Prior to the recent Federal election the Liberal-National Party opposition promised to maintain Defence expenditure at its present level of some $10 billion.

Upon coming to government the Coalition announced there was an immediate need to get the budget back into balance. Since then a vigorous campaign has been conducted to discover where government expenditure can be cut. The stated aim is to achieve a reduction over 2 years of $8 billion.

Despite all the obvious pressures, Defence has been quarantined from the expenditure review process. The promise to maintain a defence budget of $10 billion has been met. This is an outcome which must be welcomed.

Of course, there is a sting in the tail. The fact that Defence has been exempted from the expenditure cuts which are, apparently, to touch all other Departments, means that it cannot afford any suggestion of ill judged expenditure or waste. The benefits of retaining its budget unaltered carries with it the responsibility to ensure every cent is well spent.

The stated aim is to achieve a reduction over 2 years of $8 billion.

The new frigate HMAS ANZAC, photographed at speed off Iervis Bay in June 1996. ANZAC arrived in Sydney on Friday, 7 June.

The Editor, Ross Cillett.

CONTINUED ON PAGE 2
could have 14 fully fitted frigates.

destroyers, 6 terr one FFGs and 8 less capable ANZACs, Navy of previous historical books.

commissioned Robert Micheal Aviation Museum has Graham HARRIS: 3 The Navy, July/September 1996

Nicholls, a successful author Dear Sir,

Navy League of Australia

FROM OUR

Auilrjliin Australian Naval The History of JVJ/

The History of the Australian Naval Aviation Museum, loijlrd it the completed work on the 50th Anniversary of the RAN NSW Fleet Air Arm. 28 August 1998, at the Australian Naval Aviation Museum, Nowra NSW Research is well under way

HISTORY OF THE RAN FLEET AIR ARM ORDER FORM

NAME							
ADDRESS					
COST $55.00 (20% DISCOUNT $44.00)
DONATION TO THE HISTORY FUND PAYMENT METHOD (PLEASE)
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ALL DONATIONS ABOVE THE $44 PER COPY ARE FULLY TAX DEDUCTIBLE

The recently formed Anzac Ship Association turned out in strength, along with the Victorian Naval Band, local NRC units and of course, ANZAC's 16 string crew.

The Commanding Officer, Captain Ian Pataky, read the Commissioning Order before Naval Chaplains began the commissioning service and blessing in presence of the ship became embarked Seahawk helicopter, the local Naval recruiters, a swarm of Melbourne media had gathered for the formal celebrations to begin. Guests of Honour included the Minister for Defence, The Honorable Mr Ian McLachlan AO MP, the Leader of the Federal Opposition, Mr Kim Beazley MP and the frigate's Launching lady, LTCol Vivian Statham.

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An Interview with
Captain Pataky

By Ross Gillett

1. The Royal Australian Navy’s first ANZAC class frigate is now a member of the Fleet. What do the next few months have in store for the ship and her crew?

The next few months are going to be very busy indeed. The ship will have to go through the standard trials and operational work-up activities with the added complication that there is no corporate knowledge or experience in manning, operating or fighting this class of ship.

2. When will HMAS ANZAC undertake her first long deployment and initial exercises with other navies?

ANZAC will deploy to Hawaii towards the end of this year to conduct advanced missile firings on the Pacific Missile Range Facility. The ship will visituckland in Fiji en route and return to Australia via Auckland. During the first half of 1997 ANZAC is scheduled to conduct a major deployment in the Far East and will participate in a variety of multinational exercises with regional navies.

3. With a ship’s crew of only 144, will this be a hellish life onboard?

With such a small crew operating such an advanced warship we have had to devise many innovative solutions in some of the operating areas which are not a problem in ships with more personnel to draw upon. The net result has been that everybody has to pitch in to make the ship work and this means that a great deal of cross training has occurred. An example of this is that there are very few warrant category sailors in the watch on deck and now have SES and electrical sailors as helmsmen and lookouts. Most major evolutions are literally whole ship evolutions which means that operating the ship is very much a team effort and everyone can see tangible results for their efforts. This is true multi-skilling.

4. HMAS ANZAC will be the first ship in the RAN armed with Sea Sparrow missiles fired from the new vertical launchers. How does ANZAC rate as a fighting platform and when compared to the River class destroyer escorts she is replacing?

ANZAC is a very effective fighting platform. The Sea Sparrow missile is a very good point defence weapon and the combat system it is connected to is fully integrated and has performed very well during sea trials. If ANZAC is ever going to be a highly effective weapon, it is a marked improvement on the other five-inch guns in service on the DDC’s, primarily in that it is fully automatic and requires no manual input inside the gun itself. It has a slightly longer range than its predecessor and can sustain a more rapid rate of fire. It does not have the same rate of fire as the 76mm gun fitted to the FFG’s but has a much greater range and fires a larger and therefore more powerful projectile.

5. HMAS ANZAC is to establish a close relationship with the city of Albany in Western Australia. What is the background of this decision?

During the ship’s construction a number of submissions from various cities around the country were forwarded to the ANZAC project office in Canberra seeking to adopt HMAS ANZAC. Albany was selected because of its unique ANZAC connections. The convoy with the original ANZACs embarked formed at Albany prior to departing Albany, the Light Horse memorial is on Mount Claremont.

6. HMAS ANZAC has her first ANZAC Day ceremony. How is the ship’s official charity there as the ship’s official cause. I visited the city recently for their ANZAC Day ceremonies and the people there are very excited about having ANZAC as ‘their ship’ and are very much looking forward to their inaugural visit next year.

7. As the new class of RAN frigates, how has the ship been adjusted to the changes and new requirements?

The crew has adjusted very well to the demands of introducing a new class of warship into the Fleet. To a person they are all pleased to be elected as part of the commissioning crew and have approached the pre-commissioning course with enthusiasm and vigour.

Some members, primarily engineering, sailors, have been undergoing ANZAC specific training for over two years and now are very keen to go to sea to put their newly acquired knowledge to use.

8. What is the schedule for the frigate to receive a Navy helicopter?

A Navy helicopter will be attached to the ship from July this year. The ship is programmed to operate a Seahawk helicopter for the first 12 months of operations.

9. What is the average age of the crew and has special training been undertaken?

The average age of the crew is 24, with the youngest sailor aged 19 and the oldest crew member aged 45. A great deal of special training has been undertaken to prepare the crew for service in ANZAC. Much of the equipment in the ship is new to the RAN and is not used by any other navy in our region. As a result we have all had to learn about it together. The contractor has conducted a plethora of courses over the last year to provide specialist training on the wide variety of weapons, sensors and operating systems. This has provided a huge level of knowledge sufficient to operate the ship safely, however, we are always learning new things about the ship and suspect we will continue to do so for some time to come.
IN BRIEF

HMA Submarine AE2

By coincidence the writer became involved with members of the submarine community on the very day he completed a review of Stealth at Sea, a History of the Submarine. Comments on this very interesting paperback are contained in the book review section of this issue of THE NAVY.

The occasion of meeting with the submariners was the dedication of a young oak, grown from the acorn of a Gallipoli oak tree, at the Shrine of Remembrance in Melbourne in memory of AE2 which was lost in action in the Sea of Marmora on 30 April 1915 after forcing the Dardanelles on 25 April. Her crew was taken prisoner.

The plaque was unveiled by Mr Geoffrey Haywood, son of AE2's second-in-command, Commander Geoffrey Haywood OBE DC RN, and a floral tribute laid by his daughter, Mrs Jenny Smyth, widow of Commander Elaze Smyth OBE RAN R subi. A bugler and a serving submariner from HMS CERBERUS were among those attending the ceremony which took place on the lawn close to the south-west corner of the Shrine.

HMS CERBERUS

Reference was made in the last issue of THE NAVY to plans for the restoration of the old Victorian Monitor, currently being worked on at the printer.

At the time this issue goes to print (late May) no decision has been made concerning recognition for personnel serving in HMSs involved in the operation (January - March 1996) which followed the September 1995 incident at the Port of Jeddah. The number of authorities, organisations and individuals involved in what the writer would have thought to be a fairly straightforward exercise is quite impressive and includes:

• Three Commonwealth Ministries: defence, defence science and technology, transport.
• The Royal Australian Navy
• The Royal Navy
• The Naval Association of Australia and a number of ship groups.
• The RSL
• Number of individuals including Vice Admiral Sir Richard Peck, KBE, CB, DSC, RAN Rnhc who made a strong case in favour of recognition on national television and others who have been involved in the operation.

The writer hopes common sense will prevail and the matter involved before the next issue of THE NAVY goes to the printer.

Shipboard Fire

A fire on board a ship is always potentially dangerous and lessons can usually be learnt or re-learnt from the inquiry that normally follows. A fire in the engine room of a livestock carrier involved in what the writer would have thought to be a fairly straightforward exercise is quite impressive and includes:

The Marine Incidents Inspection Unit concluded that the immediate cause of the fire was the failure of one or more boiler tubes resulting in loss of water while the burner was still firing. Age, poor maintenance and operating procedures were among factors leading to the tube failure, together with lack of knowledge and experience on the part of personnel charged with the operation of the ship.

It would seem from reading the report that there were other departures from prescribed procedures, both international and local, while the following is a brief summary of the findings:

• A fire in the engine room of the livestock carrier was initially thought to be a fire in the boiler, which was in the engine room of the livestock carrier. The fire was quickly contained and extinguished.
• The fire was caused by the failure of one or more boiler tubes, resulting in loss of water while the burner was still firing.
• Age, poor maintenance and operating procedures were among factors leading to the tube failure, together with lack of knowledge and experience on the part of personnel charged with the operation of the ship.
• There were other departures from prescribed procedures, both international and local.

The ANZAC Through Time

On a blustery spring day in September 1985, the first of a new generation of frigates was launched for the Royal Australian Navy.

The class of ships, designed to carry on the traditions of the Australian Royal Navy into the next century, bears the honoured name of ANZAC. The lead ship commemorates the ANZAC tradition forged in the crucible of Gallipoli and tempered in practice through the First and Second World Wars, the Korean and Vietnam conflicts and the Malayan Emergency. Today the Australian and New Zealand Navies are close partners in numerous exercises, providing disaster relief throughout the Asia-Pacific and in making a substantial contribution to regional peace.

Two earlier ships have carried the name ANZAC in the Royal Australian Navy. ANZAC I was completed for service with the Royal Navy on 24 April, 1917, as a unit of the Marksmen class. ANZAC II was the only triple-turreted destroyer to serve in the Royal Australian Navy and was transferred from Britain to Australia in March 1920. She was sunk off Sydney on 7 May, 1939, after being used as a target by other Royal Australian Navy vessels.

