam shrouded AUCKLAND as she settled back in the water heavily listing to port, her back broken and with a pronounced fold down the starboard side.²¹ Thomas described the ship continuously jumping for approximately 20 seconds as opposed to a violent single jump and attributed it to a bomb with delay action fuse, most likely the hit that entered through the sickbay skylight. The

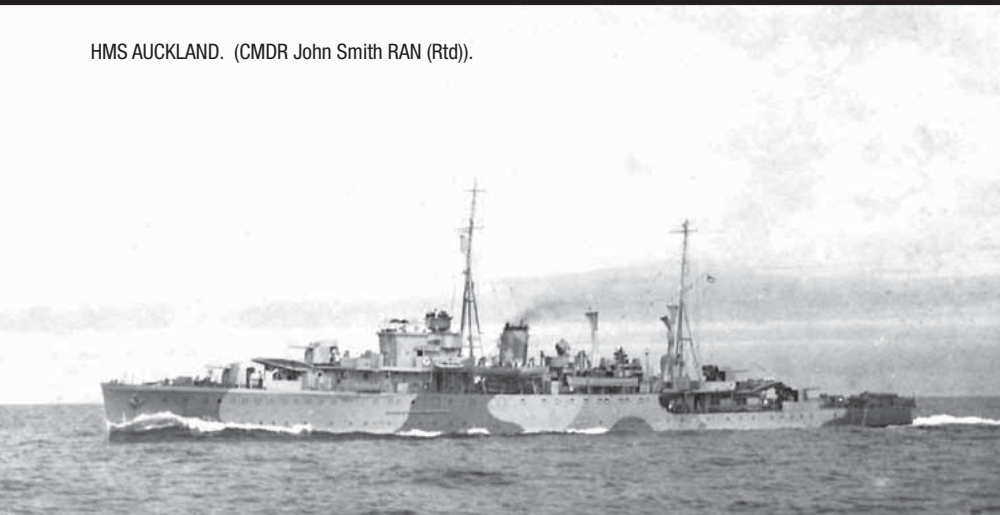
whaler was at that point clear of the ship, but the explosion wrecked the 14-foot dinghy and threw men awaiting to go over the ship's side into the sea as well as causing casualties amongst those already in the water. The conduct of the crew in abandoning ship and doing everything possible to assist the wounded was exemplary.²² PARRAMATTA managed to get a few survivors inboard but at 1828 another attack was observed developing. This time Walker was caught stopped close to the stricken AUCKLAND with men in the water around his screws. Six Italian S79s flew over the ships from the east at about 5,000 feet as the Australian anti-aircraft crews went back to work. This fire had no effect and numerous bombs landed short but quite close, lifting PARRAMATTA bodily a couple of feet out of the water and throwing towering geysers into the air. The Italians also decided to rake the struggling British sailors with machine gun fire but thankfully to little effect.²³ As the enemy pressed this attack on the Australian sloop, AUCKLAND's increasing list finally got the better of her and she rolled over and sank 20 miles east-north-east of Tobruk.²⁴ Her mainmast battle ensign was the last to disappear below.²⁵

The aircraft then quickly turned and appeared to make a second run at the Australians before altering course and bombing *Pass of Balmaha*, missing just over the tanker.²⁶ As these planes retreated from the scene, at least one of them had been hit by PARRAMATTA's gunners and was in for a tough time getting home as he dropped out of formation trailing smoke.²⁷ But now a group of between 20 and 30 German Messerschmitt Bf 109 fighters and Bf 110 fighter bombers was spotted forming up at around 10,000 feet. The crew of *Pass of Balmaha* decided at this point



HMAS Parramatta 1940.

HMS AUCKLAND. (CMDR John Smith RAN (Rtd)).



to lower boats and abandon ship, not willing to take their chances with the *Luftwaffe* any further. Walker considered this a wise decision on their part but he was now placed in the situation that if he continued the rescue he would surely bring down the dive bombers on the British survivors. He therefore decided to move to seaward to gain manoeuvring room against air attack but remain in the vicinity to pick up AUCKLAND's crew after nightfall. As the sun sank, his decision to stand clear was justified as multiple enemy aircraft formations massed above them.

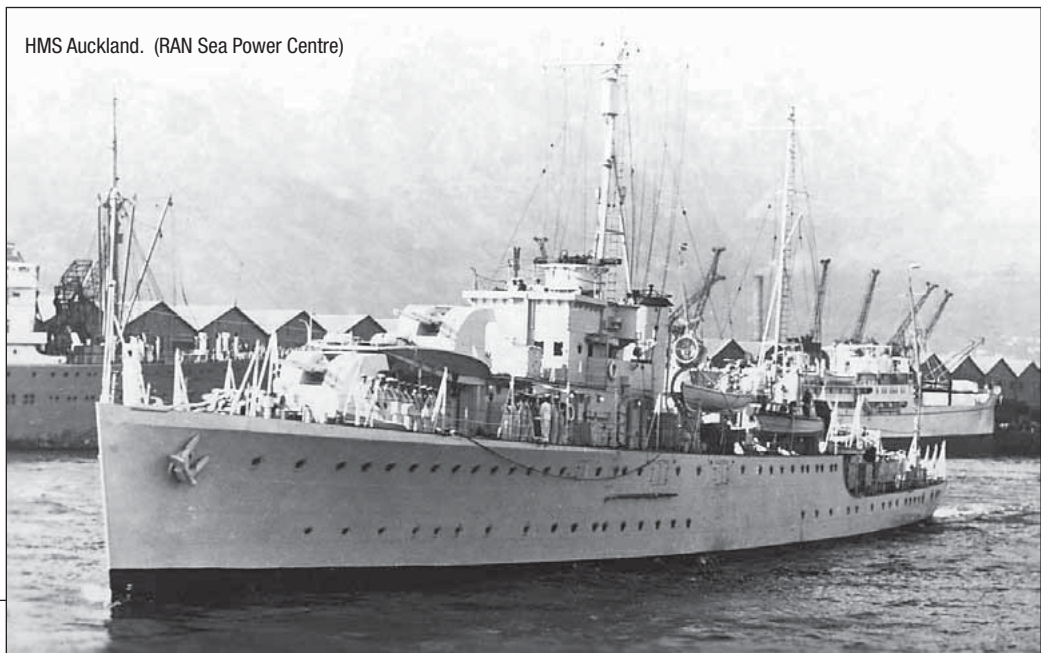
The enemy had had ample time to refuel and rearm at their airfields and once again approached from the south east before working their way around into the sun and diving on the Australians, the last mass attacks beginning just before dusk at 1955. At least 48 Stukas formed up overhead in groups of five and six before rolling over and diving either in quick succession or in twos and threes. At times the circling aircraft appeared to be uncountable. "There seemed always one formation falling about like leaves in the zenith and then diving in succession, one moving forward into position and one splitting up and coming in at 45°".²⁸ The Captain of a ship under dive bombing attack could only stand on his bridge and watch each approaching bomber to the point where the pilot was committed to release his bombs. If the

