Amphibious logistics operations – Jay Bannister ..........25
Australia's amphibious task group will have significant logistic
capacity. Logistics, however, can be an enormous challenge for
an amphibious force and the logistics plan must be flexible and
responsive to the landing force scheme of manoeuvre. Sea-
basing, embarkation, disembarkation, sustainment at sea,
biosecurity, health and other logistic challenges are discussed.

CONTRIBUTED HISTORY NOTE
Seventy years ago: the Desert Air Force in Italy, 1944 –
Bryn Evans ..........................................................29
In May-June 1944, during the Italian campaign of World War II, the Luftwaffe mounted a desperate effort to counter Allied air
superiority, but it would prove to be in vain.

BOOK REVIEWS
The backroom boys: Alfred Conlon and Army’s
Directorate of Research and Civil Affairs, 1942-46
by Graeme Sligo – reviewed by Marcus Fielding ..........31
The Backroom Boys is the remarkable story of how a varied
group of talented intellectuals were drafted into the Australian
Army in the dark days of 1942 and provided high-level policy
advice to General Blamey and through him to the Government.

Climax at Gallipoli: the failure of the August offensive
by Dr Rhys Crawley – reviewed by Marcus Fielding ..........33
Climax at Gallipoli examines the performance of the Allies’
Mediterranean Expeditionary Force in the August Offensive of the
Gallipoli Campaign rigorously and dispassionately. His message
may put some objective balance back into the Anzac Centenary
proceedings.

Australia and the Vietnam War by Peter Edwards – reviewed by Marcus Fielding .........33
This is a one-volume version of the nine-volume Official
History of Australia’s Involvement in Southeast Asian Conflicts
1948–1975 – the equivalent of C. E. W. Bean’s Anzac to Amiens
(WWII) and Gavin Long’s The Six Years War (WWII).

The digger’s view: WWI in colour by Juan Mahony –
reviewed by Marcus Fielding .................................35
The Digger’s View is a magnificently produced high quality
book that is crammed with rare colourised photos and diary
entries that provide a very personal perspective of some of the
Australian soldiers who served during World War I
United Service
Journal of the Royal United Services Institute of New South Wales, Incorporated
Informing the defence and security debate since 1947

Editor: Brigadier David Leece, PSM, RDF, ED (Ret’d)
Business Manager: Mrs Theodora Fox, BA LibSci
Editorial Advisory Committee:
Brigadier David Leece, PSM, RDF, ED (Ret’d) – chair
Air Vice-Marshall Bob Treloar, AO, RAAFAR
Colonel Marcus Fielding
Captain lan Pfennigwerth, RAN (Ret’d)

United Service is published quarterly. It seeks to inform the defence and security debate in Australia and to bring an Australian perspective to that debate internationally. To this end, the journal publishes papers presented at meetings and seminars organised by the Institute. Contributed papers dealing with defence and security issues or military history also will be published, together with relevant opinion pieces, letters to the editor, biographies, obituaries and book reviews. Before acceptance, contributions are refereed and edited.

Contributions, which conform to the journal’s style, should be addressed to the Editor either at office@rusinsw.org.au (preferred) or by post to the Institute’s offices. Papers normally should not exceed 3500 words and may be accompanied by one or two photos, a brief biography and a photo of the author. Opinion pieces, biographies, obituaries and book reviews should not exceed 850 words, guest editorials 400 words and letters 200 words. Submission of an article implies that the article has not been published elsewhere and also implies transfer of the copyright from the author to the publisher. Notes for contributors are at www.rusinsw.org.au/journal.

Copyright: This work is copyright. The Copyright Act 1968 permits fair dealing for study, research, news, reporting, criticism and review. Selected passages may be reproduced for such purposes, provided acknowledgement of the source is included. Otherwise, articles published in this journal may not be reproduced, stored in a retrieval system, or transmitted in any form by electronic or mechanical means, photocopying or recording, either in whole or in part, without the written permission of the Editor.

Publishers: United Service is jointly published by the Royal United Services Institute of New South Wales, Incorporated, ABN 80 724 654 162, Locked Bag 18, Darlinghurst NSW 2010; and Pinnacle Publishing Pty. Ltd., ABN 90 153 935 874, P.O. Box 4192, Bay Village NSW 2261; T: (02) 4334 4711; F: (02) 4334 4433.

Printer: Galloping Press, Unit 29, 398 The Boulevarde, Kirrawee NSW 2232, Phone: (02) 9521 3371.

Subscriptions: Members receive the journal at no additional charge. The subscription for non-members is: in Australia $50 per year (post paid); outside Australia AUD$60 (Asia-Pacific) or AUD$70 (elsewhere) per year (air mail); and can be arranged through the Editor at the Institute’s offices. E-copies of articles and e-subscriptions may be obtained through RMIT Informit Collections at www.informit.com.au.

Advertising should be arranged through Pinnacle Publishing Pty. Ltd. (see “Publishers” above).

Opinions expressed in United Service are those of the authors and are not necessarily those of the Institute. Publication of an advertisement does not imply endorsement of the products or services by the Institute.

Royal United Services Institute of New South Wales, Incorporated
Level 20, Defence Plaza, 270 Pitt Street, Sydney NSW 2000
Postal Address: Locked Bag 18, Darlinghurst NSW 2010, Australia
Telephone: (02) 9393 2325, Facsimile: (02) 9393 3543
Email: office@rusinsw.org.au; Website: http://www.rusinsw.org.au
ABN: 80 724 654 162

United Service 65 (3) September 2014
**INSTITUTE NEWS**

**Queen’s Birthday Day Honours 2014**

The Institute congratulates the following members who were recognised in the 2014 Queen's Birthday Day Honours:

- **Appointed a Dame in the General Division of the Order of Australia – Her Excellency Professor The Honourable Marie Roslyn BASHIR AC CVO** – Dame Marie has been Patron of the Institute for the past 13 years.
- **Appointed an Officer in the General Division of the Order of Australia – Robert Burgess LEECE AM RFD** Mosman NSW – for distinguished service to the community of NSW through the development and guidance of major infrastructure projects.
- **Appointed an Officer in the Military Division of the Order of Australia – Rear Admiral Timothy William BARRETT AM CSC RAN** NSW – for distinguished service as Commander Border Protection Command and Commander Australian Fleet Command. Admiral Barrett has been a Vice-Patron of the Institute for the last two years.
- **Appointed a Member in the Military Division of the Order of Australia – Captain Raymond John LEGGATT CSC RAN** NSW – for exceptional service to the Royal Australian Navy across the fields of capability management, training, command and operations.
- **Awarded a Commendation for Distinguished Service – Captain Jay Barton BANNISTER RAN** ACT – for distinguished performance of duty in warlike operations as the Chief of Staff, Headquarters Joint Task Force 633, on Operation Slipper.

**Upcoming Events**

**Australian Naval and Military Expeditionary Force Centenary Battlefield Tour**

- **9 – 14 September 2014, New Guinea**
  This tour is being offered by Military History Tours Australia Pty Ltd and is tailored to the needs of those wishing to visit the Rabaul battlefields prior to the Institute's Centenary Seminar. For further details, visit www.militaryhistorytours.com.au.

**Australian Naval and Military Expeditionary Force Centenary Seminar**

- **Tuesday 30 September 2014, 1.00 pm – 5.00 pm**
  Sydney Mechanics School of Arts, 280 Pitt Street, Sydney
  At the outbreak of World War I, the Australian Naval and Military Expeditionary Force (ANMETF) was raised to seize and occupy German colonial possessions in the Pacific. It was formed in August 1914 and, supported by the Australian Fleet, it captured Rabaul and began occupying German possessions, especially wireless stations, in New Guinea, Nauru, the Solomon Islands and nearby islands in September 1914.
  The Institute is holding this seminar to enhance public awareness and understanding of this important event in Australia’s military history and the circumstances surrounding it. A panel of five naval and military historians will outline the background to war in 1914, naval operations in the Pacific in 1914, the raising and training of the ANMETF and its subsequent operations in New Guinea, and the aftermath.
  Attendance fees are: members $30.00; non-members $45.00. Pre-event registration is essential either through the Institute website (www.rusinsw.org.au) or through the office (T: (02) 9393 2325; or E: office@rusinsw.org.au).