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ANZAC II

The Destroyer

The second ship of the name and the first major warship constructed in Australia after the Second World War, ANZAC II was ordered in 1946, as the basis of the post-war destroyer fleet. Following trials and exercises in Australian waters, ANZAC II left Sydney for Japan on 30 July, 1951, to join United Nations Forces in the Korean War. ANZAC II's initial task was to act as a screen for the US carrier COLUMBUS. She was transferred from Britain to the Royal Australian Navy in March 1951. On 29 June, she began coastal patrol duties along the Australian coast and on the quarterdeck. Pom-poms were sited on a bandstand in front of the bridge structure, and on the second and third funnels. The ANZAC II was transferred from Britain to the Royal Australian Navy in March 1951. On 29 June, she began coastal patrol duties along the Australian coast and on the quarterdeck. Pom-poms were sited on a bandstand in front of the bridge structure.

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proceeded to Tasmania in early 1957 and in April returned to Singapore. April and May 1960, saw the ship visiting Noumea, the Solomons and Papua New Guinea.

The Training Ship

ANZAC continued in service as a front-line unit until March 1961, when she embarked midshipmen for her first training cruise. In September 1962, ANZAC replaced SWAN as a Fleet training ship and in 1966, a classroom replaced one of the ship's two twin 4.5 inch gun mountings. Over the ensuing years much of the original armament was removed and by 1966 ANZAC was armed with only two 4.5 inch guns and four 40 millimetre guns. In addition to the classroom forward, another smaller structure was fitted atop the after deckhouse in place of the two twin 40 millimetre guns.

ANZAC visited Singapore in September 1962 and later sailed to Papua New Guinea in October. In February and March, 1963 she acted as escort for the Royal Yacht BRITANNIA throughout the Royal Tour. In the course of her duty, ANZAC circumnavigated Australia.

The training of cadet midshipmen occupied the majority of her life after 1963. In May 1964, she hosted the Governor-General Viscount de Lisle, on a cruise around New Guinea waters. In August 1964, she visited New Zealand. In June, 1968, ANZAC escorted the troop carrier SYDNEY to Vietnam and in the following September visited Tahiti, Apia, Western Samoa and New Zealand.

During 1970, the ship participated in the Captain Cook celebrations at Possession Island, Queensland the site of Captain Cook's last departure from Australian shores. New Zealand was again visited in September and October. In March, 1972, ANZAC acted as command ship for exercise “Planti Manua,” a large patrol-boat exercise (10 boats) held in northern Australian waters.

In January, 1974, ANZAC visited New Zealand and later Fiji, returning to Sydney on 11 August, flying her paying-off pendant. She was sold on 24 November, 1975, to the Hifirm Corporation Ltd, of Hong Kong, for $41,780, and left Sydney under tow on 30 December, 1975.

ANZAC III

The current ANZAC commissioned into the RAN on 18 March 1996, with the second ship, New Zealand's HMNZS TE KAHUA, to follow one year later. ARUNTA, the third of the class and the second of the Australian ship will commission in November 1997 with the other ships commissioning at yearly intervals. The eighth and final Anzac class frigate, PERTH, is expected to commission in November 2004.
Australia's Patrol Pocket Battleship

By Mark Schweikert

OPC, IPV or OPV. What is this 'alphabet Corvette' that we are going to spend our money on and what can we expect for our dollar?

Much has been written on the economic and regional advantages of the Joint Patrol Vessel (IPV) or Offshore Patrol Combatant (OPC) or Offshore Patrol Vessel (OPV), which ever terminology you subscribe to, but not on the ship itself. On the surface it would appear that the Royal Australian Navy (RAN) is relying on the Royal Malaysian Navy's (RMN) tendering process to choose, thus validating the Transfield design intended to replace the Fremantles. This would justify the theory of regional commonality and cooperation, which I support, but it would be nice to know more about the ship before we commit part of our small defence budget.

In regard to terminology the IPV is the ship at the centre of the RAN and RMN's joint project. The OPC is the combatant for the RAN and an OPV designed for the role of offshore patrolling.

The terminology, OPV, is a new and interesting one. These vessels could be more accurately described as Corvette. The standard NATO agreement 11 of 1966 (STANAG 11/66) defines a Corvette as a "small escort in size range 60 to 100 metres," our OPC is 80 metres long. An OPV is designed to be less capable than a Corvette, Corvette's were generally used for single roles such as Anti Submarine Warfare (ASW) with anti-ship and anti-air handled by Frigates and Destroyers. But with miniaturisation, increased power outputs from propulsion units and automation, an OPV could substitute for a Corvette which could, by applying the same Thomae, substitute for a Frigate. Finally OPV's and Corvettes can and do carry helicopters for ASW, over the horizon targeting, search and rescue and anti-shipping. This is something never envisaged for these ships and which enhances their emerging capabilities.

Little has been released on the IPV or OPC design as Transfield is justifiably concerned about releasing information whilst in competition with other international shipyards. But what has been released is the subject of this article. I do not intend to study the other competitor designs as the Australian product is the only one being considered for the RAN at this stage. There are however some interesting consequences and options for the RAN if Malaysia does not choose the IPV. The first is to take the Transfield product without calling for tenders. The second is to call for tenders in an open OPV contract competition and the third is to use the Transfield design but tender the building contract.

If the latter two are chosen then our replacement of the Fremantles will be delayed and the Fremantles will need to be modernised to remain competitive and last in service. This means that we will either be spending money or losing capability. The Fremantles are not getting any younger and doubt about their mission integrity are starting to emerge. The actual details regarding weapons, design, propulsion and electronics for the ship were never specified by the RAN but rather that the design meet a performance based criteria.

The ship offered by Transfield for the IPV is certainly impressive. Its primary missions consist of maritime surveillance, patrol and response tasks; protection of offshore resources and infrastructure, participation in national and international exercises and a demonstration of national presence and determination.

Secondary roles of the ship include the collection of environmental data, training, disaster relief including medical and emergency evacuation of personnel, search and rescue.

PROPELLER DESIGN

During the design and development of the OPC the RAN had an ongoing involvement to ensure it met with its standards and able to perform in the waters around the region. Extensive tank testing undertaken by the Maritime Research Institute of the Netherlands round the design to have excellent sea keeping qualities as well as meeting the-
Tomahawk for the ADF?

By Navy Leaguer

Now that the United States is prepared to sell the Hughes Tomahawk submarine launched high explosive tipped precision guided cruise missile to Britain for their submarines, there is reason to believe that these missiles would be available to Australia for our submarines and surface ships.

From a position unknown to the defenders, submarines can position themselves many hundreds of miles from a high value shore target and launch Tomahawk in surgical strike operations against a hostile defence installations.

Although Tomahawk can also be launched from surface warships, it is the submarine's inherent covert nature of submarines that is attractive to the Australian Defence Force. Although they would require integration with the ships' combat systems, the mark 41 vertical missile launching systems in the Anzac class frigates are basically capable of launching Tomahawk.

The weapons handling systems in the Collins class submarines are designed to handle Tomahawk. Again, integration into the submarines' combat systems would be required.

Indications are that the cost of integration and of the missiles themselves would not be high by major defence project standards.

Outstanding questions include whether the six Collins class submarines would be enough to undertake their current assigned roles and to provide Australia's strategic strike capability in succession to the RAAS' F111s. An extra two submarines could be provided by ordering two further Collins class boats.

In recent months, the general media have given increasing publicity to the possibility of the Government taking up their contractual option with Australian Submarine Corporation to build two further Collins class submarines.

The arguments in favour of doing this are:

+ ASC needs work to keep its capabilities available for the RAN;
+ An additional order would create more employment in South Australia (and other areas which would be major suppliers) and there would be multiplier effects through the economies.
+ The Collins class submarine could be used as a launch vehicle for Australia's strategic strike capability for which the Tomahawk missile is a prime candidate.
+ Two additional submarines would increase the Australian Defence Force's overall warfighting capabilities.

The arguments against the proposal are:

- Diverting funds to additional submarines would require cancellation of other defence equipment projects and distort the balanced force;
- It would not be possible to obtain crews for the additional submarines.
- The Defence Budget is for the defence of Australia and not for creating employment, if the Defence Budget is to be used for creating employment, such schemes should receive additional funding.

The negative arguments are strong until the addition of the strategic strike capability is considered.

Although the ADF's major long range strategic strike capability is provided by the RAAS' F111s and F111Gs, armed with guided bombs and precision guided missiles.

These aircraft are due to be phased out during the second decade of the next century. No new generation of long range strike aircraft of a size suitable for the ADF, is currently in development. In other words the RAN cannot replace the F111s with new aircraft of similar range.

For range is crucial for a strategic strike capability. With the old World War 2 strategic bombing capability in mind, the F111s were ordered in the 1960s. Then, Australia's relations with Indonesia were close to limited hostilities. Today, our relations with Indonesia are good. If it is needed, and ADF strategic strike capability would require the range to operate much further away than Indonesia, the other ASAF powers, and our close northern neighbours.

That extra distance, with its overflying requirements, limits the number of aircraft per service for the ADF's long range strategic strike capability. This applies both to the strike aircraft and refuelling aircraft.

For the additional range requires a substantial air to air refuelling capability for the F111s. With their much shorter range, the air refuellers for the F/A-18s (and their successors) would be substantially indeed probably prohibitively so.

A further point against aircraft is the overn nature, and consequent easy location, of their threat of attack. A target area's defences would know the direction, speed and range of the threatening aircraft.

The arguments in favour of aircraft, if a suitable type were to be available, are the weight of ordnance and speed of turnaround. A number of aircraft could deliver more high explosive on target than one submarine. Secondly, the aircraft could return to base and rearm in a much shorter time (hours compared with days) than a submarine armed with Tomahawk.

Although these are undoubtedly factors, in these days of very high accuracy of precision missiles such as Tomahawk, the weight of high explosive is of less significance than it was when speeds of bombs were required to improve the chances of one bomb hitting its target.

The points in favour of two more submarines and Tomahawk are:

- Submarine launched Tomahawk would provide a covert strategic strike weapon at much longer range than the overt F111s;
- The Tomahawk/submarine option would be much cheaper than any available aircraft and weapons to succeed the F111s;
- Submarine launched Tomahawk would provide a better strategic strike capability than the F111s.

The points against submarine launched Tomahawk are the difficulty of getting sufficient crews for additional submarines and the lower weight of high explosive deliverable by the Tomahawk/submarine combination.

Just as the RAN has difficulty raising sufficient crews for submarines, so the RAAS's difficulties in recruiting and retaining aircrew are well known.

It can be argued that the conclusive factor is that there is no aircraft type to succeed the F111s. Tomahawk is the only long range strategic strike option available for Australia.
Boom Defence in Fremantle

From Vic Jeffery, Navy Public Affairs Officer (WA)

The Port of Fremantle’s inner harbour was protected by a boom defence net during World War Two. The boom defence net was erected between the North and South Moles at the entrance to the harbour. The first of its kind in Australia, it was designed to stop midget submarines or fast patrol craft entering the harbour and was a protection against torpedo attack.

Electrically operated winches opened and closed the gate a steel net supported by metal drums. When open the net formed a large ‘V’ against the North Mole and when closed, the cable was secured to a chain mooring to take the strain off the winches.

A bustling wartime port and also the largest Allied submarine base in the southern hemisphere between 1942-45, Fremantle presented as an attractive target.

Rumours have persisted about an attempted Japanese midget submarine attack on the port, but there is no documentary evidence to support this claim.