pilot's aim was good, only a violent change of course could possibly save his command from a devastating hit. As Stukas released their bombs from as low as 450m, there was precious little time to get it right.²⁹ Walker manoeuvred the ship at her modest maximum speed of 16 knots, attempting to have the sloop beam on to each successive attack in order to complicate the pilot's aim and increase his chances of over-shooting when releasing his bombs, each Stuka dropping that plane's standard load of one 250 kilogram and four 50 kilogram bombs

in a pattern.³⁰ Walker described the attack as ...the sky above alive with aircraft, whistling down (or rather roaring down at one), pulling out at the last moment, and bombs crashing into the sea continuously, the whole being added to by the continuous crash of one's guns. The effect is terrific as the sky seems to rain death at one.³¹

PARRAMATTA found herself continuously straddled by near misses that caused the ship to disappear in clouds of spray, only to reappear with all weapons that would bear on the next dive bomber blazing away her tormentors. The attack was nothing short of vicious, the ship being shaken violently and hit repeatedly by bomb splinters. But miraculously no one was hit and no significant damage was sustained. During the confusion, personnel watching the action from the boats saw an unknown number of bombers estimated at between five and ten try their luck with bombing from several thousand feet but to no effect. Up to 30 enemy fighters were seen flying cover at great height for the attacking bombers. Despite the odds being stacked heavily in their favour with no aerial opposition from the RAF, the Germans still weren't having things all their own way.

HMS Auckland. (RAN Sea Power Centre)



HMS AUCKLAND 1938.



Two diving Stukas suffered direct hits from 4-inch high explosive shells and disintegrated instantly. Another was seen to be hit hard with pieces falling away from it and was likely to have crashed into the sea. In the post action analysis, other aircraft were also considered not to have survived to return to their airfield. The attacks finally ceased as the setting sun touched the horizon at 2025. Aside from the 48 planes which had pressed home attacks, another five dive bombers had remained at height apparently observing the action and

did not participate. As the western horizon quickly darkened, Walker anticipated a torpedo attack from that direction and turned his ship to face toward it but none eventuated and only then did he dare to approach the drifting boats.

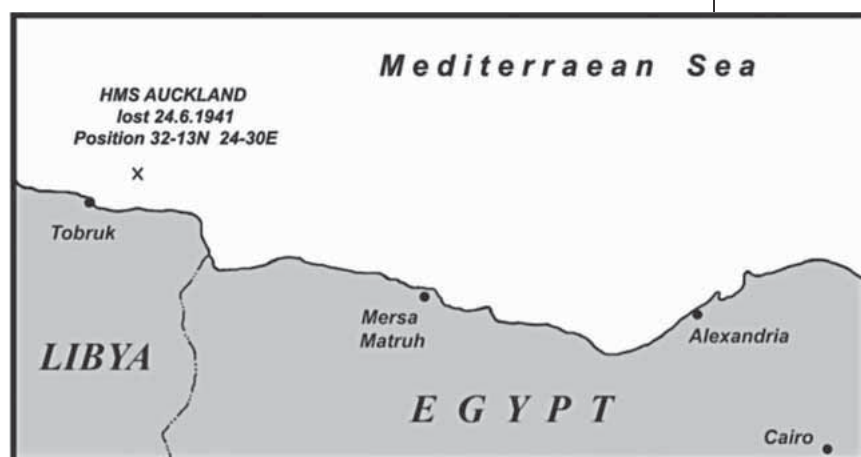
The Australian destroyers VENDETTA and WATERHEN were on passage to Tobruk from Mersa Matruh and made for the convoy at high speed after receiving word of its plight. They arrived as PARRAMATTA began rescuing British sailors from AUCKLAND's surviving whaler and the Australian boats as well as those still in the water. The boats had remained spread out while PARRAMATTA fought for her life and now the recovery effort commenced while WATERHEN maintained an anti-submarine patrol.³² 164 British survivors were picked up before Walker left the scene an hour and a half after the last German bomber had departed, making for Mersa Matruh. 36 Officers and men had died with their ship.³³ *Pass of Balmaha*, with her crew having returned onboard, discovered she could not get underway due to damage sustained in the air attacks and was towed into Tobruk by WATERHEN where she arrived with her cargo early the next morning.³⁴ As PARRAMATTA steamed east, two of the wounded British sailors died of their wounds and were buried at sea bringing the death toll to 38 while 20 others were stretcher cases. The ship arrived alongside in Alexandria late on 25 June.³⁵

During the actions of 24 June, the Axis air forces had succeeded in destroying an escorting warship but were unsuccessful in preventing the tanker load of petrol being delivered to the defenders of Tobruk. HMAS

PARRAMATTA had managed to not only fight off an incredible scale of attack similar to those which had overwhelmed British warships much more powerful than herself. AUCKLAND survivors who had lived through the deadly Norwegian and Cretan campaigns as bombing targets said they had not seen anything like it.³⁶ Of his crew, Walker was to state "... the men fought excellently, especially as this was, their first experience of a close action."³⁷ Not only had they survived, but they had certainly punished their attackers shooting down at least three of their number, possibly more and it being no mean feat to knock a dive bomber out of the sky with a 4-inch gun. The guns had fired constantly and by the time the sun had set, PARRAMATTA found herself low on ammunition but essentially unhurt, the only significant damage incurred being some wireless antennas severed by splinters.³⁸