**Annual General Meeting**

- **Tuesday 30 September 2014, 5.00 pm – 5.30 pm**
  Sydney Mechanics School of Arts, 280 Pitt Street, Sydney

**October Lunchtime-Lecture**

- **Tuesday, 28 October 2014, at 1.00 pm**
  Wesley Conference Centre, 220 Pitt Street, Sydney
  **Speaker:** Major James Nol, Royal Australian Army Medical Corps
  **Subject:** “Understanding Islam and conflict in the Middle East”

**DEFENCE NEWS**

**Changes in Senior Appointments**

The following senior Australian Defence Force appointments were made recently:
- **Chief of the Defence Force: Air Chief Marshal Mark Binskin, AC**
- **Vice-Chief of the Defence Force: Vice Admiral Ray Griggs, AO, CSC, RAN**
- **Chief of Navy: Vice Admiral Tim Barrett, AM, CSC, RAN**
- **Chief of Joint Operations: Vice Admiral David Johnston, AM, RAN**
- **Commander Australian Fleet: Rear Admiral Stuart Mayer, CSC & Bar, RAN**

**Defence White Paper 2015**

The Defence White Paper 2015 will allow the Government to take stock of the long-term opportunities and challenges for Australia's defence and security. It will align Defence policy with a clear military strategy and deliver a costed, affordable plan to achieve Australia's defence and national security objectives.

The 2015 Defence White Paper is being informed by a public consultation process. The Government is seeking the Australian community's views on the following key questions:
- What are the main threats to, and opportunities for, Australia's security?
- Are Defence's policy settings current and accurate?
- What defence capabilities do we need now, and in the future?
- How can we enhance international engagement on defence and security issues?
- What should the relationship be between Defence and defence industry to support Defence's mission?
- How should Defence invest in its people, and how should it continue to enhance its culture?

Detailed submissions can be provided in writing. Submissions can address any relevant topic and the Defence Issues Paper [at www.defence.gov.au/whitepaper/] provides guidance on suggested broad themes. Written submissions will be accepted until 29 October 2014 and can be lodged at the 2015 Defence White Paper internet site, or by sending your submission in hardcopy to the Department of Defence.

Department of Defence

**LETTER**

**The Changing Character of War**

I enjoyed reading Dr Al Palazzo's paper on the military revolution of limits and the changing character of war ([United Service 65](http://www.unitedservice.org.au/) (1, March), 9 – 13, 2014). I am pleased that he has identified the competition for resources to be a driving factor of future conflict. Indeed, David Kilcullen's omission of competition for resources as a driver was one of my criticisms of his latest book on the coming age of the urban guerrilla ([United Service 65](http://www.unitedservice.org.au/) (2, June), 35, 2014).

Palazzo's argument that the natural limit on some resources will place a limit on the growth and development of some sections of humanity is valid – however, I suspect the role of nation-states in the process will take second place to private interests. A stratification of people into wealthy and not-so-wealthy categories is a more likely outcome – not dissimilar to that depicted recently in the movie *Elysium*.

Australia is relatively rich in resources and has a relatively small population. If force were to become a factor in the competition for resources, I wonder whether Australia would be able to protect its resources, interests and sovereignty.

Colonel Marcus Fielding
Councillor, Royal United Services Institute, Victoria
13 May 2014
Amphibious Operations

Geo-strategic circumstances dictate that Australia adopts a maritime strategy, integral to which are amphibious operations – the projection of a military force from the sea onto a hostile, or potentially hostile, shore via assaults, withdrawals, raids or demonstrations. Australia is enhancing its capacity to deploy military power amphibiously across a range of contingencies, but is focused initially on security, stabilisation, humanitarian assistance and disaster relief, i.e. paramilitary and military assistance operations rather than conventional amphibious operations.

Our Amphibious Operations Seminar on 27 May 2014 examined the development of amphibious operations over the last century and Australia’s developing capability. Several lessons emerged relating to landing force size; amphibious tactics; fighter aircraft support; and amphibious vehicles.

Landing Force Size: The case studies showed that a typical contemporary amphibious task group with a battalion-sized landing force embarked can react quickly to contingencies, particularly when confronting non-state actors, terrorists, organised criminals or the like. It is suitable for raiding, non-combatant evacuations, and delivery of military assistance, but not for amphibious assaults. The only amphibious assault conducted this century, the 2003 British invasion of Iraq’s Al Faw Peninsula, required a reinforced infantry brigade group – 3 Commando Brigade, Royal Marines, reinforced by 15th Marine Expeditionary Unit, United States Marine Corps. A battalion-sized amphibious ready group lacks the land combat power needed for amphibious assaults against the forces of a nation-state.

Amphibious Tactics: Like its British and American counterparts, Australia is training its amphibious forces to avoid establishing a conventional beachhead wherever practicable and instead to employ direct ship-to-objective manoeuvre and sea-basing i.e. holding command and control, fire support and logistics facilities afloat. This is sensible for many amphibious demonstrations, raids, and withdrawals; and for many paramilitary and military support tasks. In some situations, it also may be suitable for seizing points of entry in the initial stages of an amphibious assault. But if the purpose of the assault is to establish a firm base for further combat operations inland or as a site for an advanced naval or air base, frequent reasons for such a mission, then at some stage, a firm base will need to be established ashore which can be defended against enemy counter-attack and within which the combat power and logistic support needed for the subsequent operations can be built up – i.e. a conventional beachhead will need to be established. Australia should not neglect to train for this contingency.

Fighter Aircraft: During amphibious operations, it is vital that air superiority be maintained both during passage to the battle zone and over the amphibious operations area. The landing force also needs close air support during the assault and once ashore. Both tasks require fighter aircraft which can be either land-based or ship-based. In the former case, to ensure coverage of the amphibious task force, air-to-air refuelling may be needed – air-to-air re-arming is not possible. The United States Wasp-class 40,000-tonne amphibious assault ships (LHDs) can serve as ‘lily pads’ for fixed-wing fighter aircraft, enabling them to land, refuel, rearm and take off. Australia’s two 27,500-tonne Canberra-class LHDs, two-thirds their size, will have correspondingly less capacity. While short take-off and vertical landing (STOVL) fighter aircraft (e.g. F35 Lightning II B) will be able to land and take off from them, they will have little if any capacity to refuel and rearm the aircraft; and the deck will be unable to sustain frequent STOVL landings.

Amphibious Vehicles: Australia’s LHDs will be equipped with a very capable landing craft, the 100-tonne LCM-1E). Where a beach is not protected by coral reefs, it will be suitable for landing main battle tanks and other heavy equipment and for logistic movements to and from ship and shore, although equipment and supplies will need to be discharged at the waterline, not on the beach or beyond. The LCM-1E, however, is not an amphibious assault vehicle. It provides only limited personnel protection; cannot transport assaulting infantry personnel; cannot transport amphibious assault vehicles; and cannot undertake ship-to-objective manoeuvre. For this, the US Marines use the AAV-7A1, an amphibious, tracked, armoured personnel carrier that can carry a platoon from shipping over-the-horizon to its objective inland.

White Paper Implications: Australia’s new amphibious force as currently configured is eminently suitable for paramilitary and military support operations, but less so for warfighting. Should Australia’s 2015 Defence white paper conclude that Australia could become involved in warfighting between nation-states over the next 30 years, then it should provide for: an amphibious landing force of at least brigade size, backed up by at least one similar-sized reserve force; the conversion of at least one of the two LHDs to support the frequent landing, refuelling and rearming of STOVL fighters, and the equipping of this LHD with amphibious assault vehicles; the conversion of at least one of the F35 Lightning II squadrons on order from the A model to the B (STOVL) model; and the taking up of suitable ships from trade to transport the expanded landing force.

David Leece*  


*David Leece, Editor of United Service, is President of the Institute. These are his personal views.
Its geo-strategic circumstances dictate that Australia adopts a maritime strategy, integral to which are amphibious operations. These involve the projection of a military force from the sea onto a hostile, or potentially hostile, shore; and include assaults, withdrawals, raids and demonstrations. These operations and contemporary amphibious tactics are described. Amphibious forces also can provide logistic support to deployed forces; and military support in non-warlike circumstances. Australia is building an amphibious force modelled on United States and British amphibious forces.

Key words: maritime strategy; amphibious operations; amphibious assault; amphibious withdrawal; amphibious raid; amphibious demonstration; amphibious logistics; humanitarian assistance; disaster relief; Australia's amphibious capability.

Before dawn on 12 August 1914, eight days after the declaration of war, two Australian destroyers entered Simpson Harbour at Rabaul, then the capital of German New Guinea. A landing party was put ashore and it raided the Rabaul post and telegraph office, destroying the telegraphic equipment before withdrawing (Meade 2005: 1-2). This, Australia's first military action of World War I, was a successful amphibious raid.

A month later, the Australian Naval and Military Expeditionary Force (ANMEF) comprising some 1000 infantry and 500 naval infantry, returned to Rabaul. It was embarked in the auxiliary cruiser, HMAS *Berrima*, and was escorted by a light cruiser, three destroyers, two submarines, and a supply ship. Rear Admiral Sir George Patey, commander of the Australian Fleet, was the overall commander; and Colonel William Holmes commanded the landing force, the ANMEF.