During the war many Italian ships passed through the boom and a number of US Navy submarines made there last patrols from the area.

Postwar the boom defence net, chains, and associated equipment was placed in reserve and later removed from the inner harbour.

Today at least one building, crumbling concrete ramps and blocks, fittings, and rusting pulleys remain, unknown by many and remembered by few.

A massive boom defence net was also erected across Cockburn Sound between 1942-44 ranging from Woodman Point on the mainland to the northern end of Garden Island.

Financed by the British Admiralty after the fall of Singapore in 1942, it was to be a secure anchorage for the British Eastern Fleet.

A tubular steel hurdle net was erected between the southern section of Garden Island and Cape Peron.

This mammoth task went on around the clock, 365 days a year for the two years it took to construct. By then the war had ceased closer to the Japanese mainland and it was of little strategic value.
T}

The fall of the Berlin Wall in 1989 has rightly been said to be one of those pivotal moments in history, when an empire has fallen and the face of the world has been re-written. The globe's two superpowers had glared at each other across Berlin's Checkpoint Charlie for more than forty years, each backed by an array of allies, nervously fingering their stockpiles of nuclear weapons and uneasily eying the other's forces. When an empire has fallen and the face of the world has been re-written, there is usually some kind of scattering. This happened in 1989 when the Cold War ended. Germany seemed to symbolise the Cold War and the possibility of conflict, most experts pointed to 1989 as the likely source of conflict. Far out to sea, away from the ubiquitous gage of the camera and video, from possible civilian casualties, was where many respected analysts suggested would be the most likely venue for 'tests of strength', 'displays of resolve' and even limited war.

Out of sight of the world media, the processions to the breakers yards to be gutted the inventories of many of the world's strongest navies. The cuts have continued unabated. Even less visible have been the transfers of great expense and containing the best of the world's oceans, the most likely venue for 'tests of strength', display's of resolve and even the possibility of conflict, most experts suggested would be the most likely venue for 'tests of strength', 'displays of resolve' and even limited war.

While the Cuban Confrontation and the naval manoeuvring in the Mediterranean during the Arab-Israeli Wars were the most publicised of these encounters, the constant observation, evaluation and harassment of the 'other side's' forces continued unabated. Even less visible were the silent probing missions undertaken by submarines of all navies, often inside the territorial waters or even the harbours, of unfriendly nations. Navies were built to support the national interest, with ever more new and powerful ships and submarines, aircraft and weaponry constantly being produced to grow the world's oceans. The most potent collection of firepower ever to have sailed the seas.

Today, the navies of Russia and the United States, together with many of their European allies, are a shadow of their former selves. The effects of what is often euphemistically called 'downsizing' have gutted the inventories of many of the world's strongest navies. The cuts have struck deep at the former Soviet Union, but the West has not been spared. Millions of tonnes of warships, aircraft and more have been sold to friendly countries, being towed for scrap. The only reason that more of these ships have not been sold for scrap is because they are not in service. The United States has been in the forefront of this trend, making available a wide range of vessels to friendly nations, but the United Kingdom, France and others have also been forced to shed tonnage and have pursued the same policy. The following is a short overview of these vessels.

The United States Navy has, in the years since 1989, divested itself of six carriers, four battlehips, four nuclear and eighteen conventional cruisers, thirty-three destroyers, thirty-two frigates, two replenishment oilers and two repair ships. In addition to a vast array of smaller vessels such as tugs, barges and other small boats, the United States has begun to sell off many of its submarines. The United States has been in the forefront of this trend, making available a wide range of vessels to friendly nations, but the United Kingdom, France and others have also been forced to shed tonnage and have pursued the same policy. The following is a short overview of these vessels.

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have been snapped up at bargain basement prices. Brazil purchased four of the Type 22 BROADSWORD class frigates in preference to KNOX class frigates from the US while all six of the AMAZIN class frigates were purchased by Pakistan, replacing the returned ex-USN BROOKE and CAREIA class frigates in 1993. Two countries have purchased LEANDER class frigates, with Chile acquiring two in 1980 and 1992, while India is purchasing ex-HMS ANDREMEDA for use as a training ship.

The RIVER class minesweepers have proved popular with Brazil acquiring three RIVER class in 1995 which have since had their minesweeping gear removed to being used as superfloats in their new role as large buoy tenders. Bangladesh also received four RIVER class in 1994 for use as minesweepers and patrol craft, together with an ISLAND class patrol vessel, currently used as a training ship. Also taking advantage of the chance to acquire cheap replacement vessels was the Lebanon which purchased five ATTACKER class and two TRACKER class coastal patrol boats in 1993-94 to supplement their small patrol boat fleet. The vessels of the Royal Fleet Auxiliary have also proved attractive to new owners. The name ship of the APPLEJEAN class of support tankers was sold to the RAN in 1980 and is now operational as HMAS WESTRALIA. Two of the ROVER class small tankers have also been acquired by smaller navies, with one each going to Portugal and Indonesia while Singapore has acquired the former SIR LANCELOT, a logistic landing ship.

The United States and United Kingdom are not the only navies undergoing "downsizing". Many of the European navies have shed tonnage that has found new homes around the world. Perhaps the best known, and certainly the largest of these transfers has been the thirty-nine ships of the former East German Navy purchased by Indonesia. This comprised sixteen PARCHIM class corvettes, twelve FROSCH I mechanised landing ships, nine KONDOR class coastal minesweepers and two FROSCH II mechanised landing ships currently being utilised as support ships. In total, more than forty thousand tonnes of warships

Other navies to have benefited from the downsizing largesse include Uruguay which has acquired three COM- MANDANTE RIVIERE class frigates courtesy of the French Navy, the Turkish Navy which received an intelligence collection ship, two RHEN class depot ships used as training ships, the Greek Navy which acquired three Dutch KORTEMARK class frigates together with five type 240 class corvettes, four type 148 missile armed fast attack craft, a small survey ship, two LUNEBERG class support ships, eleven mechanised landing craft and two utility landing craft, all from Germany.

Pakistan purchased the former Netherlands Navy replenishment ship POOLSTER and while Peru has purchased a DOKKUM class minesweeper from the Netherlands for use as a survey ship. Perhaps the most interesting case of "downsizing", albeit forced, has been the Turkish Navy. A number of vessels were under construction in Italy when the Iran-Iraq war commenced. Iraq was not loudy but when asked to pay their debts, the last two. Needless to say, Iraq protested home. Unfortunately Iraq's invasion of neighbouring Kuwait put paid to that idea, as the ships were impounded. The tanker AGNADEEN had actually made it as far as Alexandria in Egypt before being impounded, while four LUPO class frigates and six ASSAD class corvettes remained in Italy. Eventually, to settle the mounting debt to Fincanteri, the Italian Navy took all four LUPO class into service after extensive modifications to bring them up to an acceptable standard, while two of the ASSAD class have been purchased by Malaysia and another two by Morocco who have an option on the last two. Needless to say, Iraq protested loudly but when asked to pay their debts, were strangely silent.

The recent transfers of tonnage from the large to small navies is of a scale not seen since the end of the Second World War. Many of those earlier ships are still in service across the globe, some forty years later. Given these examples of longevity, it may not be surprising to find KNOX class frigates or NEWPORT class landing ships soldiering on under their new ensigns well into the twenty first century.
First DDG 51 Visits

Trial of Submarine Escape and Rescue Service

RIMPAC 96

Refit Begins

Australia and US Agree on Production of Nulka Decoys
Some of the warships participating in the RIMPAC '96 exercises off Hawaii in mid 1996; the Canadian frigate WINNIPEG, a United States submarine passes the LHD USS ESSEX, the Chilean frigate LYNCH, French frigate PRAIRIAL and the RAN FFG HMAS SYDNEY. (All photographs courtesy of Chris Sattler)

British aircraft carrier HMS FORMIDABLE in Grand Harbour, Malta at the close of the Second World War.

Monitor HMS ROBERTS was fitted with a main armament of two 15 inch guns in one twin turret. The weapons were originally mounted in an earlier monitor during the Great War.

Starboard quarter view of the B class battleship HMS RAMILLIES. A seaplane is carried above the aft 3 turret.
The Royal New Zealand Navy

REPRIEVED From “Rust-out”

By Mike James

The Royal New Zealand Navy (RNZN) was formed in 1921 as the New Zealand Division of the Royal Navy, following more than a decade of New Zealand contributions to the Royal Navy, most notably the funding of the battlecruiser NEW ZEALAND for the RN in 1911. The actual designation Royal New Zealand Navy was enacted in 1941, allowing New Zealand warships to carry the appellation. His/Her Majesty's New Zealand Ship, all previous having had the HMNZS prefix. The Navy played an active role in several theatres during the Second World War and later in the waters off the North East Asia during the Korean War.

The decision to purchase the two new frigates was a controversial one in New Zealand, with a vocal ‘peace’ lobby claiming that the frigates were variously; too expensive, too well armed, too big or just not needed. Eventually, however, the debate was settled with an official announcement that the RNZN would purchase the two frigates and that the ANZAC class frigates would be built to New Zealand requirements. The decision was made with the aim of modernising the RNZN fleet and providing increased internal space.

With the 90’s however there appears to have been a greater appreciation of the Navy’s role in government circles, resulting in a renewed interest in the acquisition of new frigates. The RNZN has a number of vocal and well-organised groups opposed to the spending of any money on defence, but the Navy has been able to argue successfully for ASW (anti-submarine warfare) capability and a single utility helicopter. The Sea Cat SAM system has been removed, leaving her vulnerable to surface to air missiles with Baseline 1B Standard SM-2 or RIM-66 Sea Sparrow missiles, reliant on a twin 4.5 inch gun turret and several light machine guns for anti-aircraft defence. Two triple anti-submarine ASW torpedoes tubes and a single Wasp helicopter round out her armament. In effect, the frigate is really little more than a large patrol vessel, unsuited for operations against even a modest threat, however, she is likely to pay off when the first of the new ANZAC class frigates commission.

The remainder of the frigate force is made up of two “broad beamed” LEANDER class vessels, reduced because at 13.1 metres beam they are 0.6 metres wider than earlier vessels of the class, providing increased internal space. CANTERBURY was completed in the UK at Yarrow’s Clyde yard, commissioning in 1971 and arriving in New Zealand in late 1972. WELLINGTON was originally commissioned at Vickers’ Armstrong’s Newcastle yard in 1969 as HMAS BACCHANTE, serving with the Royal Navy until 1982. In 1993, she was delivered to New Zealand in December of that year.

Both ships have undergone substantial modernisation to their electronics, having been fitted with new radar, sonar, communications and fire control systems. Today, both vessels are armed with a twin 4.5 inch gun turret, several light machine guns and an ASW (anti-submarine warfare) capability. The LEANDER class frigates are armed with a single 76mm gun system and a single utility helicopter. The Sea Cat SAM system has been removed, leaving her vulnerable to surface to air missiles with Baseline 1B Standard SM-2 or RIM-66 Sea Sparrow missiles, reliant on a twin 4.5 inch gun turret and several light machine guns for anti-aircraft defence. Two triple anti-submarine ASW torpedoes tubes and a single Wasp helicopter round out her armament. In effect, the frigate is really little more than a large patrol vessel, unsuited for operations against even a modest threat, however, she is likely to pay off when the first of the new ANZAC class frigates commission.