This dramatic action caught the attention of the First Sea Lord in London and he signalled to the Commander-in-Chief of the Mediterranean Fleet, Admiral Cunningham, on 1 July that "The ship handling and shooting of H.M.A.S. "Parramatta" must have been very good when picking up survivors of H.M.S. "Auckland" as all attacks were avoided and three aircraft shot down".³⁹ Tribute was also paid to the ship's company of AUCKLAND from their CO for the gallant manner in which they conducted themselves during their ship's final action.⁴⁰ Both *Pass of Balmaha* and PARRAMATTA would be lost before the end of year whilst attempting to resupply Tobruk, not to air attack, but to German U-boats. PARRAMATTA had continued to see action in the Mediterranean theatre before escorting

an ammunition ship desperately needed by the garrison in its attempt to break out of the Axis encirclement. She was hit by a torpedo fired from U559 in the early hours of 27 November north east of Tobruk and sank instantly. Of 163 men aboard including a handful of Royal Navy personnel, only 24 survived her sinking. Acting Commander Jefferson Walker, posthumously awarded the Distinguished Service Cross for "... courage, resolution and devotion to duty in operations in the Mediterranean" as a result of the air attacks of 24 June, along with all of his officers, was lost with the ship.⁴¹



Position of final air attacks upon AUCKLAND, PARRAMATTA and Pass of Balmaha 24 June 1941.

1. Australian War Memorial 78, Item 290/1, HMAS PARRAMATTA: Reports of Proceedings, Letter of Proceedings – June, 1941.
2. AWM78, Item 290/1, HMAS PARRAMATTA: Reports of Proceedings, Narrative of Action against Enemy Aircraft on 24th. June. H.M.S. "AUCKLAND" and H.M.A.S. "PARRAMATTA".
3. AWM78, Item 290/1, HMAS PARRAMATTA: Reports of Proceedings, HMS AUCKLAND Report of Proceedings – 22nd to 24th June, 1941.
4. AWM78, Item 290/1, HMAS PARRAMATTA: Reports of Proceedings, HMS AUCKLAND Report of Proceedings – 22nd to 24th June, 1941.
5. AWM78, Item 290/1, HMAS PARRAMATTA: Reports of Proceedings, Narrative of Action against Enemy Aircraft on 24th. June. H.M.S. "AUCKLAND" and H.M.A.S. "PARRAMATTA".
6. Weal, Junkers Ju 87 Stukageschwader, p. 40.
7. <http://uboat.net/allies/warships/ship/3910.html>. Visited 29 July 2009.
8. Brown, Nelson to Vanguard, p. 208.
9. Phone Interview: Commander John Smith RAN (Retd), 28 July 2009.
10. Brown, Nelson to Vanguard, p. 209.
11. AWM78, Item 290/1, HMAS PARRAMATTA: Reports of Proceedings, Narrative of Action against Enemy Aircraft on 24th. June. H.M.S. "AUCKLAND" and H.M.A.S. "PARRAMATTA".
12. Weal, Junkers Ju 87 Stukageschwader, pp. 11-27.
13. Lenton, British and Empire Warships, pp. 243-246.
14. McQuire, The Price of Admiralty, p. 264.
15. Letter: LCDR J. H. Walker to his wife, 31 July 1941.
16. AWM78, Item 290/1, HMAS PARRAMATTA: Reports of Proceedings, HMS AUCKLAND Report of Proceedings – 22nd to 24th June, 1941.
17. AWM78, Item 290/1, HMAS PARRAMATTA: Reports of Proceedings, Narrative of Action against Enemy Aircraft on 24th. June. H.M.S. "AUCKLAND" and H.M.A.S. "PARRAMATTA".
18. AWM78, Item 290/1, HMAS PARRAMATTA: Reports of Proceedings, HMS AUCKLAND Report of Proceedings – 22nd to 24th June, 1941.
19. AWM78, Item 290/1, HMAS PARRAMATTA: Reports of Proceedings, Narrative of Action against Enemy Aircraft on 24th. June. H.M.S. "AUCKLAND" and H.M.A.S. "PARRAMATTA".
20. AWM78, Item 290/1, HMAS PARRAMATTA: Reports of Proceedings, HMS AUCKLAND Report of Proceedings – 22nd to 24th June, 1941.
21. AWM78, Item 290/1, HMAS PARRAMATTA: Reports of Proceedings, Narrative of Action against Enemy Aircraft on 24th. June. H.M.S. "AUCKLAND" and H.M.A.S. "PARRAMATTA".
22. AWM78, Item 290/1, HMAS PARRAMATTA: Reports of Proceedings, HMS AUCKLAND Report of Proceedings – 22nd to 24th June, 1941.
23. AWM78, Item 290/1, HMAS PARRAMATTA: Reports of Proceedings, Narrative of Action against Enemy Aircraft on 24th. June. H.M.S. "AUCKLAND" and H.M.A.S. "PARRAMATTA".
24. Brown, Warship Losses of World War Two, p. 47.
25. Letter: LCDR J. H. Walker to his wife, 31 July 1941.
26. AWM78, Item 290/1, HMAS PARRAMATTA: Reports of Proceedings, Narrative of Action against Enemy Aircraft on 24th. June. H.M.S. "AUCKLAND" and H.M.A.S. "PARRAMATTA".
27. Letter: LCDR J. H. Walker to his wife, 31 July 1941.
28. AWM78, Item 290/1, HMAS PARRAMATTA: Reports of Proceedings, Narrative of Action against Enemy Aircraft on 24th. June. H.M.S. "AUCKLAND" and H.M.A.S. "PARRAMATTA".
29. Griehl, Junker Ju 87 Stuka, p. 61.
30. AWM78, Item 290/1, HMAS PARRAMATTA: Reports of Proceedings, Narrative of Action against Enemy Aircraft on 24th. June. H.M.S. "AUCKLAND" and H.M.A.S. "PARRAMATTA".
31. Letter: LCDR J. H. Walker to his wife, 31 July 1941.
32. AWM78, Item 290/1, HMAS PARRAMATTA: Reports of Proceedings, Narrative of Action against Enemy Aircraft on 24th. June. H.M.S. "AUCKLAND" and H.M.A.S. "PARRAMATTA".
33. <http://www.naval-history.net/xDKCas1941-06JUN.htm>. Visited 29 July 2009.
34. Gill, Royal Australian Navy 1939-1942, p. 393.
35. AWM78, Item 290/1, HMAS PARRAMATTA: Reports of Proceedings, Narrative of Action against Enemy Aircraft on 24th. June. H.M.S. "AUCKLAND" and H.M.A.S. "PARRAMATTA".
36. Letter: LCDR J. H. Walker to his wife, 31 July 1941.
37. AWM78, Item 290/1, HMAS PARRAMATTA: Reports of Proceedings, Narrative of Action against Enemy Aircraft on 24th. June. H.M.S. "AUCKLAND" and H.M.A.S. "PARRAMATTA".
38. Australian War Memorial 78, Item 290/1, HMAS PARRAMATTA: Reports of Proceedings, Letter of Proceedings – June, 1941.
39. AWM78, Item 290/1, HMAS PARRAMATTA: Reports of Proceedings, Letter of Proceedings – June, 1941.
40. AWM78, Item 290/1, HMAS PARRAMATTA: Reports of Proceedings, HMS AUCKLAND Report of Proceedings – 22nd to 24th June, 1941.
41. RAN: Sea Power Centre Australia, Naval History Section, HMAS PARRAMATTA II file