On 11 September 1914, the ANMEF undertook amphibious landings on the south shore of Blanche Bay at Herbertshohe and Kabakaul before advancing inland and capturing the German wireless station at Bita Paka after a day of fierce fighting. On 12 September, the Australians occupied Rabaul against light resistance (Mead 2005: 37-74). This action was a successful amphibious assault.

On 22 September, Holmes sailed from Rabaul to Madang on mainland New Guinea with a combined force of army and navy troops in the *Berrima*, accompanied by the heavy cruiser, HMAS *Australia*, the light cruiser, HMAS *Encounter*, and the French armoured cruiser, *Montcalm*. On arrival, the warships trained their guns on the town. Holmes sent an envoy ashore under a flag of truce and demanded the unconditional surrender of Madang which was immediately forthcoming (Meade 2005: 79-82). This action was a successful employment of the amphibious demonstration.

Seven months later, on 25 April 1915, Australian troops again took part in an amphibious assault, this time as participants in an Allied seaborne invasion of the Gallipoli Peninsula, Turkey. Led by the 3rd Infantry Brigade, the 1st Australian Division began landing from rowing boats before first light on the beaches at Ari Burnu on the Peninsula's west coast with a view to advancing east to secure the high ground in the centre of the Peninsula and to isolating the main Turkish forces to the south. By dusk, despite determined Turkish opposition and heavy casualties, the Division had secured a beachhead and the first two lines of hills which dominated it, but the third ridge, their prime objective, remained beyond their grasp, as it would for the remainder of the campaign (Firkins 1971: 45-51). For this operation, the Australians were transported by ships of the Royal Navy, which also provided them with naval gunfire and logistic support.

After eight months of futile effort to secure the Gallipoli peninsula, Britain decided to withdraw. The Australian and New Zealand Army Corps, while still in contact with the enemy, successfully executed an amphibious withdrawal from the Ari Burnu beachhead over two nights, 18-19 December 1915 (Firkins 1971: 59-60). The Royal Navy again provided the naval support for the withdrawal.

So before the war was 16-months-old, Australian troops with either Australian or British naval support had successfully conducted all recognised forms of amphibious operation.

**Australia’s Defence Strategy**

Australia is an island continent situated between the Indian and the South Pacific Oceans, and with its northern oceanic approaches interdicted by the Indonesian-Melanesian archipelago. Consequently, since European settlement, Australia’s defence has been based on a maritime strategy involving:

- denying any potential enemy use of the sea and air approaches to the continent;
- denying him forward bases in the archipelago for an attack on the continent; and
- protecting the sea and air lines of communication between Australia and its trading partners.
Inevitably, amphibious operations have been an integral component of this strategy, especially in the defence of the archipelago.

Amphibious Operations

So what constitutes an amphibious operation? An amphibious operation is any operation that involves the projection of a military force from the sea onto a hostile, or potentially hostile, shore (Speller and Tuck 2001: 7). Such operations are usually conducted without access to port facilities and frequently employ specialist amphibious shipping, including landing craft and amphibious vehicles able to deliver troops and stores over the shore across beaches. Helicopters, too, can be used to speed up the rapid build-up of combat power ashore.

While similar in many respects to other maritime activities, including administrative disembarkation of forces on a friendly shore and ferrying activities between ports, the defining characteristic of an amphibious operation is the need to land military forces on a hostile shore.

That said, the techniques and equipment designed for amphibious operations frequently also have application when providing amphibious logistic support to forces ashore — which is sometimes referred to as logistics over-the-shore operations (LOTS); and in non-warlike circumstances, especially where entry to coastal and near coastal areas is needed in the absence of port facilities — frequently a requirement following natural disasters and when delivering humanitarian assistance. As amphibious forces tend to be called on in such circumstances, such so-called ‘military support operations’ are frequently discussed along with amphibious operations.

As already indicated, there are four types of amphibious operation — the assault, the withdrawal, the raid and the demonstration — and each one needs to be underpinned by sound logistic support. We will now look at each in turn.

Amphibious Assaults

The amphibious assault is the principal type of amphibious operation and is conducted in order to establish a landing force on a hostile or potentially hostile shore. Commonly, amphibious assaults are conducted for one of three reasons (Speller and Tuck 2001: 12-13):

- to establish a firm base or point of entry for further combat operations inland — e.g. the Normandy landings in June 1944 served as a prelude to a major land campaign in Europe;
- to obtain a site for an advanced naval or air base — e.g. the majority of island landings conducted by the United States in the Pacific in World War II were to secure airfields to cover the next phase of the advance towards Japan; or
- to deny use of the area or facility to the enemy — e.g. the British assault on Vichy-held Madagascar in World War II was to forestall Japanese use of its naval base.

Completely unopposed landings are rare and are usually dependent on both excellent intelligence and good fortune. Even where the beach itself is undefended, as at San Carlos Water during the 1982 Falklands War, the landing may be opposed by enemy air and naval forces or indirect artillery fire (Speller and Tuck 2001: 13-14). Sea mines in the approaches and long-range ballistic missiles also can provide hidden dangers for an apparently benign landing site.

Conventionally, the assaulting force is assembled on ships at sea. It is then transported to the shore by landing craft, where it secures a beachhead which is defensible against enemy counter-attack and large enough to accommodate the whole force and its equipment and stores on-shore. Once the force is established securely ashore, command is transferred from the naval commander to the land commander. Finally, the force attempts to break out of the beachhead and then advance to its primary objective.

Today, specialist amphibious forces when conducting assaults prefer not to establish a beachhead. Instead, wherever practicable, they employ direct ship-to-objective manoeuvre, in which the landing force treats the sea and land as one continuum. The landing force, whether deployed by helicopter or amphibious assault vehicle or both, thrusts inland straight to its ultimate objective without pausing at the shoreline. Requirements of ship-to-objective manoeuvre are that the assault be launched from over-the-horizon, preferably by night, to achieve tactical surprise; and that command and control, logistics and fire support remain afloat, a technique known as ‘sea-basing’.

With sea-basing, supplies are held afloat and are delivered on a ‘just enough’, ‘just on time’, basis to the forces that need them.

In World War II, the amphibious assault was used extensively in the Pacific Theatre, given its island nature, to gain points of entry both for the capture of airfields and for the development of further operations inland. United States Marine Corps amphibious assaults at places like Guadalcanal, Bougainville and Iwo Jima, have become legend (Costello 1981: 338-553; Polmar and Mersky 1988: 96-131).

Australian amphibious operations are less well recognised. After its successes in the Western Desert in 1941-42 at Tobruk and El Alamein, the 9th Australian Division returned to Australia and trained with the United States Navy in amphibious warfare (Mallett 2007). It subsequently employed the amphibious assault in New Guinea in 1943 to gain points of entry at Lae in September (Dexter 1961: 326-346) and Finschhafen in October (Dexter 1961: 444-479). In 1945 in British North Borneo, it again employed the amphibious assault at Tarakan in May, and Brunei and Labuan in June (Long 1963: 406-471). The 7th Division also trained in the technique and then used it successfully in Dutch Borneo at Balikpapan in July 1945 (Long 1963: 502-531).

Amphibious Withdrawals

Amphibious withdrawals involve the re-embarkation of military or civilian personnel and equipment. They may be pre-planned or may involve an emergency embarkation from a hostile, or potentially hostile, shore (Speller and Tuck 2001: 18-19). A withdrawal may be conducted:

- to disengage in contact with the enemy and withdraw from a hostile shore back to a safe base — as at Gallipoli in December 1915/January 1916, Dunkirk in 1940, Greece and Crete in 1941, and Korea in 1950;
in order to conduct further amphibious operations elsewhere (in which case the landing force needs to be to tactically reloaded and reconfigured, which can make the embarkation process complex) – as in Korea in 1950;
• as the final stage of an amphibious raid; or
• to help evacuate civilian personnel, i.e. undertake non-combatant evacuation operations (NEOs), such as the final evacuation of United States citizens from Saigon in 1975 by helicopter from the embassy to ships off-shore.

Amphibious Raids

The amphibious raid involves both a pre-planned assault and a pre-planned withdrawal, including re-embarkation of the landing force, shortly thereafter. The objective is occupied only long enough to enable the raiding force to achieve its mission – the ‘hit and run’ concept (Speller and Tuck 2001: 15). Raids are conducted (Speller and Tuck 2001: 16-18):
• to inflict loss or damage on the enemy – e.g. the British Special Air Service raid on Pebble Island off West Falkland on 14 May 1982, during which they destroyed 11 Argentine ground-attack aircraft;
• to secure information say by gathering intelligence from prisoners or captured documents, or by undertaking covert reconnaissance, perhaps as a prelude to a full-scale assault – e.g. the regular landing of special forces reconnaissance teams from submarines to gather intelligence covertly during the Korean War;
• to create a diversion – e.g. repeated Allied raids on Norway in World War II forced Germany to station 18 divisions there against the possibility of a major Allied invasion; or
• to capture individuals or equipment – e.g. the raid on Bruneval in February 1942 during which 100 commandos were parachuted into France close to a German cliff-top radar station, and then overwhelmed the defenders and seized the radar equipment, before withdrawing back to Britain by landing craft from a beach at the base of the cliffs.