All three ships are now more than 25 years old and have crew requirements of more than 300 each, a serious constraint on the Navy’s ability to deploy its ships. Fortunately, however, the Navy has been able to argue successfully for ASW (anti-submarine warfare) capability and a single utility helicopter. The Sea Cat SAM system has been removed, leaving her vulnerable to surface to air missiles with Baseline 1B Standard SM-2 or RIM-66 Sea Sparrow missiles, reliant on a twin 4.5 inch gun turret and several light machine guns for anti-aircraft defence. Two triple anti-submarine ASW torpedoes tubes and a single Wasp helicopter round out her armament. In effect, the frigate is really little more than a large patrol vessel, unsuited for operations against even a modest threat, however, she is likely to pay off when the first of the new ANZAC class frigates commission.

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The RNZN has determined that the force of four frigates is necessary for the service to carry out its assigned role in support of the New Zealand Government’s policies. The current frigate force has shrunk to a low of three ships, the fourth

Launch of the ANZAC class frigate TE Kaha 22 July 1995 (RAN)
THE ROYAL NEW ZEALAND NAVY

The RNZN currently operates six Westland Wasp helicopters from the frigate the tanker CHARLES UPHAM and the survey ships MONOWAI and QUEEN II. The largest ship in the RNZN is the replenishment tanker CHARLES UPHAM. Under conversion from a roll-on, roll-off ship, the MSS will provide the New Zealand Defence Force with the capability to deploy an Army force of up to 500 troops and their equipment throughout the Asia Pacific region and beyond. The need for CHARLES UPHAM was made plain by the requirement to charter commercial shipping to transport a battalion of troops and their equipment to Europe to take part in United Nations in the former Yugoslavia. Initially it was hoped to acquire the RAN Heavy Landing Ship HMAS SYRILLUS, however the acquisition was turned down, ostensibly due to the large crew required (144 in RAN service) however it is also believed the two Navy's were unable to come to a mutually agreeable timetable for transfer.

The solution was to acquire the 7200 tonne MERCANDIA QUEEN II, a German-built roll-on, roll-off ship completed in 1984, for US$9 million. Initially the MSS underwrote a minimum requirement for ten to render her suitable for naval service, initial training, modular training in firefighting and pollution control, communications equipment, and, of course, painting the ship RNZN grey. Once these modules were complete the ship commissioned and commenced trials and training with the Army to prepare both services for joint operations.

The Royal New Zealand Navy is a small but professional force, with a long and proud history spanning seven decades. Under threats to its viability as a viable force in the early and mid-1980s, it has undergone something of a renaissance in recent years, with new construction and cost-effective second hand purchases having added new and upgraded capabilities continuing to link with the Royal Australian Navy continue to pay benefits. With RNZN ship training and operating closely with RAN units, benefiting from the RAN experience in the Gulf War, the use of RAN facilities such as the Beausitt Gunnery Range and utilising Australian logistic support while on deployment to areas such as South East Asia.

THE ROYAL NEW ZEALAND NAVY

A mid-1980's view of a RENZ/RAN Task Force (RAN)
Arsenal Ship for USN

WASHINGTON - The US Navy's futuristic, heavily armed Arsenal Ship could be a sort of stealthy Sea Shadow ship, a new ship design with a wave-piercing bow, an adapted commercial cargo ship or an extrapolation of a variety of existing ship designs.

US shipbuilders are drawing up myriad designs for the Arsenal Ship, which is envisioned by Navy officials as a missile-laden, armored ship that could deploy minimal support commanders ashore in striking enemy forces.

Service officials eventually intend to station the missile-armed ships overseas, and periodically rotate minimal crews to man the ships, service officials said. That was the Arsenal Ship, equipped with up to 500 missiles each, would be maintainable overseas, Service officials said.

"We think it is a good idea to get firepower in theater to support the ground commander," Adm. Mike Boorda, chief of naval operations, said in an April 11 interview. "If we can get a ship to stay overseas, we can get a lot more bang for the buck."

In cooperation with the Defense Advanced Research Projects Agency (DARPA), Arlington, Va., the Navy intends to issue an industrywide solicitation for proposals on how to develop and construct the first ship not to serve as a platform for a missile-laden forward-deployed ship to significantly lengthen the hull of the DDG-51 Arleigh Burke-class destroyer.

Government Electronic Systems, Montgomery, N.J., will leverage off the company's Sea Shadow work for the Arsenal Ship. Sea Shadow was a long classed effort to build stealthy features into a combat ship. Lockheed Martin's design also adds more armor to protect vital portions of the ship.

Newport News Shipyards, Newport News, Va., also plans to compete for the Arsenal Ship, company officials said, noting that the company may propose a new design or a modified version of a commercial product tankers.

Arsenal attributes for the Ship that have been identified by the Navy and DARPA were contained in a joint memorandum signed March 25. Critical capabilities include:

- Provide up to 500 Vertical Launching System cells to house a variety of missiles for use against land targets.
- Ensure the ship's combat system is linked to the service's cooperative Engagement Capability.
- Ensure the design can accommodate additional ship self-defense and survivability features in the future.
- Lower costs by using innovative maintenance and operational procedures, methods, and technologies.
- Limit crew size to no more than 50 personnel.
- Cover the amount of new technology and automation expected to be designed into the Arsenal Ship to ensure the service can support it.

Recent emerging from China include.

- The Royal Navy apparently suffered a minor (F123) mishap during the launching of HMS OCEAN. The 20,500-ton amphibious helicopter carrier (LPH) was being launched down the slipway when the apparently partially fell off her supporting cradle, puncturing a hole in the ships hull. The remaining supports held the ship upright long enough for her to enter the water without a waiting lag as she did not where she rapidly started taking on water when floating several compartments. A spokesman for the ship stated that there was no damage to the ship and that the incident would not delay OCEAN's completion.

- New Delhi is exploring the option of leasing the 15,000-tonne KVL class carrier ADAMBSL (35000) to BALI for ten years with an option to buy. Request indicates that the vessel is in poor condition after a February 1994 bushfire on the vessel and would require a huge expensive repair to be brought back into service. The Indian Navy desperately needs replacements for its current carriers, both of which are over 30 years old.

- The US government has agreed to supply three F-16 Fighting Falcon aircraft to Pakistan. Already paid for, the mission, together with $1.65 billion, had been stranded in the US by an American congressional ban on military sales to Pakistan after the US government could not guarantee that Pakistan was not pursuing a nuclear weapon program.

- A personal appeal by Pakistan's Prime Minister, Benazir Bhutto, to President Clinton resulted in the US's decision. It is reported that the Indians are not amused.

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sorts of problems. Reports indicate that late last year several nuclear-powered submarines were out of service for a considerable period of time. This was not the only indication of things not being right. Articles appeared in the newspapers linking the poor state of the navy in the dark ages. In a country that is so small and with no power to the submarine reactor's. Apparently, the auxiliary diesel engines could not be started as they had been sold on the market and the boats had not been kept the batteries topped up. One submarine was reported to have come close to a reactor meltdown before emergency battery power could be restored. Why was the power cut? The navy had not been paying its electricity bills for more than six months!

The Bangladesh Navy has found a novel way to fund new warships on hire. Get someone else to pay for them! Reports indicate that South Africa is to offer a $100m to Bangladesh to cover the cost of purchasing a new multi-role frigate. The ship's design has yet been selected is to be armed with a 40mm or 14mm gun, at least anti-ship missiles and two IIANGHU IV class frigates were ordered in 1988 with the first, HTMS CHAO PHRAYA, delivered in 1991, the second, HTMS NAVALAMA, is to be armed with a 76mm or 100mm gun, a 3.5mm or 25mm gun and two ex-Dutch KORTENAER class frigates, the PIET HEYN and the MELCHIOR, has been commissioned in 1992. Despite being only 14 years old her condition was reportedly described as being very poor. The United Arab Emirates has taken a step in line with the Navy in the region by taking delivery of the IJPHANNE Training ship.

The extended time that the US Navy has been spending on the development of the medium shipboard helicopter. Decision is to be made on a medium shipboard helicopter as the efforts of the US Navy to define the requirements for a new medium shipboard helicopter have been fruitless. The Navy has been discussing the development of a medium shipboard helicopter since the late 1980s. The development of the medium shipboard helicopter has been hampered by the lack of funding and the competition from US Army's requirements for a medium helicopter. The Navy has also been facing difficulty in defining the requirements for a medium shipboard helicopter. As a result, the development of the medium shipboard helicopter has been slow and the Navy has been unable to make a decision on the requirements for a medium shipboard helicopter.

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AUSTRALIAN SEAPOWER - CRUISERS
Photofile No. 4
Published by Jomill Publications
Price $9.95
Review by Joe Strazzek

Cruisers
The latest publicarion to emerge from the renowned Conway Maritime Press. All the World’s Fighting Ships 1947-1995, became available in Australian bookshops early this year. One of the longest serving was the 1890s cruisers that were designed and built for the British Royal Navy. These vessels were among the first to carry steam-powered turbines and steam turbines were used to drive the propellers. They were also equipped with SNLF engines, which could propel the ship forward or backward at a speed of 16 knots. These engines were considered to be a significant technological advance at the time. The cruisers were used for a variety of purposes, including battleships, warships, and merchant ships. They were used in conflicts such as World War I and World War II. Today, these cruisers are considered to be important historical artifacts and are preserved in museums around the world. The book includes detailed specifications, images, and descriptions of each cruiser, making it an essential resource for students and enthusiasts of naval history.
ADI - The Clever Australian

ADI's Garden Island facility in Sydney Harbour is a world class centre for the repair, refit and modernisation of ships - both naval and commercial. Located close to the centre of Sydney, the facility is within short steaming distance of major ports.

ADI has developed extensive engineering capabilities at this location and provides all the skills for the conversion and modernisation of vessels.

Their capabilities cover:
- Design services for structural, naval architecture, marine and electrical engineering, enhanced by CAD, CAE, CEM systems (CALS compliant)
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- Electronic communication and control systems
- Overhaul of gimbals and control systems
- Repair and refit of marine power systems
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- Gas turbines
- Rebuilding relubing of boilers and pressure vessels
- Electrical power generators, motors and hydraulic power systems
- Manufacture of components, spares, including N/C machinery, specialist welding and pipe fabrication - MS, SS and CuNi
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- Laboratory services (NATA registration), metallurgy, metrology, fuels and lubricants
- Certification to ISO 9001

A highly skilled workforce, with specialists in marine engineering and architecture, is backed by a long history of ship repair. The largest graving dock in the Southern Hemisphere, capable of docking ships up to 110,000 tonnes, is supplemented by a floating dock with 1000 tonne lift capacity.