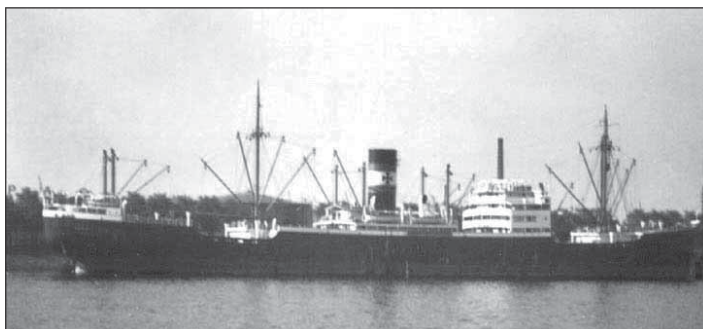


HILFSKREUZER

German Raider Operations against Australia and New Zealand during World War II

By Geoff Crowhurst

Geoff Crowhurst, in this his 1st place 2009 Navy League of Australia Non-Professional Essay Competition entry, examines the effectiveness of German Raider Operations against Australia and New Zealand during World War II and how they impacted allied war strategies in the region.



The first of Germany's raiders to successfully operate in Australian waters was the 7,766 ton PINGUIN commanded by Kapitän Ernst-Felix Kruder. Seen here in her pre-war livery.

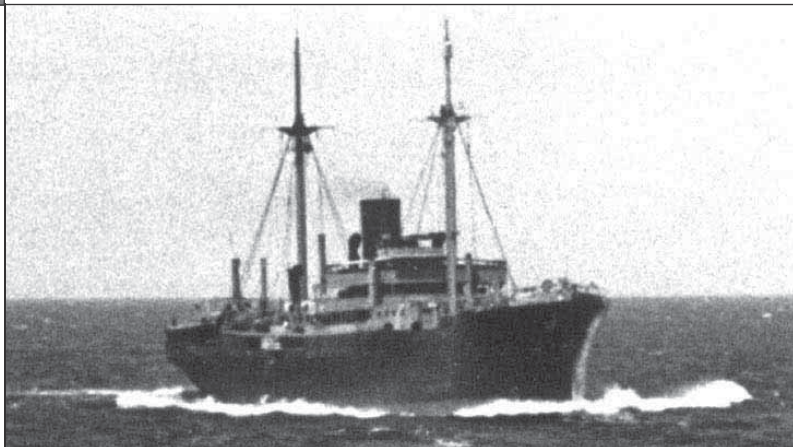
German surface raiders such as SCHARNHORST, GNEISENAU and ADMIRAL SCHEER had mixed fortunes during the early years of the war. As time went on it became harder for them to break out into the Atlantic as they were increasingly targeted by the RN and RAF. Admiral Raeder turned to the Auxiliary Cruiser (Hilfskreuzer) to take the battle to the enemy and to keep the Royal Navy dispersed over the world's oceans. These were ordinary merchant vessels that had been modified to carry an assortment of weapons from torpedoes to guns, all concealed behind fake superstructure or built into the hull of the ship itself. Some carried spotter planes and most were equipped to lay mines. Their mission was to sail the world over striking at merchant shipping and causing a dispersion of the Royal Navy's strength.

Occasionally the raiders operated together but ordinarily they were lone wolves. Their tactics were to cruise the shipping lanes searching for lone merchant ships then capture that ship quickly and quietly. Unmasking their hidden armament, followed by a shot across the bow was usually enough to suppress any resistance. The main concern of the raider during operations was the possibility the victim would get off a raider warning by radio. Prior to unmasking, the gun crews would identify the radio room, usually by the position of the antenna, and would be ready to instantly demolish it with a well aimed shot at the first interception of a transmission. The radiomen in the raider would monitor the airwaves to pinpoint the frequency the merchant ship was using and when the action began would jam radio traffic, while also listening for the merchant transmitting on other frequencies. These measures were not always successful and occasionally merchant ships were able to get off raider warnings prior to surrendering. Many merchants had guns mounted on them. Several put up a stiff fight before being pounded into submission by the raiders.

The first of the raiders to successfully operate in Australian waters was the 7,766 ton PINGUIN, her 420 man crew commanded by Kapitän Ernst-Felix Kruder. Kruder was born in 1897 and joined the Imperial German

Navy in 1915. He saw action at the battle of Jutland in 1916 and later in the Black Sea. Between the wars he remained in the navy in administrative and training postings and became a specialist in mine warfare. He would put this knowledge to good use off the Australian coast.