Raids also can be conducted for logistical reasons, such as to establish a temporary supply point or communications facility.

In the past century, most amphibious raids have been small in scale involving at most a few hundred well-trained soldiers or marines, at times put ashore by canoe from submarines, or by helicopter from amphibious assault ships. Wherever practicable today, the raiding force employs ship-to-objective manoeuvre. Indeed, it has now become the preferred modus operandi of specialist amphibious forces.

Amphibious Demonstrations

An amphibious demonstration is designed either to deceive the enemy or as a show of strength (Speller and Tuck 2001: 19-20), with a view to causing the enemy to act in a way that he otherwise would not. To be effective, it must be credible.

In peacetime, amphibious exercises demonstrate the strength of national capability and hence can serve to deter would be aggressors. In wartime, amphibious demonstrations are employed to induce surrender without engaging in fighting – as at Madang in 1914; to tie down enemy forces; or to divert them away from the main area of operations. To do so, they must appear to pose a credible threat to the enemy force ashore.

In the 1991 Gulf War, the United States deployed 31 amphibious ships carrying 17,000 marines, 39 tanks, 12 amphibious assault vehicles, 30 light armoured vehicles and 52 howitzers to the Gulf. The force conducted numerous landing rehearsals to ensure Saddam got the message. The Iraqis were convinced a major amphibious landing would occur on the coast of Kuwait and diverted five divisions to its defence. Without having to land on the mainland, the United States amphibious force effectively neutralised an Iraqi force roughly 15 times larger than itself.

Amphibious Logistics

Sound logistic support is indispensable to all military operations. Logistics involve moving armed forces and keeping them supplied; the art and science of organisation, administration and supply. As applied to amphibious operations, this includes the tactical embarkation of troops, equipment and supplies; movement to the objective area; and the disembarkation of personnel and the unloading of ships; as well as the sustained provision of supply, medical, salvage, evacuation, construction, repair and maintenance services. Crucial sub-systems are the organisation of storage afloat, storage on the beach, and the system of movement between the two (Speller and Tuck 2001: 103-117).

The logistic support usually travels, at least initially, with the amphibious task force. It can be provided from within the task force (e.g. by amphibious assault ships and/or supply ships); or by certain specialist ships in the accompanying naval escort force (e.g. Britain maintains a Royal Fleet Auxiliary and the United States its Military Sealift Command for this purpose); and/or by suitable merchant ships, including troop transports, that have been taken up from trade – a practice referred to by the acronym ‘STUFT’ and which was used to great effect by Britain in the 1982 Falklands conflict (Speller and Tuck 2001: 115-117). It was also used by Australia in the Vietnam War and the 1999 East Timor crisis (Leach et al. 2004).

Forces skilled in providing such services in war are also usually well-equipped and trained for doing so in some non-warlike situations requiring similar skills and equipment, such as the provision of humanitarian assistance and disaster relief, which can have a heavy demand on emergency supply, engineering, medical, communications and control services. Accordingly, governments frequently employ their amphibious forces on such military support tasks, often at short notice.

Planning and Conducting an Amphibious Operation

The ‘seaborne soldiers’ (Parkin 2003) of the landing force can be naval infantry [i.e. soldiers who are part of the navy, such as the naval reservists of the ANMEF in 1914, and the Royal Naval Division which served on Gallipoli in 1915 (Page 2007)]; marines who specialise in amphibious operations (whether they be part of the navy or a separate
marine service); or an infantry-predominant balanced army formation, such as an infantry brigade group or infantry division.

Operations that involve more than one service (Navy, Army or Air Force) are referred to as ‘joint’ operations, and those involving the armed forces of two or more nations as ‘combined’ operations. Amphibious operations are normally joint operations and frequently are also combined ones; and may involve coordination with intelligence teams and partisans on the hostile shore. Consequently, amphibious operations can be among the most complex of all military activities to plan and conduct. The amphibious assault is the basic amphibious operation. There are five stages in the planning and conduct of an amphibious assault (Weller and Tuck 2001: 22-101).

Planning and preparation is a stage which may take many months. It can involve intelligence collection and deception activities; establishing command relationships; choosing a landing site; resolving the critical issues of weather, tides and timing; and training and rehearsal of the force.

Passage to the battle zone is the stage when the ‘amphibious task force’ (ATF) moves from its points of embarkation or its forward deployed positions by sea to the area of operations, often referred to as the ‘amphibious objective area’. During transit, crowded into transports, the amphibious force can be at its most vulnerable, so sufficient sea control must be achieved to protect the ATF from enemy attack. As a consequence, possible threats, choice of route, an escort screen and battlespace dominance become key considerations.

Pre-landing operations, sometimes referred to as favourably shaping the littoral battlespace, can increase the chances of success. They can involve supporting operations to deceive the enemy; and more frequently include direct preparation of the landing beaches by beach reconnaissance, sea-mine clearing and other obstacle removal. The need for speed and surprise, however, may constrain their scope – as far as possible, they should not constrain the intended place or time of the main landing. Further, a vertical envelopment capability (e.g. helicopters) may render them less important.

Securing the beach can be most difficult and dangerous. The landing force has to be transported to the beach, get ashore and then secure the beach. Combat power must be built up rapidly on the beach in sufficient strength to defeat enemy counter-attacks and create a viable bridgehead into which reinforcements can be deployed. Air superiority must be achieved over the objective area and the assaulting force must be provided with both close air support (from ground-attack aircraft) and naval gunfire support.

Consolidation and exploitation: A period of consolidation is necessary to expand the beachhead to an adequate size, to secure it against enemy attack, and to develop the combat power, logistic support, and command and control needed for the breakout. The efficient organisation and management of the beachhead is critical. In its 1943-45 amphibious assaults, the Australian Army used beach groups consisting of infantry, engineers, pioneers, signallers, medical staff and beach commandos, totalling 1800 men to manage beachhead logistics (Crawley 2014). Finally, with consolidation complete, the force attempts to achieve a breakout and exploit the earlier success.

Australian doctrine. While the above stages in the planning of an amphibious assault have universal applicability, current Australian amphibious doctrine, with its primary focus on the amphibious raid, recognises seven stages in the planning and conduct of an amphibious operation from its inception to its conclusion, namely: Plan, Embark, Rehearse, Move, Shape, Action, and Termination.

Contemporary Amphibious Forces

Amphibious operations are extraordinarily difficult to mount at short notice unless well-rehearsed contingency plans are available and, with little adjustment, can be given effect. This has led in recent times to several nations forming specialist amphibious forces which have an experienced commander, supported by an efficient staff, in command of well-trained and properly-equipped forces, and with the capacity to respond to lower-level contingencies at short notice. Australia’s amphibious capability was found wanting during the East Timor crisis in 1999 and since then Australia has been moving determinedly to redress this deficiency. It has been attracted to two contemporary models: the United States Marine Expeditionary Unit and associated naval Amphibious Ready Group; and Britain’s 3 Commando Brigade, Royal Marines, and the amphibious ships of the Royal Navy.

United States amphibious forces

Each United States Marine Expeditionary Unit (MEU) trains and deploys as a task-tailored Marine Air-Ground-Task Force (MAGTF) of some 2200 marines and sailors and consists of a command element, a reinforced infantry battalion, a composite fixed and rotary wing squadron, and a combat logistic battalion. When required, a Marine special operations company embarks in support. There are four MEUs in the Pacific and they deploy forward aboard Amphibious Ready Groups in areas of potential crisis to respond rapidly to crises and contingencies across the range of military operations (Speller and Tuck 2001: 165).

United States Navy Amphibious Ready Groups (ARGs) are amphibious ship formations. Each is built around a core of three ships: a multi-purpose (LHD) or general-purpose (LHA) amphibious assault ship; a landing platform, dock (LPD); and a landing ship, dock (LSD). As required, ARGs and their embarked MEUs are escorted on operations by ships of the United States Navy (Speller and Tuck 2001: 166).

The three amphibious ships that embark and deploy a MEU are led by a United States Navy captain titled Commander Amphibious Task Force (CATF). His Marine counterpart is a colonel, the MEU commander, titled Commander, Landing Force (CLF). The CATF and CLF use ‘supporting command relations’ to determine lead responsibility during the phases of an amphibious operation.

Britain’s amphibious force

3 Commando Brigade, Royal Marines, is an all-arms formation centred around three battalion-sized commando
units, reinforced with artillery, engineer and logistic support elements (Speller and Tuck 2001: 167-8). A Royal Netherlands Marine Corps battalion is integrated into the brigade as a fourth manoeuvre unit and a Dutch colonial serves as the brigade’s deputy commander. There is provision for support as needed from tanks and armoured reconnaissance from the Army’s ready brigade; and from army-operated Apache attack helicopters from the amphibious assault ship.