For further information, please contact:
Commercial Manager, Operations Group, Garden Island, NSW 2000, Australia
Tel: +61 2 562 3209 Fax: +61 2 562 3821

ADI - The strategic edge
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Who's world class in ship repair and modernisation?

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- Repair and refit of marine power systems.
- Steam turbines, reducing, balancing and machining.
- Gas systems.
- Rebuilding tripping of boilers and pressure vessels.
- Electrical power generators, motors and hydraulic power systems.
- Manufacture of components, spares, including wire, electrical, special welding and pipe fabrication. MS, SS and C'Ni vessels.
- Equipment testing and calibration.
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For further information, please contact:
Commercial Manager, Operations Group.
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The strategic edge
Dear Sir,

I am sure that fellow readers of The Navy will be interested in these photographs of the submarine Collins. They were taken at her launch on 28 August 1993.

The boat became HMAS Collins when the Australian White Ensign and Australian National Flag were hoisted and the commissioning pennant was raised.

HMAS Collins was welcomed into the Australian Fleet on the presence of the Governor General, Sir William Deane, Minister for Defence, Mr Ian McLauchlan, Chief of Defence Force, General John Baker, Secretary for Defence, Mr Tony Abbott, Chief of Navy, Vice Admiral Rod Taylor, and many other Australian and overseas dignitaries.

Commander Sinclair was pipped aboard before the guard and ship's company hoisted the boat to take possession of the vessel.

COlteins was the first of six submarines being built for the Royal Australian Navy in a project worth an estimated $502 million at December 1995. It was the cost of the six submarines together with the cost of associated services. The submarine had the distinction of being the first submarine to have been designed specifically to be capable of meeting the Royal Australian Navy's requirement of enhanced operational effectiveness, rapid response time, reduced manning, and flexibility for improvement throughout its lifetime.

More than 100 Australian companies are participating in the program. The work being done in Australia is introducing significant new skills to Australian industry such as specialized steel production, complex welding, fabrication and machining techniques, software development and processes associated with producing electronic and electro-optical systems.

This activity resulted in the award on 3 June 1987 of a contract with the Australian Submarine Corporation for the design and construction of six submarines with associated services.

Collins has the distinction of being the first submarine to have been constructed in Australia and is the 18th submarine to have entered service with the Royal Australian Navy since 1914.

In 1981 the Royal Australian Navy initiated a program to specify and procure a new class submarine incorporating an integrated combat system to replace the ageing Oberon class submarines.

The motto "VANGUARD" is defined as the symbol of Office of the Chief of Naval Staff in the Royal Australian Navy. British officers up until this time had held the position.

The Malta Cross on the blue background represents the distinguished wartime service of Vice Admiral Collins in the Mediterranean Sea during the Second World War. The Double fouled anchor, is the symbol of Office of the Chief of Naval Staff in the Royal Australian Navy. British officers up until this time had held the position.

The motto "JANGUARD" is defined as "At the forefront." This represents that COllins is the leading submarine of the class, and at the forefront of technology.

The Boat

This submarine's operational characteristics and range have been tailored specifically for the defense and interdictory roles in the Royal Australian Navy.

Designed to be as quiet as advanced technology can achieve. COllins has been developed from four generations of submarines designed and built over the last 20 years for the Swedish Navy.

One of the first submarines to be totally designed using computers.

Yours sincerely,

John Whitefield
Red Hill, Qld 1911
The prime reason for this is the major black hole in the problem that has been allowed to develop in the RAAF. This coincides with a need to put the Army on a footing for the next seven or eight years.

By Navy Leaguera

The impending major problem of insufficient funding for capital equipment is already showing up in professional and bureaucratic debate within Defence and the ADF.
The Navy, October/December 1996

AUSTRALIAN DEFENCE

Australia's defence strategy will have to be subjected to penetrating review. This is the essential prerequisite for rigorous evaluation of every capital equipment project that will be presented over the next ten years.

The RAN's P-3 Orion long range maritime patrol aircraft, the F-111 long range strike aircraft, the F/A-18 Horrier fighters, and the E-710 Hercules transports will all fall due for replacement.

The question for keeping the first three aircraft types in service inventory is the defence and of the sea-air gap around Australia. The RAAF's P-3 Orions are essential long range striking power and participate in the defence of our overseas bases. The F-111s strike them as far out as possible. Nearest home, the F/A-18s deal with air attack on Australia itself and strike sorties that get through the outer chain.

The E-710 Hercules role in supporting RAAF forces on their forward bases is also essential to the defence of the sea air gap.

The ADF force structure was developed widely to defend Australia and our area of direct military interest. New equipment, no reorganisation, could be justified in whole or in part as needed in operations outside Australia's area of direct military interest.

The same is true for the ADF's maritime forces. Air, submarine and surface forces complement one another in the defence of the sea-air gap policy. This means a balanced force, with the ability to provide long range striking power and participate in the defence of our overseas bases. The F-111s strike them as far out as possible. Nearest home, the F/A-18s deal with air attack on Australia itself and strike sorties that get through the outer chain.

The RAN also plays an essential role in the defence of the sea-air gap. The submarines' prolonged covert reconnaissance capability can detect approaching surface and submarine forces and provide a warning of the threat.

The importance of this maritime capability is illustrated by the fact that air, submarine and surface forces complement one another in the defence of the sea-air gap. Surface forces provide a long term, constant presence in our area of interest, long range detection and strike abilities.

It is important to recognise that air, submarine and surface forces complement one another in the defence of the sea-air gap. Surface forces provide a long term, constant presence in our area of interest, long range detection and strike abilities.

This steady increase in regional involvement has the support of both major Australian political parties. In developing regional defence relationships, Defence and Foreign Affairs have worked closely together.

The time is last approaching for the realities of our foreign affairs and defence policy to be reflected in the force structure of the Australian defence force.

The defence gap policy is based on the fact that, with Australia's wide maritime approaches, defence technological and land mass, it is practicable to neutralise an enemy before they get here.

The 1980/81 defence policy evolved in the period following the end of the Vietnam War to full scale implementation in the mid-1980s.

Change of Owner

Earlier in the year the UK magazine SHIPS MONTHLY reported the sale of the British liner HMP Queen Elizabeth to a Norwegian engineering and shipbuilding firm. Queen Elizabeth is the last ship of the world's most famous shipping lines - Britain's Cunard line.

It is hard to believe that a company that owned the ocean liner in 1947 and which has for so long operated a line of great passenger ships, the best known perhaps being the Queen Mary and Queen Elizabeth and which still operates a number of fine ships, should pass from British hands; however, along with Britain's decline as a major shipbuilder and her reduced status as a manufacturing power, it is only one of the trials and tribulations that have beset Britain since World War II.

Most of Cunard's passenger fleet is engaged in the cruise trade at the present time and this is expected to continue for some time being, however Queen Elizabeth is not a cruise ship, and to maintain the Queen Elizabeth this fleet will eventually be sold.

Shipping Reform

Reform of the Australian shipping industry which has been underway

Australian Defence

IN BRIEF

By Geoffrey Evans

HMVS CERBERUS

Further to previous "IN BRIEF" references to the former Victorian monitor, "The Age" newspaper in August carried an article on the gradual subsidence of the wreck at Half Moon Bay under the heading, "Grande ship sinks its nemesis: a hungry worm". It was reported that the teredo worm was destroying the waterlogged timbers of the old sunken wooden deck.

The article went on to report the chairman of the National Trust saying the "Cerberus was the most significant wreck in Victorian history and the world's first battlefield in its time."

While the last part of the chairman's statement might raise a few eyebrows, the National Trust is to be commended for working with the Bayside Council towards the Cerberus on a $10 million five year plan to partly restore the old wreck and connect it to the shore with a walkway.

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AUSTRALIAN DEFENCE

THE NAVY, OCTOBER/DECEMBER 1996

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17 Mews Road, Freemantle WA 6160
ARUNTA Launched

The sun smiled from a blue, Melbourne winter sky as ARUNTA, second of our Anzac class frigates, slid easily down the Williamstown slipway on 28 June.

By Tony Underwood

The sky clouded briefly as the haunting, sad sounds of Aboriginal women were carried by the public address system across the empty slipway.

The songs were a sharp contrast to the cheers of jubilation by all, particularly Transfield Defence System (TDS) artisans, as the 1980 tonnes of metal - the displacement of ARUNTA to date - headed for water, to be "rounded up" by waiting tugs. And the displacement is a long way short of what will be the new ship's lightship weight of 3600 tonnes after TDS has carried out the final 33 per cent of the work on superstructure and internals to ready her for sea trials.

"The ANZAC Project is one example among the many that exemplify the objectives that form the basis of the closer defence relationship," Mrs Bishop said she was particularly pleased that about three quarters of the total contract price of the ANZAC Ship Project is being spent in Australia and New Zealand.

"Most of this work is being allocated to a wide variety of subcontractors, however, we cannot hope to become truly self-reliant until we can support platforms like these throughout their operational lives. The evolution of the support arrangements over the next few years will be critical.

The slipway blanked and created ominously through the interdenominational service by Navy chaplains as checks were removed. The congregation responded in the Naval Psalm and sang the Naval Hymn before the benediction was pronounced.

"The first ARUNTA was 2600 tonnes, said VADM Rod Taylor, the command distinguished by the fact that she became the only Australian ship ever to sink an enemy submarine, the Japanese "Tate" off Port Moresby while acting alone. The (then) Commander Morrow was subsequently awarded the Distinguished Service Cross for the feat.

"Our support is now being extended to the ANZAC Project. We have now hit top gear in production of ANZAC frigates. Today we are working on five ships simultaneously."

Delivered with functional systems

ANZAC was delivered on schedule, within budget and with its ship and combat systems operational, believed to be a world first for this type of ship. "SIMAS ANZAC, the first of the class has proven a strong and capable ship in sea trials and has met or exceeded contract specifications," said the then Chief of Naval Staff, VADM Rod Taylor.

Commanding Officer Designate of ARUNTA, Commander Greg Veale and the Launch Lady, Mrs Dulce Morrow (wife of the first CO of the first ARUNTA), cut the first steal for the launch.

By Antony Underwood

"No two countries in the world have a closer identity of fundamental strategic interests than Australia and New Zealand," she said, "and few have such long traditions of close military cooperation, nor such diverse and intimate contact in the day-to-day business of maintaining and developing defence capabilities.

"The ANZAC Project is a perfect example of the many that exemplify the objectives that form the basis of the closer defence relationship."

"We are working on five ships simultaneously."
Early Goodwill Visits

Though the RAN did not become operationally involved in the Vietnam conflict until 1964, HMAS Ships VAMPIRE and QUICKMATCH were the first ships in the area when they made a goodwill visit to Saigon in 1962. They were followed the next year by the Q Class frigates HMAS Ships QUIBERON and QUEENBOROUGH. These were not operational visits but designed to show the Australian government support for the government in Saigon, and members of the ships' companies visited the Vietnamese Special Forces training centre and carried out other 'flag showing' activities. During the 1963 visit the small Vietnamese naval vessel KYHOA accidentally rammed and holed QUIBERON, resulting in her being returned to Sydney.