On 7 October 1940 PINGUIN's lookouts located a ship between Christmas Island and the Western Australian coast. It was SS Storstad, a Norwegian tanker of 8,998 tons. PINGUIN closed and signalled by flag for it to stop at once and cease all radio traffic. The signal was accompanied by a single shot across the tanker's bow.



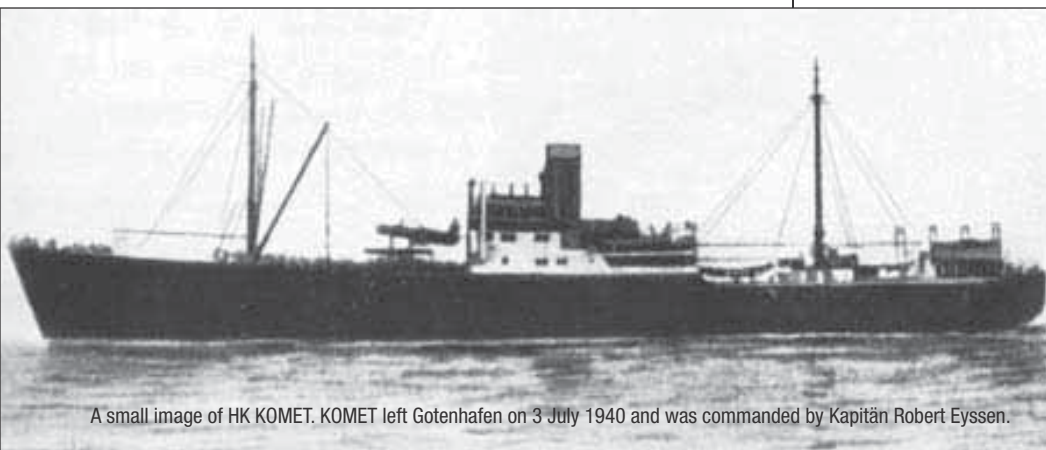
HK ORION. ORION sailed from Germany in April 1940 disguised as a Dutch ship. After rounding South America she cruised into the Pacific and headed for New Zealand to start her operations.

The raiders always tried to capture their victims intact, supplementing their food and fuel supplies from their victims. Vessels found to be carrying cargoes valuable to the Reich had a prize crew put aboard and were sailed for the nearest friendly European port. For this reason the raiders carried large crews for ships of their size. Prisoners were kept aboard the raiders until they could be loaded onto prize ships bound for Germany or Japan. On one occasion over 500 prisoners were offloaded onto an atoll and given supplies. As the war went on the raiders were less inclined to send their "guests" to Japan as the rumours of sub standard treatment grew. However, they generally had no choice, given the necessity of feeding a growing number of prisoners from a rapidly diminishing supply of food. In the case of the Storstad the German boarding party found 12,000 tons of fuel oil and 500 tons of coal. Kruder topped up PINGUIN's fuel tanks by 1,000 tons from the captured supply and a prize crew was put aboard.

Meanwhile Kruder began to form a plan from an idea that he had been considering for some time. He had been studying admiralty charts of Australia that had been provided by German Naval Intelligence. He saw

that it was possible to close off the main shipping lanes around southern Australia by mining the approaches to Sydney, Newcastle and Hobart and closing Bass Strait and Banks Strait. The next few days were spent in altering the stern of the Storstad, making room for the storage of mines and the mining crew as well as fitting launch rails over the stern. Finally he changed the tanker's name to PASSAT, which means "Trade Wind" in German. Once the tanker was prepared, 110 mines were transferred across one by one in life boats.

On the night of 28 October 1940, Kruder arrived off Sydney. As PINGUIN crossed the shipping channels leading into the harbour, mines began rolling off the stern into the sea. Three rows of mines were laid between Sydney and Newcastle. In the meantime, PASSAT had gone further south. During the night of 29 October, PASSAT crossed Banks Strait, the body of water that connects Tasmania to Clark Island and Flinders Island, leaving behind a barrier of 30 mines that effectively closed the channel. During the 29th and 30th Kruder took PINGUIN down around the south east coast and through Bass Strait on his way west. Once he had passed, PASSAT moved in behind him and laid a pattern of 40 mines across the eastern approaches. When PINGUIN was safely out of the area, PASSAT moved west through Bass Strait and deposited its remaining 40 mines in the western approaches, sealing the Straits. Kruder, in the meantime, had taken PINGUIN further west to the entrance of the Spencer Gulf. Under the cover of darkness, he laid another thick field of mines across the shipping channels leading to the Port of Adelaide and Port Pirie. Once they had finished, the two ships joined up and cleared the area at top speed, heading west for the Indian Ocean.



A small image of HK KOMET. KOMET left Gotenhafen on 3 July 1940 and was commanded by Kapitän Robert Eyssen.

The minefields claimed their first victim, the 10,846 ton SS Cambridge, on the night of 7 November, two and a half miles south of Wilson's Promontory. Ironically, SS Cambridge was originally a German merchant vessel, first launched in 1919 and immediately seized by the allies as war reparations. Less than 24 hours later the US flagged 5,883 ton SS City of Rayville fell victim as she entered the western approaches to Bass Strait. She struck another of PASSAT's mines close to Apollo Bay, becoming the first American ship sunk in World War Two.

The twin sinkings elicited a quick reaction from the Australian military. RAN vessels carried out a surface search of the surrounding areas looking for the minelayers but without success. They were joined by RAAF aircraft that searched the southern coast of Australia, also without result. Ports were immediately closed to shipping while the approaches and the area around Bass Strait were swept for mines and cleared. Ships in harbour sat idle while those at sea were diverted away from the areas being cleared by the navy. The channels were soon pronounced clear for traffic although, unknown to the authorities, they had not disposed of all of the mines, which continued to cause problems along the coast and shipping lanes. In December 1940 the 1,052 ton freighter Nimbin struck a mine off the New South Wales coast and sank, taking seven crewmen with her.