This landing force is supported by an amphibious assault ship, helicopter (LPH); two landing platforms, dock (LPD); up to three landing ships, dock (LSD); and, if needed, a carrier group, which will include joint strike fighters in the future.

**Australia’s amphibious force**

Australia’s amphibious force draws on elements of both the United States and British models and is intended to be interoperable with them (Leggatt 2013). Current capability is the Amphibious Ready Element (ARE) that consists of: a joint Amphibious Task Force command element; a landing force, built upon a rifle company group task-tailored to form an infantry combat team of 150 – 220 personnel; a rotary-wing aviation element of 4 – 6 helicopters; and a combat support element.

The ARE has so far trained and is ready to respond to crises and contingencies aboard HMAS Choules, a 16,000-tonne landing ship, dock (LSD). In the future, the ARE will deploy aboard one of two Canberra-class 27,000-tonne multi-purpose amphibious assault ships (LHD) and use 100-tonne landing craft, mechanised (LCMs) and helicopters to rapidly move equipment and soldiers ashore. Once the ARE has been certified in 2015, it will be the ready amphibious force used for regional engagement exercises and to rapidly respond to crises and contingencies.

Future amphibious capability will build upon the ARE organisation, with the landing force expanded to a light infantry battalion group task-tailored to form a battle group of up to 2200 personnel; and with the rotary-wing aviation element expanded to 12 – 24 helicopters. It will require both LHDs, the LSD and up to 12 LCMs for embarkation and deployment. Called the Amphibious Ready Group (ARG), it will be the amphibious component of the ADF’s contingency forces. The ADF’s intent is to test and demonstrate the ARG during Exercise Talisman Sabre 2017. It will be escorted on operations by ships of the Australian Fleet and Air Force assets as needed.

**Conclusion**

Given its geo-strategic positioning, it is not surprising that amphibious operations, be they assaults, withdrawals, raids or demonstrations, have played a key role in the defence of Australia’s national interests over the last 100 years, especially during the two world wars. Since World War II, Australia has also employed its amphibious capabilities to support peacekeeping, stabilisation, humanitarian assistance, disaster relief and other military assistance operations. The 1999 East Timor crisis, though, demonstrated the weakness of Australia’s then amphibious capability. Australia has since been moving slowly but determinedly to rebuild a modern, highly-professional, amphibious capability suitable particularly for lower-level contingencies and interoperable with that of its principal allies, the United States and Britain.

**The Author:** Brigadier Leece is President of the Royal United Services Institute, New South Wales, and editor of the Institute’s quarterly professional journal, *United Service*. A former citizen-soldier, he served in the Australian Army for 37 years. Commissioned into the Infantry Corps in 1962, he served on exchange with the United States Marine Corps Reserve (1967-69), and later commanded the 17th Battalion, Royal New South Wales Regiment (1978-81), and the 8th Australian Infantry Brigade (1988-90). In civil life, he was initially an agricultural research scientist who ultimately became Executive Director and Chief Scientist of the New South Wales Environment Protection Authority.

**Acknowledgements:** I thank Rear Admiral Mark Campbell, RAN, Colonel Jim Hutton, Royal Marines and Colonel John Mayer, US Marine Corps, for helpful comments on the manuscript.

**References**


Landing Ships

A landing ship is a purpose-built troop transport ship modified to enhance its utility as a platform from which an amphibious operation may be launched and supported without relying on conventional port facilities.

The Landing Ship, Tank (LST) has a shallow draught to enable it to discharge personnel and vehicles through bow doors within wading distance of the beach.

Most landing ships, however, stand offshore where they are less vulnerable to attack from the shore and employ landing craft, landing vehicles and/or helicopters to transfer their cargo ashore.

The Landing Ship, Dock (LSD) e.g. HMAS Choules, carries its landing craft in a stern well deck (‘dock’). To launch the landing craft, the well is flooded and the loaded craft can then sail out and back in through the ship’s stern doors.

The Landing Platform, Dock (LPD), in addition to a dock, has a short flight deck and a hanger to support limited helicopter operations.

The Landing Platform, Helicopter (LPH) or ‘commando carrier’ (e.g. HMS Ocean) is an aircraft carrier modified to embark and support helicopters, rather than fixed-wing aircraft. It has a full flight deck but no dock, so it cannot land equipment, such as tanks, which is too heavy for helicopters.

The Amphibious Assault Ship (LHA/LHD) combines the features of an LSD and LPH. It can use LCS to land heavy equipment. It also can serve as a ‘lily pad’ for fixed-wing fighter aircraft, enabling them to land, and refuel and rearm, before taking off again. Most also have excellent command, fire control and logistic facilities, including hospitals, designed to facilitate ‘sea basing’. The 40,000-tonne US Wasp-class LHDs have better dock facilities than the older LHAs. They can carry 1870 troops, 12 landing craft and 32 CH-46 Sea Knight helicopters. In their secondary role as a sea-control ship, they can operate 20 AV-8B Harrier II [vertical/short take-off and vertical landing (V/STOVL)] ground attack aircraft.

Australia is acquiring two 27,500-tonne Canberra-class LHDs to be commissioned as HMA Ships Canberra and Adelaide. Their shallow draft will enable operations in littoral waters. They will have a range of 9000 nautical miles at a cruising speed of 15 knots. They will be able to embark 1050 troops, 110 vehicles, 11 helicopters and four landing craft (LCM-1E); and deploy up to 200 troops (a company group) in one helicopter lift. Their hulls have been configured to optimise the helicopter role and while STOVL aircraft (e.g. F35 Lightning II B) will be able to land and take off from them, they will have little if any capacity to refuel and rearm the aircraft; and the deck will be unable to sustain frequent STOVL landings.

Landing Craft and Vehicles

By the start of World War II, the landing craft (LC) had replaced rowing boats for ferrying troops and stores from ship to shore. LCs have a flat bottom, enabling them to reach the beach, and a bow ramp across which troops disembark within wading depth or at the waterline. Typical early ones were the Landing Craft, Vehicle and Personnel (LCVP), capable of carrying 36 men; and the Landing Craft, Mechanised (LCM), of various dimensions. The more recent 100-tonne LCM Mark 8 (LCM-8), still in service, can transport 200 personnel, 50 equipped troops, 54.5 tonnes of cargo, or a main battle tank.

During the Pacific War, it often proved difficult to find beaches suitable for amphibious assaults and where they existed, the route to them at times was impeded by coral reefs, impassable to landing craft. To overcome this, the Landing Vehicle, Tracked (LVT) was developed which could drive over any reefs encountered. Being tracked, it could also drive across the beach and disembark assaulting infantry at the back of the beach or beyond. Modifications to enhance troop safety included armour protection, a stern (rather than bow) ramp, and a heavy machine gun to provide covering fire during disembarkation. By the war’s end, the Amphibious Tractor or ‘Amtrac’, which embodied the foregoing features, had become the preferred Amphibious Assault Vehicle (AAV).

The current US Marines LVTP-7A1 (AAV-7A1) Amphibious Assault Vehicle can carry a marine platoon from shipping over-the-horizon to its objective inland and, while a compromise between a modern landing craft and a terrestrial armoured personnel carrier, it is preferred to both for ship-to-objective manoeuvre.

The DUKW or ‘Duck’ is a 2-tonne 6x6-Wheeled Amphibious Truck developed in World War II for the transport of troops and cargo across the beach and beyond. It has more land mobility than the LVT but, because it lacks armour and is slow and bulky ashore, it is primarily employed on ship-to-shore transport of logistic supplies.

Australia is equipping its LHDs with the 100-tonne LCM-1E, especially designed for the Canberra-class LHDs, to deliver troops and equipment, including the Abrams main battle tank, from over-the horizon to the shore. It incorporates a bow ramp and a stern gate, facilitating the loading/unloading of rolling stock within the flood levee and the transfer of vehicles of up to 12 tonnes from one barge to another. However, it cannot traverse coral reefs, transport an assaulting force across a beach, or transport commandos to their target in ship-to-objective manoeuvre.

David Leece
Case Study: The utility of amphibious forces in the 21st century

Major John Collins, Royal Marines

While this case-study is constrained by secrecy aspects regarding operations in Libya and Somalia, it demonstrates the utility of an integrated 21st century amphibious force. The critical enabler was HMS Ocean. What started as a 7-week exercise evolved into a 7-month operation, with three payload re-configurations, spanning all amphibious roles, over a distance of 40,000 nautical miles.