Vung Tau Ferry

As the overall role of Australia's military increased in Vietnam so did the involvement of the RAN. The converted aircraft carrier HMAS SYDNEY had been transporting Army personnel and equipment from Australia to Vietnam since 1963. This ship was to become a familiar sight and temporary home to some 16,000 Australian military personnel as they deployed to Vietnam or returned to Australia. Because of these troopings, SYDNEY was affectionately known as the 'Vung Tau Ferry'.

During these deployments, SYDNEY was escorted and protected by other units of the RAN. On one such trip her escort included the aircraft carrier HMAS MELBOURNE, though MELBOURNE did not enter Vietnamese waters.

Clearance Diving Teams

In May 1964 the RAN's underwater Clearance Diving Team 1 (CDT1) spent a short period in Vietnam working with USN divers. Almost a year later the Australian government announced the deployment of Clearance Diving Team 3. This team was made up of personnel from the RAN's two existing diving teams, CDT1 and CDT2, and after a period of additional training arrived in Vietnam on 6 February 1967.

RAN CDT 1 was primarily employed in clearing rivers and shipping channels of mines and booby traps laid by the Viet Cong. This normally dangerous task was made especially so by the murky conditions under which the divers had to work. Other tasks assigned to the divers included salvage work and assisting in towlines and ship search.

RAN CDT 3 was primarily employed in clearing rivers and shipping channels of mines and booby traps laid by the Viet Cong. This normally dangerous task was made especially so by the murky conditions under which the divers had to work. Other tasks assigned to the divers included salvage work and assisting in towlines and ship search.

Regular searches were also conducted of Japanese Army water transport and other ships. This task was known as Operation STABLE DOOR and was intended to protect and secure South Vietnamese ports and military shipping from sabotage by the Viet Cong. As part of this operation RAN clearance divers conducted about 7,500 ship searches.

While the Clearance Divers operated as a distinct unit the number of personnel was adjusted for short intervals to USN diving teams. Such attachments provided the RAN clearance divers with valuable experience and exposure to other operating techniques. Perhaps the most unusual request for assistance received by the RAN clearance divers came from the US Army 16th Evacuation Hospital. They had just admitted a patient who had eaten some C-4 explosive.

On The Gunline

In March 1967, one month after the announcement of the deployment of the Clearance Diving Team to Vietnam, the (then) Minister for the Navy, Mr Don Chipp, announced that the RAN's newly commissioned guided missile destroyer HMAS HOBART would be deployed to join the US Seventh Fleet to support operations off the coast of Vietnam.

HOBART departed Sydney on 2 March 1967 and joined the US Seventh Fleet on 15 March. Her arrival at the US Naval Base in Subic Bay began the six monthly rotation of RAN destroyers which was to last until October 1971.

All of the RAN's guided missile destroyers deployed to Vietnam as did the Daring Class destroyer HMAS VENDETTA. HOBART and PERTH made three deployments each and BRISBANE made two. During the course of these operations the destroyers lifted over 100,000 rounds of ammunition in support of military operations and steamed 197,484 miles.

Typically the destroyers were operating on the gunline providing fire support to Allied forces. They also took part in Operation SEA DRAGON, the name given to surface ship operations against North Vietnam. At various times the commanders of RAN ships were delegated command of the 'gunline' and SEA DRAGON operations. Other tasks performed by the destroyers included escorting the US carriers on YANKEE Station and, in the case of PERTH, supervising an abortive return of POWs to North Vietnam.

VENDETTA, which served in Vietnam from September 1969 to April 1970 was the only Australian built destroyer to deploy. With her six 4.5 inch guns and 40 mm Bofors she was more like a light cruiser than the typical American destroyer.

On several occasions the destroyers operated close inshore and were fired upon by North Vietnamese shore batteries. However, the only fatal casualties onboard these ships occurred when HOBART was attacked, on 17 June 1968, by an aircraft later identified as belonging to the USAF. Two sailors were killed and a number wounded. HOBART returned to Subic Bay for repairs.

While they were in the operational area the RAN destroyers were supported by the Royal Australian Air Force (RAAF) through the provision of aerial and helicopter support.
Logistic Support

General logistic support to the Australian military forces operating in Vietnam was provided by Sydney, supported by the merchant ships JEPARIT and BOONAROO. The latter two were initially manned by civilian crews but had to be commissioned into the RAN due to union demands. BOONAROO was the first ship to commission into the RAN under the distinctive Australian White Ensign. These ships transported almost 200,000 tonnes of supplies, with BOONAROO making a total of 42 trips. As a result of wounds received when his aircraft was shot down, LCDR P.J. Vickers died first fatality when LCDR P. Vickers died, serving in this capacity the Navy doctors and US Army and Navy hospitals. While serving in this capacity the Navy doctors and as detached medical officers. This group of medical support to the local civilian population.

Withdrawal

In April 1971, the then Prime Minister, Mr John Gorton announced that Australian forces in Vietnam would be reduced. This led to the withdrawal of the clearance divers in May and the RAN HFV in June. The final RAN destroyer on the gunline, BRISBANE, returned to Sydney on October 15, 1971. The Whitsunday Labor government withdrew all Australian forces from and stopped military aid to South Vietnam. The Australian Fleet Air Arm returned to Sydney from her final voyage on March 11, 1972 and was followed the next day by SYDNEY.

During the 10 years that the RAN was involved in the war, eight officers and sailors were killed and another 46 were either wounded or suffered other injuries. The dedication and professionalism shown by members of the RAN earned the Service the respect of our Allies and continued the traditions established by Australian sailors in other wars.

Realignment ships. At regular intervals the ships visited Singapore, Hong Kong and the Philippines. This was to allow maintenance to be carried out and to provide shore leave and rest for the ship's crew.

Medical and Support Personnel

Members of the RAN also served at the Headquarters Australian Forces Vietnam and as detached medical officers. This group of medical support to the local civilian population.

RAN Ships in Support of the Vietnam War

**Gunline Destroyers**
- HOBART
- BRISBANE
- PERTH
- VENDETTA
- SYDNEY
- BOONAROO
- JEPARIT
- ESCORS
- ANZAC
- DEERWENT
- DUCHESS
- MELBOURNE
- PARRAMATTA
- STUART
- SWAN
- TORRENS
- VAMPIRE
- VENETIA
- YARRA

The combination of the speed and the stealth and the weapons-carrying capacity of this ship really makes it the most powerful warship in the world. Not just the most powerful submarine, said Admiral Bruce DeMars, director of naval nuclear propulsion, described the initial trials. The dedication and professionalism shown by members of the RAN earned the Service the respect of our Allies and continued the traditions established by Australian sailors in other wars.

By Robert Holzer

The United States Navy's new submarine USN SEAWOLF during sea trials.

New USN Submarine At Sea

US Navy and shipbuilding industry officials have reported that the initial trials of the service's SSN-21 Seawolf attack submarine herald a new era in undersea warfare.

The Royal Australian Navy

The combination of the speed and the stealth and the weapons-carrying capacity of this ship really makes it the most powerful ship in the world. Not just the most powerful submarine, Admiral Bruce DeMars, director of naval nuclear propulsion, described the initial trials. So with the stealth of this ship, and with its high-speed, it can carry its mission with great flexibility and can be in the world without people knowing that they're there.
Navy in Darwin

The fleet also proved to be a significant boost to the local economy, with many of the ships docked up on shore and giving their crews leave in the area.

Visiting Australian ships included the guided missile destroyer HMAS CORINTHION and patrol boats FREMANTLE and TOWNSVILLE. The Darwin based patrol boat HMAS ESSEX, COWAN, CRAWLER, DUBBO and WOLLONGONG, and the landing craft BAILORO PAN were also included.

New Zealand ships included the frigates HMAS NEW ZEALAND, CANTERBURY and WAIKATO and the replenishment tanker ENDEAVOUR.

Australia and US Agree on Nulka Decoys

The Minister for Defence, Ian McLachlan MP, recently announced that Australia has signed a Memorandum of Understanding (MOU) with the US for the joint production of Nulka decoys for the Royal Australian Navy’s (RAN) and United States Navy (USN). The Nulka decoy is designed to provide protection against anti-ship missiles, is derived from the Defence Science and Technology Organisation’s IACS decoy rocket, and was jointly developed by Australian and US industry.

The initial joint production run under the MOU will be carried out by British Aerospace Australia Pty Ltd and will involve a number of Australian and US companies as subcontractors. Mr McLachlan said “The agreement to enter into joint production demonstrates that Australia’s industry has achieved world standards in an area of highly sophisticated technology.”

He said the purchase of Nulka by the RAN and USN shows the confidence that the Australian and United States Defence organisations have in Australian designed and produced high technology products.

It is expected that Nulka will be in service with the RAN for more than ten years from late 1998 onwards. The RAN intends to carry the Nulka decoy onboard its FFG guided missile and Anzac Class frigates.

Navy Clears Harbour Minefield

The Royal Australian Navy’s inshore mine hunter AMHIL HMAS SHOAIB WATER made history today, 9 August, when she conducted the first “lead through” of a submarine between North Head and South Head. The exercise involved the twin-hulled 178 tonne minehunter leading the ONSLOW class submarine HMAS ONSLOW through a swept channel within a minefield in the Rose Bay area.

Under the command of LCDR Barry Jones, SHOAIB WATER rendezvoused with ONSLOW at Middle Head, to travel at its knots to clear the hazard. "Lead through" exercises are held about six times a year, normally in the Jervis Bay and Shoalwater Bay areas.

Navy Week 1996

For the Sydney public a number of new attractions and innovations have been planned for the Fleet Base East on both Saturday, 6 and Monday, 8 October. As a start, the new frigate HMAS ANZAC will open her gangways to the public and when onboard, a giant video screen will bring the ship to life for all visitors. As well as ANZAC, three other ships will be open for inspection including the HMAS WARRNAMBOOL, the guided missile and Anzac Class frigates.

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The auxiliary minesweeper, BROCA, departing Sydney for mine countermeasure trials along the NSW coast.

PSS PRESIDENT H. I. REIK, the 21st Pacific Island patrol boat, running trials in Cockburn Sound, Western Australia. The boat has since been handed over to the Republic of Palau.

The last of the original four Oberon class submarines ordered for the RAN, HMAS ONSLOW sails for exercises from her base, HMAS PLATYPUS on 9 August 1996. The previous Sunday, both OTAMA and ONSLOW were opened to the public, with more than 7000 visitors boarding the boats and inspecting the shore facilities.

The guided-missile frigates, HMAS ADELAIDE and HMAS CANBERRA have recently undertaken a deployment to South East Asia.

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The Navy, October/December 1996 17
Sea Riding ANZAC
By Graeme Andrews

Things have changed quite a lot since I signed on in 1955 and no-where was this better illustrated than when I found myself in Brisbane, gazing at the new frigate HMAS ANZAC (3) as she lay at the Cairncross Dock wharf.

ANZAC had been in commission less than three months and is the first of eight similar ships of the German-designed Meko 200 type which will be built for the RAN by Transfield in Williamstown, Victoria.