She was quickly followed by the British 10,923 ton SS Hertford, severely damaged off the South Australian coast, requiring repairs that kept her in port for the next twelve months. In March 1941 the trawler Millimumul went down with the loss of seven lives in New South Wales coastal waters, a further victim of PINGUIN's mines. Several mines were washed up on South Australian beaches and one of them resulted in the deaths of two naval ratings when it prematurely exploded while being defused.

The two raiders then headed west into the Indian Ocean. It wasn't until midnight on 17 November that they caught their next victim off the coast of Western Australia. She was the 7,920 ton SS Nowshera. She was loaded with a cargo of wool, wheat and zinc. After being searched Kruder sent Nowshera to the depths.

November 20 found PINGUIN in a stern chase with her next victim. PINGUIN's seaplane was assembled and hoisted into the water. It took off and was soon over the freighter. After tearing away the radio mast with a grappling hook the pilot dropped a message instructing the ship to switch off its radio and engines, emphasised with two bombs dropped across the freighter's bow. The ship increased speed and the crew tried to drive the plane off with rifles and two Lewis guns. The plane returned fire. The crew rigged a spare aerial and began sending off raider warnings. The normally proficient radio operators on the PINGUIN were unable to jam the outgoing signal. It took two hours for PINGUIN to reach gun range. After two warning salvos, the freighter surrendered. The 10,123 ton SS Miamoa, a refrigerated ship carrying a cargo of frozen food, was scuttled.

The next evening Kruder attacked and sank the 8,739 ton SS Port Brisbane, another refrigerated ship. Port Brisbane also got off a raider warning and 24 hours later the cruiser HMAS CANBERRA arrived in the area to search for the raider. Kruder sailed west across the Indian Ocean. PINGUIN did not return to Australian waters and was sunk by the heavy cruiser HMS CORNWALL off the Arabian Peninsula on 8 April 1941.

While PINGUIN was approaching Western Australia, the raider ORION was closing from the east, commanded by Kapitän Kurt Weyher. ORION had sailed from Germany in April 1940 disguised as a Dutch ship. Raiders depended on stealth and disguise for their survival. Each raider put to sea with paint, materials and the flags of almost every sea faring nation on earth. Within a matter of

hours the ship could completely change its identity. All raiders resorted to this deception at some time during their cruises. The Geneva Convention, which Germany had signed, states that while it is legal to wear the colours of an enemy or neutral, it is illegal to engage in combat while disguised as such. The captains of the raiders were careful to ensure that they did not fight under false flags and that the German ensign was always flying when combat was joined. However, there is testimony that this was not adhered to in at least one instance.

ORION rounded South America and cruised into the Pacific, heading for New Zealand. On 12 June she arrived off Auckland, which she mined on the night of the 13th/14th (this minefield sunk the SS Niagara on 19th June and the minesweeper HMNZS PURIRI a year later, on 14th May 1941. It was not finally declared clear until June 1946). She spent the next few weeks around New Zealand and hunting in the Pacific's shipping lanes without any success. In early August Weyher approached to within 120 miles of Brisbane but was unable to locate any targets. Leaving Australia behind, he decided to try his luck around New Caledonia, sinking one ship in mid August. On 12th August 1940, German Naval HQ sent a warning that the enemy knew the ORION was operating as a raider. Weyher decided to steam south back to the Tasman Sea and the New



HK KORMORAN. KORMORAN was the biggest and newest of the German raiders. She was commanded by Korvettan-Kapitän Theodore Detmers. She is seen here refuelling a U-Boat at sea.

Zealand coast.

On 20th August ORION found and sank the New Zealand ship SS Turakina off Cape Egmont in the North Island. The sinking bought out a naval search party consisting of the cruisers HMAS PERTH and HMS ACHILLES, either one more than a match for ORION. Weyher fled west across the Tasman and along the Great Australian Bight without spotting any targets. He survived close examination by an RAAF Anson on 22 August. Frustrated by the lack of action, Weyher decided to mine the entrance to Albany Harbour in Western Australia. The only problem was that he had laid all 228 mines outside Auckland in June. He set his crew to making dummy mines out of empty fuel containers. Into these were placed anti handling explosive charges. While making the fifth "mine" the charge exploded, killing one rating and wounding another. On 2 September, ORION sailed into the mouth of Albany Harbour and laid its four "mines" into the shipping channel before heading south west and away, never to return to Australian waters. On 9 September Weyher received orders to rendezvous with the supply ship REGENSBURG in the Marshall Islands. Both ships then headed south before receiving orders to rendezvous with the raider KOMET and the supply ship KULMERLAND.

KOMET had left Gotenhafen on 3 July 1940, commanded by Kapitän Robert Eyssen. It headed north through the Bering Strait escorted by two Soviet icebreakers. Eyssen was ordered to rendezvous with ORION at Lamotrec Atoll in the Caroline Islands, where they arrived on 14 October 1940 and spent the next few days loading up with supplies and fuel. REGENSBURG sailed for Japan to restock while KOMET, ORION and KULMERLAND joined forces and headed for New Zealand. On 25 November, off Chatham Island, they stopped and sank the 546 ton SS Holmwood, carrying 1,370 sheep. Two nights later the three raiders attacked the 16,712 ton SS Rangitane and after taking off the passengers and crew, sank her with torpedoes.

To escape the subsequent allied searches, the three raiders sailed north and raided the phosphate works on Nauru, sinking five ships, before parting company. KOMET moved south into the Antarctic region capturing the Norwegian whaler Adjutant. In June 1941 Eyssen took both ships back to New Zealand waters. Adjutant laid a field of acoustic mines off Lyttelton on the east coast of the South Island on 25 June. The next night she laid another field off Wellington Harbour. No ship was ever sunk by these mines. The two raiders sailed out into the Pacific and did not return to either Australian or New Zealand waters.

The next raider to approach Australia only sank one ship off our coast, but caused the biggest naval controversy in the country's history. KORMORAN

was the biggest and newest of the German raiders. She was commanded by Korvettan-Kapitän Theodore Detmers. He enlisted into the Navy as an officer cadet in 1921. In 1938 he took command of the Destroyer Z7 HERMANN SCHOEMANN. During the early war years he commanded Z7 on operations laying mines along the south coast of England and also saw action in the Norwegian campaign, earning the Iron Cross First Class. He applied for command of an Auxiliary Cruiser not really expecting to get one due to his age (he was only 37 years old) and his low rank (Korvettan- Kapitän is equal to a Lieutenant-Commander). The High Command thought otherwise due to his bravery and resourcefulness and he became the youngest raider captain in the German Navy.