Key words: amphibious; Libya; Somalia; HMS Ocean; 2011

The title of this case study paraphrases General Rupert Smith’s book, The Utility of Force, in which he argues that the entire concept of military engagement has experienced a paradigm-shift from ‘industrial war’ to ‘war amongst the people’ (Smith 2005: 3). Recent Middle-East campaigns, the 2011 ‘Arab Spring’ and ongoing Asian-Pacific regional disputes all appear to validate this assertion. Smith’s thesis does not mean force cannot be used for positive effect; rather that force/politics ratios must be re-calibrated by a greater admixture of politics alongside military force.

Ninety per cent of the world’s population lives within 100 nautical miles of the sea (UK Parliament 2012: Ev-w47). Logically, therefore, 90 per cent of potential trouble-spots lie in littoral areas. As a timely reminder, David Kilcullen asserts that, post-Afghanistan, “it’s time for the military to re-engage with the challenge of irregular warfare in the urban littoral” (Kilcullen 2013: viii). Embarking into an increasingly uncertain ‘Asian-Century’ means that the Australian Defence Force’s (ADF) ability to conduct littoral manoeuvre has exponential relevancy, affording the government a highly cost-effective means of recalibrating inter-agency levers to assist regional partners prevent or resolve potential brushfires. As Sir Basil Liddell Hart observed: “A self-contained and sea-based amphibious force is the best kind of fire extinguisher because of its flexibility, reliability, logistic simplicity and relative economy” (Liddell Hart 1960a: 128).

Strategic Context

This case study’s theme fuses Smith’s and Kilcullen’s assertions with the: ‘strategic challenges that will arise’ as part of the Asian-Century (Australian Government 2012: ii); United States ‘strategic rebalancing’ to the Asia-Pacific; and the maritime strategy adopted by Australia’s 2013 Defence White Paper (Department of Defence 2013: 29) to underpin its strategic interests: a secure Australia; a secure South Pacific and Timor-Leste; a stable Indo-Pacific region; and a stable, rules-based global order (Department of Defence 2013: 24-27).

‘Industrial-Era’ Amphibious Roles

ADF doctrine describes an amphibious operation as: “A military operation launched from the sea by a naval and landing force embarked in ships, landing craft or helicopters, with the principle purpose of projecting landing forces ashore” (ADDP 2009: 1-2). It envisages four types of amphibious operations: demonstration, raid, assault and withdrawal (ADDP 2009: 3-1). History is punctuated by scalable examples of each, from discrete raids in Bordeaux and Singapore Harbours to Gallipoli, Dunkirk, Normandy and Inchon. More recent utility was illustrated in The Falklands (1982), Kuwait (1991) and East Timor (1999).

Sir Thomas More Molyneux’s 1759 work Conjunct Expeditions was the first to articulate the complexity of amphibious operations. Molyneux argued that combined operations were a necessary component of national defence and that the fleet and army, acting as consort, seem to be the natural bulwark (Coetzee and Eusturid 2013: 123-124).

As Liddell Hart observed, overcoming these complexities demands consistent training: “Adequate amphibious means are not only a matter of ships. Skilled personnel are no less important ... the required skill is the fruit of long training in amphibious techniques and of constant practice in combination of the various elements in such a force (Liddell Hart 1960b).

A single Landing Helicopter Dock (LHD) can deploy for months with controllable political overheads and latent capacity to deliver a spectrum of amphibious effects as illustrated by the case study below involving HMS Ocean, a 22,000-tonne amphibious Landing Platform Helicopter (LPH).

Amongst The People – A Glimpse of One Possible Future

The imminent delivery of Australia’s two 27,000-tonne LHDs provides a focus to develop a robust ADF littoral capability. Rightly, the ADF has reached out to long-established practitioners, namely the United States Marine Corps and the Royal Marines. As the ADF develops its capability, however, it must avoid being hypnotised by the traditional amphibious roles or seduced into replicating the industrial-scale of earlier campaigns.

Instead, it must focus on more likely regional threats. Contemporary threats ‘amongst the people’ mean that: a ‘demonstration’ is more likely to be humanitarian disaster-relief; a ‘raid’ to be a helicopter-borne, Special Forces hostage-rescue mission; an ‘assault’ to be a maritime-launched Apache helicopter strike; and a ‘withdrawal’ to be a non-combatant evacuation. This new paradigm demands that inter-agency planners, instead of solely military planners, design a strategic-level regional engagement...
campaign to utilise the scalable capabilities that amphibious forces can exert.

Special Forces have become the tool of choice for many governments. This case study reviews two operations to illustrate the utility of 21st century amphibious force. Specifically, it examines the Royal Navy’s HMS *Ocean* 2011 deployment as a glimpse of one possible amphibious future.

**A Tale of Two Global Contingencies**

HMS *Ocean* left Britain in April 2011 on a scheduled Mediterranean amphibious exercise, Exercise Cougar, with an embarked force of Royal Marines, Commando Helicopter Force, and Army Apache helicopters. It returned 229-days later, having supported operations in Libya and Somalia.

In May, *Ocean* was re-tasked to Operation Unified Protector off Libya. In addition to air and naval operations, a military liaison advisory team had been deployed in April (UK Parliament 2012: 18). As astute journalists noted, “the British campaign also had a secret ground aspect, as Special Forces blended in with rebel fighters” to direct air-strikes and “enable rebel forces to operate more effectively” (UK Parliament 2012: Ev-w1). In complementing operations ashore, “Ocean launched Britain’s first amphibious-based Apache helicopter raid on 3 June, destroying regime armoured vehicles, installations and communications” (Taylor 2011); and continued to do so throughout the campaign.

Broader amphibious utility was demonstrated by *Ocean’s* other embarked capabilities. Sea King helicopters conducted area surveillance operations; on-board rigid-hull boats conducted high-speed interception and boarding-parties; whilst the LPH itself acted as a base to protect humanitarian shipping and prevent arms deliveries (Taylor 2011: Ev-w10).

After 4 months of operations off Libya, *Ocean* was ordered east of Suez. While the press reported accurately that *Ocean* had reconfigured her personnel and air group and prepared for further contingency tasking, it purposely omitted details of what that task entailed. *Ocean’s* re-deployment had coincided with the kidnap of Judith Tebbutt on 11 September 2011. The Tebbutt’s were holidaying in a remote Kenyan resort when husband David was killed and Judith taken to Somalia. By 20 September, the British media were reporting that Special Forces were waiting for the green-light to deploy. During that period, *Ocean* had been rapidly re-rolled and steamed to the Arabian Sea as an amphibious contingency platform to support a potential Special Forces hostage-rescue operation.

**Conclusions**

Despite omnipresent global instability, analysts failed to predict the Arab Spring or its after-shocks. Fragmented, social-media inspired revolutions, however, validate Smith’s concept and re-calibrated utility of force. Whilst this case-study remains constrained by disclosure aspects regarding operations in Libya and Somalia, the overarching narrative is the utility of an integrated 21st century amphibious force. The critical enabler was HMS *Ocean*. What started as a 7-week exercise evolved into a 7-month operation, with three payload re-configurations, spanning all amphibious roles, over a distance of 40,000 nautical miles.

The relevance of this case-study is three-fold. Firstly, it highlights LPH/LHD similarities and offers a glimpse of how the ADF could develop a region-specific amphibious capability rather than slavishly adopting United Kingdom/United States doctrinal and deployment models. Secondly, it fuses Molyneux’s legacy with Liddell Hart’s dictum that amphibious operations are an inherently joint, complex and necessary component of defence strategy, demanding constant practice. Thirdly, and most significantly, it cautions that ‘war amongst the people’ has fundamentally changed the rules of the game. While providing a useful handrail, operationalization of the four traditional amphibious roles has been radically altered in terms of time, dimension and simultaneity.

According to Britain’s First Sea Lord, operations in Libya demonstrated the strategic utility of the Royal Navy and value of persistent presence in regions of interest. Scalable utility and persistence are integral features of amphibious forces and will imminently provide the Australian Government with Liddell Hart’s metaphorical fire-extinguisher to deter, defeat and contribute to the security of its strategic interests. In an archipelagic region, prone to brush-fires, a quality fire-extinguisher is essential.

**The Author:** John Collins has served for 32 years in the Royal Marines, including 27 years in the Special Boat Service. He is currently serving on exchange with Headquarters Special Operations Command, Australia, as lead counter-terrorist planner for the November 2014 G20 Summit. Concurrently, prior to a post-military career, he is completing a PhD thesis examining the British Army’s credentials as a counterinsurgency learning organisation. [Photo of Major Collins: Colonel J. M. Hutcheson, MC]

**References**


---


The introduction of Australia’s two new Canberra-class Landing Helicopter Dock (LHD) multi-purpose amphibious ships will be a significant milestone in the development of the Australian Defence Force’s (ADF) amphibious capacity to deploy and sustain military power across a range of contingencies. The ADF’s joint amphibious capability centred on the LHD ships will be a central plank in our ability to conduct security and stabilisation missions in the region. The LHDs will be able to carry substantial quantities of personnel and equipment, and both disembark them at sea via landing craft and helicopters and provide onshore support.