Today's RAN is no longer the most powerful indigenous force in Australia's areas of interest and influence, as it was in the 1950s and 1960s. Over the last decade or so, it has slipped considerably in capability, specifically since aircraft carrier MELBOURNE retired without replacement, when compared to her neighbours ANZAC and her sisters, combined with the six FFGs are intended to stop this qualitative slide.

The ANZACs will act as an extension to the more capable FFGs, while bringing certain additional attributes, such as a naval gunfire support capability by means of the single 127mm (5in) gun. The ships were completed with about half its intended weapon fit, thus allowing the RAN to go eight ships afloat rather than having four fully-equipped frigates. It is to be hoped that our politicians don't forget the rest of the gear before making service commitments as did Prime Minister Thatcher at the Falkland Islands, in 1982.

ANZAC is 118m overall about the same length as the RAN's now-retired Daring class. She is very beamy at 14.8m, being a lot “fatter” than the much longer FFGs and DDGs. The Darrings were 13.1m. This combined with a full length superstructure, gives the new ships the internal feeling of being aboard a small cruiser and provides a great amount of space for accommodation. The accommodation is intended for only 164 people of which some 15 or so are females who have their own fully-equipped messdeck.

The big improvement in the accommodation stakes are the lower deck cabins, particularly Chiefs and Petty Officers, as junior ranks are much better off in most ways, although that point of view is hard to accept until you've tried the earlier version.

One down-side, to me personally, was the complete air-conditioning of the ships. Those of our readers who have enjoyed the proximity of an open scuttle and wind-scoop in the tropics, will know just how good that is, until a slug of salt water spoils the feel. There are no scuttles in the ANZAC and, oddly enough, when the VOYAGER disaster is recalled, no hull-side escape hatches. All escape hatches are vertical. The ship is subdivided into many more compartments than my memory can divide into, and a man's survival chances in action and these have been enhanced by lessons learnt from the Falklands actions.

For example, all the ship's company sleep on inner spring mattresses! The covers are of fire retardant material, as are the issued doonas, which have replaced the old naval blankets and mattresses. Washrooms (Heads?) in ANZAC are a revelation. It seems that all showers and toilets have been built uni-sex. The result are wash rooms of the standard of a well-planned caravan park. To those sailors who can see the stars are sentries. At sea, at night, the only way to know just how good that is, until a slug of salt water spoils the feel. There are no scuttles in the ANZAC and, oddly enough, when the VOYAGER disaster is recalled, no hull-side escape hatches. All escape hatches are vertical. The ship is subdivided into many more compartments than my memory can recall on the Darrings or the "Q" class frigates, particularly in the vicinity of the machinery spaces. This should improve the ship's survival chances in action and these have been enhanced by lessons learnt from the Falklands actions.

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The trials team Seahawk prepares to take off. (Photo - G. Andrews)
THE ROYAL AUSTRALIAN NAVY

The Royal Australian Navy

Australia's DDGs

By Michael James

ANZAC's major weapon will be her single anti-submarine and missile control helicopter. The ship was built to operate the Seahawk, as used on the FFGs, but may have to settle for a smaller and cheaper type in the future. During my four days on board, the ship was training a Seahawk to allow calculation of the operating limitations in wind and sea conditions.

The decision to purchase the three CHARLES F ADAMS class destroyers from the United States marked a turning point in the history of the Royal Australian Navy. The first ships not designed or built in the United Kingdom for the RAN, they represented a tangible link between the US and Australian navies.

Displacing some 4,700 tonnes, the design was modified in a number of areas from the American original, most notably, the fitting of the Australian-designed IKARA anti-submarine missile system in place of the ASROC anti-submarine rocket in their US and West German sisters.

Commissioned in 1965 and 1967, HMAS BRISBANE, PERTH and BRISBANE have served the nation well, in peace and war over three decades.

The three guided missile destroyers (DDGs) are familiar sights to most Sydneysiders, their long sleek shapes gliding through the water, often leading a line of warships through the “Heads”. HMAS Ships HOBART, PERTH and BRISBANE have served the nation well, in peace and war over three decades.

By Michael James

THE ROYAL AUSTRALIAN NAVY

The Royal Australian Navy

Australia's DDGs

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Displacing some 4,700 tonnes, the design was modified in a number of areas from the American original, most notably, the fitting of the Australian-designed IKARA anti-submarine missile system in place of the ASROC anti-submarine rocket in their US and West German sisters.

Commissioned in 1965 and 1967, HMAS BRISBANE, PERTH and BRISBANE have served the nation well, in peace and war over three decades.

The three guided missile destroyers (DDGs) are familiar sights to most Sydneysiders, their long sleek shapes gliding through the water, often leading a line of warships through the “Heads”. HMAS Ships HOBART, PERTH and BRISBANE have served the nation well, in peace and war over three decades.

By Michael James
NoosaCat

Workhorse For The 90s

One model of the NoosaCat range has exceeded the sales of all others as a popular, reliable workboat around Australia. The 3100 Series, 880 model has been snapped up by the Army, other government departments and SAR groups. The list of configurations varies, power supplies and options is extensive but the ride, speed, handling and stability of this big cat are the same. NoosaCat has modified the layout slightly as the Army specifications, fitted with 800lb life rafts, also carries the Army equipment for military operations. The boats have been field-tested and have proven to be reliable workboats around Australian waters.

To date NoosaCat has provided nine workboats to the Navy, October/December 1996

Aged 15, he joined the cadet of the RAN, the training ship TIMBERA. It was the beginning of a lifelong passion for the sea and the inspiration for a future career as a naval artist and writer.

In 1913, when he was five years old, John Bastock perched on his father’s shoulders to watch the arrival from England into Sydney Harbour of the flagship, the powerful new battlecruiser HMAS AUSTRALIA, the new cruisers MELBOURNE and SYDNEY, together with other units of the Royal Australian Navy, already serving in Australian waters.

The Navy, October/December 1996 23

RAN Serviceman, Naval Artist, Writer
Born - Feb 18, 1908
Died - Jul 26, 1996
Aged 88

The late John Bastock (left) presents his painting of the First HMAS ADELAIDE for display in the current ship’s wardroom.

Bastock was an expert in drawing and painting naval subjects. He built many model ships, some of which will be presented to museums. The wardrobe of HMAS ADELAIDE has a fine painting of the cruiser in 1944 in her wartime camouflage, and HMAS CANBERRA also has an outstanding painting of the 10,000-ton Class of cruiser in her present ship, Bastock also presented the ships MELBOURNE, SUCCESS and ANZAC with splendid paintings of earlier warships bearing those names.

Bastock's enthusiasm for the Royal Australian Navy was contagious, and many people have a greater appreciation of it as a result of his excellent work with pen and paintbrush.

He married Vera in 1930, they had one son and two daughters. Vera died three days after her husband.
Busy In The Gulf

On 10 April, 1996, the RAN’s guided missile frigate (FFG) HMAS MELBOURNE sailed from Sydney’s Fleet Base East, her destination, the Arabian Gulf.

The Navy, October/December 1996
HISTORY REVISITED

Right: Seaplane carrier HMAS ALBATROSS in the early 1930s. The ship's forward crane has lifted a Seagull III amphibian.

The ship's forward crane has
lifted a Seagull III amphibian.

HaHMMHMMMKVw. — • 'JSaVt,

Left: An unusual view of the 5 class destroyer HMAS SUCCESS. Note the tiny beam of the ship.

Below: HMAS AUSTRALIA (II) in Farm Cove, Sydney. The photograph was probably taken in the late 1920s, with northern pylon for the Sydney Harbour Bridge having only just commenced construction.

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“Swansong”

From Vic Jeffery, Navy Public Affairs Officer (WA)

With the decommissioning of the 26 year old HMAS SWAN at HMAS STIRLING on Friday, 13 September, the era of the RIVER-class destroyer escort in the Royal Australian Navy is drawing to a close.

Of the original class of six, YARRA, PARRAMATTA and STUART have been broken-up and DERWENT was expended in a series of ship survivability tests in conjunction with Defence Science and Technology Organisation off the WA coast.

The future of SWAN remains undecided with the ship being gifted to the WA State Government by the Federal Government and submissions being called by the WA Tourism Commission for expressions of interest as to what the future of the old warship will be, either on or below the waves. A steering committee will make the final decision.

This has created a great deal of speculation and numerous bids to secure the ship with competition coming from a number of areas including the City of Rockingham and Town of Bunbury who both are keen to secure SWAN as an offshore dive wreck.

Then there is the Perth-based National Naval Heritage Centre Inc., which wants to preserve SWAN as a museum ship at A Berth, Victoria Quay near the mouth of the Swan River in Fremantle Harbour. This proposal would include accommodating youth groups taking part in live-in learning programmes.

The south coast Town of Albany, great supporters of the Royal Australian Navy over many years, are keen to secure SWAN’s twin 4.5-inch gun turret for display on the slopes of Mount Adelaide as part of the historic tourist attraction, the Princess Royal Fortress.

This popular complex already boasts a twin 40mm Bofors from the former HMAS STALWART and both RAN and USN 21-inch torpedoes along with a growing collection of naval uniforms and memorabilia. The "Albany Force" as it is known, protected the entrance to this magnificent harbour during both World Wars.

Built at HMA Naval Dockyard, Williamstown, SWAN was laid down on 18 August, 1965 and launched by His Excellency, wife of the Minister for Defence, on 16 December, 1967.

After eleven attempts in breaking the traditional champagne bottle the Superintendent Naval Architect stepped in and broke the bottle. HMAS SWAN was commissioned on 20 January, 1970 under...
HMAS BARCOO
The Story of a Ship and Her Ship’s
Company
By Robert McAuslan
Published by His Print, Manly, NSW, 2600

The latest in a long line of individual RAN ship histories, the 104 page HMAS BARCOO is a combination of the career of the frigate, war and peace-time reminiscences and the personal contributions of many of the former crew members.

Published in late 1995, the book is presented in a辞卷 tone, both the narrative and photographs. Most of the illustrations are onboard scenes, taken by the men at sea and at rest in the various ports. A small pictorial section is devoted to a recent BARCOO reunion.

A good read, the book is available through the publishers or Ian Thomas on 02 9302 1052.

LEADLINE TO LASERS

Leadline to Laser, the history of the Hydrographic Service, Royal Australian Navy, was compiled by Commander R.I Hardstaff RAN Rtd to mark the 75th anniversary of the RAN Hydrographic Service in 1995.

The volume is a comprehensive account extracted from reports of proceedings, reports of survey, submitted fair charts, published charts, Hydrographic Office files (both current and these are housed) and numerous other sources, including the memories of a number of persons mentioned in the book. The volume lists the documented facts to tell the story.

Admiral Ritchie in his foreword, and Commander Hardstaff in his introduction, both allude to the continuance of the Navy’s tasks, initially that of the Royal Navy, and since 1920, that of the Royal Australian, in conducting the hydrographic survey of Australia and publishing the navigational charts on which the initial settlement and development of the country depend. The ships now carrying Australia’s exports use these charts to ensure both their own safety and that of the marine environment through which they pass.

The book has seven components.