Raider captains were selected for their initiative and proven combat records. The officers, handpicked by the captains, brought some of the senior NCOs across from previous commands if they had proven themselves to be steady and competent. Raider crews were portrayed by allied propaganda as little better than pirates, murderers and criminals, who regularly machine gunned lifeboats and slaughtered survivors. But this was not the case. Most

prisoners praised the raider crew's correct behaviour. All raider crews were volunteers. The crews were all regular navy and they were posted to the raiders as the need for their skills arose. The captain of a raider needed to be resourceful, tenacious and a free thinker. Raiders operated alone during their cruises and their captains had more autonomy than any other officer in the service. The raider captain had to be daring but also had to fight intelligently, taking the fight to the enemy without risking destruction at the same time. Above all else the raiders were to avoid contact with naval vessels. However, if this became unavoidable, they were to try to bluff their way out of trouble. Although the raider carried armament comparable to that of a cruiser, it would not survive a battle with a naval vessel of a similar size.

On the way to Australia KORMORAN changed her identity to that of a Dutch freighter, Straat Malakka. Thus disguised, KORMORAN sailed for a pre-arranged rendezvous with the supply ship KULMERLAND, which had returned to the Indian Ocean after restocking in Japan. The meeting place was 1,200 miles west of Cape Leeuwin in Western Australia. At the rendezvous, KULMERLAND's captain informed Detmers that she had been sighted by an unidentified vessel the day before so Detmers moved both ships a further 300 miles away to the north. For the next week, KULMERLAND supplied rations, fuel and material to repair KORMORAN's engine bearings, which had been causing trouble for most of the cruise. All was completed by 26 October and the two ships went their separate ways. KORMORAN trawled the trade routes off Western Australia but was only able to sight one ship, a neutral American. KORMORAN was 130 miles west of Shark Bay on 19 November 1941, when at 15.55 her lookouts reported a ship rapidly approaching. That ship was HMAS SYDNEY. The resulting battle, which led to the loss of both ships, has been well documented and need not be repeated here. KORMORAN was the last raider to operate off Australia's coast.

German raider operations off the Australian and New Zealand coasts sank 14 ships totalling 91,845 tons including the cruiser HMAS SYDNEY, claiming at least 684 lives (645 in SYDNEY alone). Their minefields diverted naval assets and manpower and kept merchant ships bottled up in harbour while the navy made the shipping lanes safe. However, most importantly as far as Germany was concerned, by tying down disproportionately large numbers of Australian, New Zealand and Royal Navy vessels in the peripheries, they kept these units out of the Atlantic while the U-boats commenced their ascendancy.

BOOKS

Flying Black Ponies The Navy's Close Air Support Squadron in Vietnam

By Kit Lavell

Paperback
375 pages

Publisher: Naval Institute Press (September 1, 2009)
ISBN-10: 159114468X
ISBN-13: 978-1591144687

Flying Black Ponies is an effective combination of combat narrative, squadron history, and personal memoir, telling the story of Light Attack Squadron 4 (VAL 4, or the "Black Ponies"), a USN aviation squadron stationed in the Mekong Delta during the Vietnam War. VAL-4 flew specialist interdiction and close air support missions for the riverine forces, SEALs, and allied units in borrowed, propeller-driven OV-10 Broncos in and around the Delta.

The book follows VAL 4 from its commissioning in San Diego, in January 1969, until its last mission and decommissioning in April 1972. The narrative also contains useful summaries of Navy tactics in the Mekong Delta, briefly describing MARKET TIME, GAME WARDEN, SEA LORDS, GIANT SLINGSHOT, DUFFLE BAG, ACTOV, and other operations in which the Black Ponies were involved.

Most importantly, however, this book is about the pilots of VAL 4 and their combat experiences. In three years of flying in the Mekong Delta, the squadron compiled a unique and impressive record. The Black Ponies' ability to "scramble" when the Riverine Force made contact with the enemy continually resulted in direct air-ground firefights saving many 'friendlies' on the ground. The combat action is sharply drawn, evoking the tension, complexity, and confusion of delivering air strikes, especially in close proximity to friendly forces. When strikes took place at night and in bad weather (which they often did), the descriptions are even more harrowing. Several of the stories of the aerial fighting are effectively paired with personal memories of the same engagement by other personnel involved--river patrol boat crews, SEAL teams, and Riverine Force troops on the ground.

The author, Kit Lavell, was one of the Black Pony pilots, flying 234 combat missions in the OV-10 Bronco aircraft during his tour with VAL 4. After two years of research, Lavell has been able to match many of the air operations to those on the ground and tell the dramatic story from both perspectives. One of several offered in the book is the bringing together of SEAL Barry Enoch, a Navy Cross recipient, and Black Pony pilot Larry Hone, a Distinguished Flying Cross recipient, whose encounter is stunningly described in chapter 14. Lavell also provides vivid scenes of life and gives a concise history of the squadron along with details of its unique use of the OV-10 Bronco.

Australian RAAF Iroquois even get a mentioned after rescuing some downed 'Black Ponies'. The author describes how their wounds were healed with many applications of medicinal 'Victoria Bitter' and how they were sent back to their squadron with effectively a case of VB stuffed into all parts of their flight suit.

The Squadron and their effective OV-10 Bronco aircraft are said to have killed more enemy than any other US Navy squadron in the Vietnam War.

The Black Ponies' aircraft was North American Rockwell OV-10 Bronco, a turboprop-driven light attack and observation aircraft. It was developed



A USN OV-10 Bronco 'Black Pony' of VAL-4 squadron setting off on a mission. (USN)

in the 1960s as a special aircraft for close air support and Counter Insurgency (COIN) combat. It can carry up to three tons of external munitions, and loiter for three or more hours. It was so effective in the light close air support role that there is serious plans to resurrect the production line for use in Afghanistan.