As stated in the Defence White Paper 2013¹, Australia’s amphibious capability will focus on security, stabilisation, humanitarian assistance and disaster relief tasks. This enhanced amphibious capability will also provide additional options for co-operation and engagement activities in the Indo-Pacific region, Southern Pacific and Timor-Leste, including bilateral and/or multi-national exercises with regional security forces such as the United States Navy and Marine Corps. Although likely that Defence will take the lead in operations or capacity building activities, it will need to be very closely integrated with Australia’s civilian agencies such as the Department of Foreign Affairs and Trade, Emergency Management Australia, and commonwealth, state and territory health and police forces, which provide substantial parts of Australia’s disaster response capability.

What is significant about the LHDs?

While the size and appearance of the LHDs makes them seem like a major change in direction, Australia has had an amphibious capability for many years – the World War II landing ships Kanimbla and Manoora, and their 1990s and 2000s namesakes, the converted aircraft carrier Sydney, and the landing ship, heavy, HMAS Tobruk, and its flotilla of landing craft, heavy. This is not a new concept for the ADF.

So Canberra and Adelaide are the most recent manifestations of our amphibious capability. What I think has happened is their breathtaking appearance and scale has focused people inside and outside of Navy on what an amphibious capability brings. And made people ask why we need that amphibious capability. In my view the answer is twofold.

The first is simple – Australia’s strategic geography is fundamentally maritime. We are, as our national anthem says, girt by sea. But our vision, as the Chief of Navy is wont to quip, is girt by beach.

What does fundamentally maritime mean? And what does that mean for land and air forces? Well, for a start, maritime campaigns are inherently joint – sea, land, air, cyber, space, military, government and private sector capabilities are essential to a maritime campaign.

Australia’s maritime environment means that our security and prosperity is dependent on our ability to operate in the maritime environment. We need to maintain good order at sea, to maintain our ability to trade, to bring liquid fuels and manufactured goods in, and to get bulk goods and other goods out. Without the ability to trade Australia’s economy would quite simply cease to function as we know it.

The maritime environment is not demarcated in the same way a terrestrial environment is – its borders are porous and there are complex overlapping jurisdictional and sovereignty issues. Moreover, many parts of it are not owned by any nation – the high seas, the great global commons, are not owned by any nation, but all nations depend on them – including Australia.

So we need maritime capabilities to represent our interests in that maritime environment. And our amphibious capability enables land and air forces to be more effective in the maritime environment than they otherwise would be. A small company-sized force embarked in *Canberra* or *Adelaide* will be a strategic weapon in a way no other group of 200 soldiers is ever likely to be – the decision to employ them will obviously be one for Government.

The LHDs bring the ability to have a joint force operate around Australia and around our region in a more flexible, sustained manner than we have previously been able to do. Their effect will be similar to what we have been able to do previously, but on a bigger scale.

The second reason *Canberra* and *Adelaide* are attracting attention, is they are capable of much more than just amphibious operations. Like all warships, they are defined by their principal war fighting task, but like all warships, they will be capable of operations across many different warfare disciplines. An LHD with Seahawk Romeo helicopters embarked will be a powerful asset in the anti-submarine warfare or anti-surface warfare disciplines. An LHD with unmanned aerial vehicles, unmanned surface vehicles or unmanned underwater vehicles embarked will contribute to surveillance and strike functions. Acting as a lily pad (platform for landing and take-off) for allied forces, they can contribute to the air war.

Importantly from a joint context, the flexibility of the LHD is partly inherent in the capability of the platform and partly inherent in the embarked assets – so a company group intended principally for a combat task can be employed and supported for more constabulary or diplomatic tasks – learning this is partly a cultural issue and partly a question of logistics and training. It is one of the less obvious parts of the journey we, as the ADF, need to take to get the most from the LHD.

And we must never forget that an amphibious operation is not simply a transport task – it is but one phase of a much bigger maritime campaign.

So as we contemplate these excellent vessels, I think we are seeing many people opening their eyes to the importance of the maritime environment not just to Australia, but to our neighbours, partners and allies, to our region – and opening their eyes to the possibilities such capable warships open up for Australia as it pursues a maritime defence strategy.

**The LHD in Detail**

Each LHD will be able to embark, transport and deploy a force of over 1000 personnel by air (with the LHD’s flight deck allowing the operation of a range of ADF rotary-wing aircraft) and sea, along with all their weapons, ammunition, vehicles and stores. The LHDs have also been designed with the shallowest possible draft to allow them to operate in secondary ports and harbours as well as manoeuvre tactically in the shallow waters common to littoral regions. The LHDs are jointly crewed with personnel from Navy, Army and Air Force to form a ship’s company of approximately 400.

![Diagram: Department of Defence](image-url)

Diagrammatic representation in cross-section of a Canberra-class landing helicopter dock (LHD)

---

2In a military context, the littoral zone refers to the coastline and adjacent waters, including estuarine and reef-enclosed waters.
These highly capable ships, the largest ever operated by the ADF, will enable a step change in the way Australia deploys its land forces and their supporting systems in amphibious operations, which are by their very nature 'joint', thereby requiring contributions from across the ADF. The ADF will develop an amphibious capability based around an Amphibious Ready Element (ARE), enabling growth to an Amphibious Ready Group (ARG) if required in the future. The Land Force element will initially be based on the Australian Army's 2nd Battalion, the Royal Australian Regiment, with supporting elements. The Amphibious Ready Element is a task-organised force element consisting of light infantry, protected mobility, offensive support, aviation, logistics, engineers and communications specialists, plus a command and control element. The ARE consists of approximately 600 people and will be capable of responding across the full spectrum of contingencies. Co-ordination and training will be critical to delivering this robust amphibious capability.

**Australia's Amphibious Concept**

The use of coastal, riverine and reef-enclosed waters for resupply and tactical manoeuvre by an adversary must be countered by an equally agile maritime force. ADF expeditionary forces operating in the littoral environment face threats of varying intensity and sophistication, in circumstances ranging from permissive to hostile environments. The nature of our region adds a layer of complexity to the ADF’s operational manoeuvre requirements. The ADF’s operating environment is geographically diverse and complex. It is dominated by ocean with numerous land masses separated by narrow maritime passages. Its littoral terrain is characterised by the archipelagic, riverine and estuarine, subject to large tidal variations and severe weather. Despite this archipelagic focus, the amphibious deployment and sustainment (ADAS) system must also be capable of operating in cold weather environments such as the Southern Ocean. An amphibious capability that is configured to operate from afloat offers increased flexibility in its ability to concurrently influence affairs ashore across multiple islands without necessarily a commitment to land.

The ADF amphibious capability aspires to develop an Australian approach, leveraging United States and United Kingdom conceptual and modernisation development initiatives in littoral manoeuvre\(^1\), ship-to-objective manoeuvre (STOM)\(^4\), distributed manoeuvre (DM)\(^5\) and sea basing\(^6\). Amphibious and military support operations (MSO) will be the primary capability determinant for the ADAS capability. Sea lift will normally be a secondary mission. Amphibious operations can provide government with a cost-effective option for shaping and influencing the geo-political environment as well as a significant deterrent effect. In addition to traditional amphibious operations (demonstration, raid, assault and withdrawal), amphibious forces also offer considerable advantages where short notice responses and political sensitivities commonly restrict the employment of other land-based capabilities.

Amphibious operations should be viewed as a single integrated operation rather than two or three parallel operations. The force projection capabilities (utilising air and surface manoeuvre) of available amphibious platforms will shape the landing force scheme of manoeuvre. The tactical situation will drive the tempo required (of helicopters and landing craft) to launch, insert, recover and sustain those force elements assigned to an amphibious operation. Importantly, amphibious operations in the Australian context must comprise two essential elements: expeditionary orientation and littoral manoeuvre. These two essential elements of Australian amphibious operations can be considered the key drivers for ADF amphibious modernisation, and require a fundamental change of approach that was not previously envisaged.

**Capability Realisation**

Navy has developed a comprehensive LHD capability realisation plan to address and synchronise the fundamental inputs to capability required to ensure the LHDs are transitioned into service smoothly. Work force continues to be our major challenge, particularly in the technical trades. In parallel, a naval operational test and evaluation programme has been designed to gradually build the LHD capability over the next four years culminating in final operating capability in mid-2017. The first milestone (initial operating capability) scheduled for mid to late 2015 will deliver the ADF a humanitarian assistance, disaster relief and non-combatant evacuation operations capability akin to the now decommissioned landing platform amphibious capability previously provided by *Kanimbla* and *Manoora*. As the LHDs are brought into service and the ADF’s amphibious capability matures, the LHDs will be incrementally tested to deliver a greater level of capability than has previously been resident in the ADF.