Part 1, Principal Surveys takes the form of an annual synopsis of activities both ashore and afloat. As the 75th Anniversary fell in the Australia Remembers Year, it is particularly noteworthy the detail that has been put into chronicling the events in the years 1939 through to 1945.

Part 2, Biographical Details. This Part gives personal details of those unannounced hydrographic officers who have either submitted surveys for the Hydrographic Office, commanded RAN survey vessels or have been in charge of the Hydrographic School.

Part 3, Vessels. This section lists all RAN, RUSN and USCG vessels employed in the hydrographic survey duties in the area of Australian maritime interest, and gives details of each vessel and the surveys each was involved with.

Part 4, Technical Notes. Although not comprehensive, this part has endeavoured to describe the technicalities of the past which have been superseded. This concept is most forcefully identified by the title of the book, Leadline to Laser.

Appendices and other matter make up the sixth section of the book. The twelve appendices cover a range of statistics and other supportive matter.

The final part of the book are the indices which have been compiled in the form of General Index, Index of Persons, Index of Locations and Index of Ships and Establishment.

The volume is a worthy continuation of C.G. Ingleton’s “Charting a Continent” and a new addition to the series of volumes which have been compiled in the Hydrographic Office of various other countries. T immediately after the book is issued is the year 1996, the 75th anniversary of the Hydrographic Service in the RAN.

Published in late 1995, the book is an excellent publication and one which will serve as a general reference for all interested in the Hydrographic Service of the RAN.

BOOK REVIEWS

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Notice is hereby given that the
ANNUAL GENERAL MEETING
of
THE NAVY LEAGUE OF AUSTRALIA
will be held at the Brassey Hotel, Belmore Gardens, Barton ACT
On Friday, 8 November 1996 at 8pm
BUSINESS

1. To confirm the Minutes of the Annual General Meeting held in Adelaide on Friday 17 November 1995.
2. To receive the report of the Federal Council, and to consider matters raised thereon.
3. To receive the financial statements for the year ended 30 June 1996.
4. To elect Officers for the 1996-97 year as follows:
   - Federal President
   - Federal Vice-President
   - Additional Vice-Presidents (1)

Nominations for these positions are to be lodged with the Honorary Federal Secretary prior to commencement of the Annual General Meeting.

5. General Business:
   - To deal with any matter notified in writing to the Honorary Federal Secretary by 28 October 1996.
   - To receive the report of the Federal Council at its meeting held on 18 November 1995, and to consider the same.
   - The following matters are to be considered:
     (a) To Article 33 add ‘(g) immediate past Federal President’.
     (b) Upon the Federal Council determining to dissolve a Branch it shall give such directions as are necessary as to the allocation of the membership and disposition of the property of that Branch.
     (c) To Article 48 insert ‘(a)’ after the number ‘40’.
     (d) To Article 131 (1) insert after the expression ‘The Federal Vice-President’ the words ‘and such other Vice-Presidents as the Federal Council from time to time appoint.’
     (e) To Article 131 (2) after the number ‘80’ insert ‘(i) insert ‘(a)’ after the number ‘80’.
     (f) To Article 131 (3) after the number ‘140’ add ‘(ii) add to Article I the following – (b) the Federal Council may in its absolute discretion determine to dissolve a Division.’
     (g) To Article 131 (3) after the number ‘170’ add ‘(i) add to Article I the following – (a) the Federal Council may in its absolute discretion determine to dissolve a Division.’
     (h) Upon the Federal Council determining to dissolve a Branch it shall give such directions as are necessary as to the allocation of the membership and disposition of the property of that Branch.

6. General Business:
   - To receive the financial statements for the year ended 10 June 1996.
   - To receive the report of the Federal Council, and to consider matters raised therefrom.

7. To approve the continuation in office of those members of the Federal Council who have attained 72 years of age, namely Arthur Hewitt (SA) and Mervyn Cooper (Tas).

8. To deal with any matter notified in writing to the Honorary Federal Secretary by 28 October 1996.

9. General Business:
   - To consider the following resolution recommended by the Federal Council at its meeting held on 18 November 1995, and if thought fit pass as a special resolution:
     (a) To Article 137 add ‘(g) Artie les 170 and 171 be deleted.
     (b) Upon the Federal Council determining to dissolve a Branch it shall give such directions as are necessary as to the allocation of the membership and disposition of the property of that Branch.
     (c) To Article 137 be deleted.

ALL MEMBERS ARE WELCOME TO ATTEND
By order of the Federal Council
Don Schrapel, Honorary Federal Secretary, PO BOX 309 M, Waverley 3149
Telephone (03) 9888 1977 Fax (03) 9888 1083

VIEWPOINT
The 1996 Federal budget has been brought down. The Defence vote has survived, untouched, at $10 billion.

The fact that the Defence vote has not been cut is, of course, welcome. It fulfills a promise made by the Coalition prior to the election. It also raises a number of points worth consideration.

The Defence vote has been protected when all other departments have made a contribution to the Government's debt reduction programme. Not surprisingly, there have been complaints and criticism of the seeming immunity of the Defence budget. People interested in defence, including readers of this magazine, understand the need to maintain the $10 billion figure. However, people involved in areas of activity outside defence, in particular those subject to expenditure cuts, can be expected to have a different view.

This situation clearly means that Defence will have to ensure that every cent is wisely spent. In the current climate any waste or ill-judged expenditure will attract some very ready critics.

A likely consequence of the present circumstances is that while defence expenditure will be maintained at around its current level there can be no expectation of any significant increase.

One aspect of the $10 billion figure that might be usefully pointed out is that this figure represents a declining proportion of GNP. Product (GDP). It is a not so long ago that we were campaigning to maintain expenditure above 3% of GDP. This year's figure will represent just under 2%.

Expressed as a percentage of GDP, defence spending is at its lowest since before World War II. It is probable that this percentage will decline further over the next few years.

These circumstances may produce some particular difficulties for Navy. It is likely that in Defence and Government Navy is viewed as having done pretty well out of the budget in recent years. The Anzac frigates and the six Collins submarines represent the two biggest 'big ticket' programmes Defence has yet had. Navy has also got the minehunter programme and recently, albeit fairly cheaply, acquired Kamikamba and Matzuco.

In the pipeline for Navy (perhaps) are Offshore Patrol Combatants (OPCs), helicopters, replacements for the three destroyers (DDGs) and an additional two submarines. In a situation of financial constraint and in circumstances such as these, the Defence vote has grown. Defence thought it had done pretty well already, and a few hard choices will have to be made.

How many OPCs can Navy afford? The answer to this may depend upon what Malaysia decides Can Navy keep the Fremantle patrol boats going? How many and for how long? Certainly, the fewer the OPCs, the more the need to keep the Fremantles.

What about the DDGs Can Navy afford to replace them? Might it not be better to develop the Anzacs to their full capability and do without the destroyers?

Helicopters are a must. But how many and of what type? If it was decided to fully utilise the Anzacs then this could impact upon the type of helicopter they would employ.

After all this was taken into account would there be funds for a further two submarines?

The $10 billion allocated in the budget is welcome. But there is an awkward lot to be done within the budget.

The $6.1 million contract for the design and construction of the 26.5m Coastal Patrol Boat was awarded to Ballinger Shipyards Inc in Lockport Louisiana on 19 March.

The contract includes options for the construction of an additional 50 vessels which could bring the value of the contract to $200 million if all of the options are exercised.

Ballinger first entered the patrol boat industry in 1994 with the award of 15 'Island'-class 32m patrol boats for the US Coast Guard Command. This class was also based on a Wesport-Thornycroft design, and is powered by four Paxman Diesels 3516 diesel engines. For the purposes of the Coastal Patrol Boat programme, the US Coast Guard continued with its 'Parent Craft' procurement strategy that had been successfully employed in the 'Island'-class programme.

All of the designs proposed for the Coastal Patrol Boat programme were required to be based on a hullform already used in the construction of at least two vessels, at least one of which had to be operated as a patrol boat by the US Coast Guard. This was to further reduce the lead time for the development of a new design.

The US Coast Guard selected the Stan Patrol 2660 semi-displacement monohull from Damen Shipyards in the Netherlands. The lead ship and her sisterships are being developed to replace the US Coast Guard's aging 82ft 'Point'-class fleet of patrol boats which consists of 37 cutters built during the 1960s at the Coast Guard Yard in Baltimore, Maryland, and at J M Marine Shipyards Corporation in Tacoma Washington.

The main role of the Coastal Patrol Boat is search and rescue (SAR), with law enforcement, drug interdiction, marine environmental protection (by towing containment booms or skimming equipment), and recreational boating safety (conducting boardings of US registered vessels out to 200nm) as secondary roles.

Compared to the 'Ward'-class, the new vessels will reduce operating and
maintenance costs, and provide a safer and more efficient working environment.

The requirement to operate in shallow waters offensively and the additional missions of law enforcement and drug interdiction required that the craft be capable of launching and recovering a rigid inflatable boat (RIB) in heavy seas, and be capable of towing vessels much larger than itself.

The RIB launch and recovery system was designated as the most important aspect of the requirement by the Coastal Guard program office.

After selecting the Damen Stanly 2600 as the best hullform for the parent craft, Bollinger teamed with David M. Cathell in the UK to assess the design of the launch and recovery system.

Together the two companies chose to use a launch and recovery system based on that employed in the Protector III UK Fisheries Patrol Boat built by Halmatic Ltd.

In order to eliminate a gasoline-based propulsion system for the 5.5m aluminium RIB, the boat will use a small diesel engine driving a waterjet.

The launch and recovery system from the Protector III will enable the RIB to be handled safely in seas of up to 25 m, which will substantially enhance the ability of the vessel to conduct offshore search and rescue operations in adverse weather conditions.

Other innovative features of the Coastal Patrol Boat will include an integrated pilot house with radar, depthfinder, differential Global Positioning System (DGPS), and other sensors, linked to an " Compared to the 'Wind'-class, the new vessels will reduce operating and maintenance costs, and provide a safer and more efficient working environment."

The propulsion system for the new class will be based on two MTU 8V196 TE94 diesel engines rated at 2,000 kW (2,680bhp) driving fixed pitch propellers through ZF 6L4100 gearboxes. The ship's service diesel generators will be based on two Cummins 45kW models.

The Coastal Patrol Boat will have a range of 1000nm and endurance of five days. It will have a crew of 11 arrangements, all of them capable of accommodation, with 1500 litres of fuel and a RO water maker of 700 litres/day.

The steel hull of the Coastal patrol boat will be built by Bollinger. Halmatic in the UK will build the fiberglass reinforced plastic (FRP) superstructure.

Construction of the first of class is due to start in January 1997 on completion of what will have been an 8-12 month design phase. The projected delivery date for the first Coastal Patrol Boat is 22 September 1997.

The five-year contract awarded to Bollinger includes multiple options. Depending on delivery/acceptance of the first boat, there are as follows: 6-8 boats to start in January 1997 on completion of what will have been an 8-12 month design phase. The projected delivery date for the first Coastal Patrol Boat is 22 September 1997.
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