The German Invasion of Norway, April 1940

By Geirr H. Haarr

Hardcover
416 pages

Publisher: Naval Institute Press; 1 edition (October 1, 2009)
ISBN-10: 1591143101
ISBN-13: 978-1591143109

This book has been many years in the making and it is clear author Geirr Haarr has crafted this book with care and attention to accuracy and detail. Geirr Haarr has written an excellent book. He works well in English, German and his native tongue.

This is not a one-sided account of 'official histories' that we are seeing more and more of but a book which gives equal measure and weighting to the Norwegian, German and British sides utilising a prolific array of primary sources. Indeed, the author has researched extensively in Norway, UK and Germany in his quest for historical accuracy drawing the information together and presenting with great clarity a well-written and balanced account of the invasion of Norway. His breath of knowledge on the topic is outstanding. Primarily looking at naval events in April of 1940 in and about Norway, there is nothing that has equalled this effort. If you have any interest in this, the first three-dimensional campaign with land, air and sea all interacting fully for the first time, YOU WANT THIS BOOK.

It also provides an interesting assessment of the German military's performance at an amphibious landing/invasion that could be translated into how they might have invaded the UK had Operation Sea Lion been progressed.

The book is sizeable; but it is here where we see the author ably demonstrating his energy and drive in presenting the many aspects to what happened as well as engaging and retaining the reader's attention. The numerous images (the vast majority have not been seen before) are exceptional providing the reader with additional background and understanding coupled with detailed appendices and references which historians will find immensely useful. The author rightly corrects the many long-standing and accepted so-called facts of various events that occurred and comments on poor decision making where appropriate. This book can be regarded as the most authoritative book on the subject of the invasion of Norway: Geirr Haarr has raised the bar to unparalleled heights on historical accuracy to events in Norway and he is to be congratulated.

The strategic background to Australia's security has changed in recent decades and in some respects become more uncertain. The League believes it is essential that Australia develops the capability to defend itself, paying particular attention to maritime defence. Australia is, of geographical necessity, a maritime nation whose prosperity strength and safety depend to a great extent on the security of the surrounding ocean and island areas, and on seaborne trade.

The Navy League:

- Believes Australia can be defended against attack by other than a super or 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 to our allies.
- Supports the ANZUS Treaty and the future reintegration of New Zealand as a full partner.
- Urges close relationships with the nearer ASEAN countries, PNG and South Pacific Island States.
- Advocates the acquisition of the most modern armaments, surveillance systems and sensors to ensure that the Australian Defence Force (ADF) maintains some technological advantages over forces in our general area.
- Believes there must be a significant deterrent element in the ADF capable of powerful retaliation at considerable distances from Australia.
- Believes the ADF must have the capability to protect essential shipping at considerable distances from Australia, as well as in coastal waters.
- Supports the concept of a strong modern Air Force and a highly mobile well-equipped Army, capable of island and jungle warfare as well as the defence of Northern Australia and its role in combatting terrorism.
- Endorses the control of Coastal Surveillance by the defence force and the development of the capability for patrol and surveillance of the ocean areas all around the Australian coast and island territories, including the Southern Ocean.
- Advocates measures to foster a build-up of Australian-owned shipping to support the ADF and to ensure the carriage of essential cargoes to and from Australia in time of conflict.

As to the RAN, the League:

- Supports the concept of a Navy capable of effective action off both East and West coasts simultaneously and advocates a gradual build up of the Fleet and its afloat support ships to ensure that, in conjunction with the RAAF, this can be achieved against any force which could be deployed in our general area.

- Believes that the level of both the offensive and defensive capability of the RAN should be increased and welcomes the Government's decisions to acquire 12 new Future Submarines; to continue building the 3 Air Warfare Destroyers (AWDs) and the two landing ships (LHDs); and to acquire 8 new Future Frigates, a large Strategic Sealift Ship, 20 Offshore Combatant Vessels, 24 Naval Combatant Helicopters, and 6 Heavy Landing Craft.
- Noting the deterrent value and the huge operational advantages of nuclear-powered submarines in most threat situations, recommends that some of the proposed Future Submarines should be nuclear-powered.
- Noting the considerable increase in foreign maritime power now taking place in our general area, advocates increasing the order for Air Warfare Destroyers to at least 4 vessels.
- Welcomes the decisions to increase 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.
- Advocates that a proportion of the projected new F35 fighters for the ADF be of the short-takeoff and vertical-landing (STOVL) version to enable operation from small airfields and suitable ships in order to support overseas deployments where access to secure major airfields may not be available.
- Supports the acquisition of unmanned surface and sub-surface vessels and aircraft.
- Advocates that all warships be equipped with some form of defence against missiles.
- Supports the development of Australia's defence industry, including strong research and design organisations capable of constructing and maintaining all needed types of warships and support vessels.
- Advocates the retention in a Reserve Fleet of Naval vessels of potential value in defence emergency.
- Supports the maintenance of a strong Naval Reserve to help crew vessels and aircraft and for specialised tasks in time of defence emergency.
- Supports the maintenance of a strong Australian Navy Cadets organisation.

The League:

- Calls for a bipartisan political approach to national defence with a commitment to a steady long-term build-up in our national 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.

ex- **HMAS CANBERRA**



Three images of the ex-HMAS CANBERRA and her sinking as a dive wreck/reef off Ocean Grove in Victoria.
She was sunk at approximately 2pm Sunday 4 October 2009 and is currently
sitting upright on the bottom in about 26 metres of water.
(Kevin Dunn FLEETLINE)





ADVANCED. PROVEN. READY.

MH-60R



U.S. NAVY
SIKORSKY
LOCKHEED MARTIN

The MH-60R is the U.S. Navy's most advanced anti-submarine and surface warfare helicopter. Operationally proven and in production. Featuring interoperable multi-mission capabilities. A funded technology plan designed to keep the MH-60R current and relevant. And through life support backed by the U.S. Navy logistics supply chain.

MH-60R. The next generation military technology. Available off-the-shelf today.