Against the backdrop of this strategic planning to introduce the LHDs into service, 2013 was a very successful year for Navy which saw the crew of NUSHIP *Canberra* established in Sydney, including the

---

\(^1\)Littoral manoeuvre (also known as operational manoeuvre from the sea) is the delivery by amphibious forces of high-tempo precision effect against objectives ashore through simultaneous air and surface assault. It employs ship-to-objective manoeuvre, with forces launched from over-the-horizon to achieve tactical surprise, and sea-basing.

\(^2\)In ship-to-objective manoeuvre, the landing force treats the sea and land as one continuum. It does not seek to secure a beach. Rather, it thrusts inland straight to its ultimate objective without pausing at the shoreline.

\(^3\)Distributed manoeuvre utilises multiple entry points and high mobility focused directly on the objective, or multiple objectives.

\(^4\)A requirement of ship-to-objective manoeuvre is that command and control, logistics and fire support remain sea-based (*i.e.* aboard the LHD.

---
posting of Navy, Army and Air Force personnel to the ship. A specialist team of the ship’s engineering department was co-located at the Williamstown shipyard to develop a deeper understanding of the platform system, safety issues and development of engineering operating procedures. Another significant milestone was the opening of the BAE Systems Interim Training Facility at Mascot in May 2013 and the commencement of LHD platform and combat system training for the first crew. This initial training has now been completed and has delivered a very good level of training.

The Chief of Army has tasked the 2nd Battalion, the Royal Australian Regiment (2RAR), to form Army’s Amphibious Battle Group. This battle group is responsible for raising the core of Army’s amphibious capability. In the last 12 months, elements of 2RAR have undergone training in Australia supported by United States Marine Corps mobile training teams and United Kingdom Royal Marine subject matter experts. The training has focused upon planning amphibious operations, expeditionary logistics and expeditionary communications. Members of 2RAR have also benefited from the opportunity to observe United States Marine Corps certification exercises overseas.

Navy has also developed a very positive relationship with the Spanish Armada and conducts routine counterpart meetings and undertakes experiential training opportunities under a joint memorandum of understanding. In mid-2013, members of the Canberra crew had the opportunity to sea-ride the Spanish LHD, SPS Juan Carlos I, to better understand LHD operations and assist to develop the numerous operating procedures required of the LHD.

Similarly, late last year, Navy sent a small team of sailors to undertake LCM-1E landing craft training to assist in better understanding that component of the capability and its introduction into service next year.

Another area of work that Navy and Army are working together on is the complexity of operating helicopters from the LHD as part of the embarked Rotary Wing Group. Again procedures and concepts are being developed and the opportunity to sea-ride Spanish, United States Navy and Royal Navy amphibious platforms are being utilised. The challenge of operating large, complex aviation platforms should not be underestimated. The aviation capability will be operating procedures required of the LHD.

In 2013, DJFHQ validated the Amphibious Pre-deployment Training Programme through the conduct of a trial certification exercise synchronised with Exercise Talisman Sabre 2013. Using HMAS Choules and the 2RAR landing force, Defence has developed a collective training regime that is now tailored to the LHD capability and has begun to address the numerous joint challenges the ADF will face as the LHD comes into service and the joint amphibious concepts are tested.

Conclusion

In summary, we have made significant progress towards introducing the first LHD in the years ahead and continue to refine our concepts and plans as we get closer to realising the LHD capability and broader ADF amphibious capability.

The Author: Rear Admiral Mark Campbell has been Head of Navy Capability since October 2012. A helicopter warfare instructor with substantial aviation, command, acquisition and sustainment experience, he has about 3500 flying hours mainly as an anti-submarine tactical co-ordinator in Sea King and Seahawk helicopters. He has also flown S2-G Tracker, UH-1B Iroquois, Wessex 31B, Bell 206B-1 and AS350B Squirrel aircraft and served in HMA Ships Tobruk, Sydney, Darwin and Adelaide and HM Ships Illustrious and Invincible. He commanded 816 Squadron in 1999–2000 and was head of the Defence Material Organisation’s Helicopter Systems Division in 2010–2012. His operational deployments have included Operation Bursa, Operation Damask including Operation Desert Shield and Desert Storm in 1990–91, and in the North Red Sea enforcing United Nations sanctions against Iraq in 1992. [Photo of author: Department of Defence]
In this paper, I shall discuss logistic concepts in the amphibious environment and the many logistic challenges associated with supporting an amphibious force. First, though, I shall provide some context on how the Australian Defence Force (ADF) intends to employ its amphibious force.

Australia's Amphibious Force

The amphibious warfare spectrum is wide ranging from hard kinetic type operations such as assaults and raids, to military support operations including humanitarian assistance and disaster relief (HADR), non-combatant evacuation operations (NEO), and defence aid to the civil community (DACC).

We are about to undertake a step change transition in the amphibious force, particularly as it relates to shipping, and the huge amount of equipment and troops embarked therein. Over the last 18 months, the ADF has made great inroads in the transition from a force based on a landing platform amphibious (LPA) with an ad hoc landing force, towards a standing joint force that can be increased/decreased in size (i.e. is scalable) and in the very near future will be based around the amphibious assault ship (LHD). That work has principally been achieved through a number of lines including:

- improved command and control structures and training within those structures of the Amphibious Task Group (ATG) and the 2nd Battalion, Royal Australian Regiment (2RAR);
- development of joint mission essential task lists – those fundamental tasks relevant to amphibious operations;
- development and testing of collective training regimes;
- the integration of 2RAR Landing Force elements with HMAS *Choules*, the landing ship dock (LSD);
- the integration of Army's 5th Aviation Regiment air assets with *Choules*; and
- continual development of tactics, techniques and procedures around operating the amphibious task force.

The development of the logistic plan is but one of those plans that continues to be developed. It includes a standard amphibious support order that includes aspects such as finance, mortuary affairs and health support. I believe we continue to make good progress towards a fully operational amphibious force by 2017.

The core of the amphibious force consists of a number of amphibious ships and the embarked force. The embarked force comprises a joint command and control element; an intelligence, surveillance and reconnaissance team; the ground combat element; a logistic combat element; a rotary wing detachment; and navy elements. Depending on the mission and the environment, the amphibious force may be supported by special forces, naval escorts and support ships, additional organic and land-based aircraft, and other joint enablers.

While the force is scalable and flexible, there are two baseline amphibious capabilities for planning purposes:

- the Amphibious Ready Element (ARE), based around 1 x LHD; and
- the Amphibious Ready Group (ARG), based around both LHDs and supported by the LSD *Choules*.

Amphibious Ready Group

The larger ARG is capable of the full suite of amphibious tasks in a hostile environment. The size and complexity of this force dictates that it will be held at a longer readiness notice and is a much more complex logistic problem for the Amphibious Task Force, the supporting maritime force and the joint logistics chain.

The landing force is likely to include: infantry; armour; artillery; engineers; armed reconnaissance, lift and mobility helicopters; intelligence, surveillance and reconnaissance elements; logistic and health support. This large ATF will also require escort and support ships, as well as land-based aircraft in support. This force will be capable of responding to strategic shaping, crisis and contingency responses. It will have the capacity to open...
Amphibious Ready Element

The smaller ARE amphibious force, while possessing less combat power, is still capable of the full range of amphibious tasks. The ARE, however, will be at a much reduced notice (i.e. must be ready sooner) to provide a ready force to conduct strategic shaping, crisis and contingency response in an uncertain threat environment.

The ARE is based around a single LHD. Still with an integrated joint command and control structure, it will comprise a scalable landing force with the commander of those forces commanding one or more combined arms combat teams with associated air, ground, intelligence, reconnaissance, surveillance, and logistic enablers. Depending on the mission, escorts and support ships, land-based aircraft and other joint enablers may be in support. It might also include an enhanced health capability.

In 2013, components of the ARE were taken through a newly developed joint mounting, collective training and certification period in Choules. Whereas previously forces had prepared predominantly in isolation with no certification before coming together for joint training, this cycle will raise the joint amphibious force to a level where they are certified to meet government-directed requirements, or to progress through to mission specific training. The ARE, embarked in HMAS Canberra, will go through this training and certification in 2015.

As part of the joint certification conducted in 2013 for the newly formed ARE, a block training structure was trialled for the continued development and certification of the amphibious force. This training was designed to test different aspects of the ARE and was modelled on the ‘crawl, walk, run’ philosophy. It was significant as this training had not been conducted to this scale by the ADF previously. The trial presented both challenges and opportunities for development of the joint force.

Block One, which was further separated into three phases, was the entry level activity and focused on the basic development of the capability of the ARE. Block One Phase One was a specifically designed command post exercise to test the planning function of the headquarters in a simulated environment away from the ship. Block One Phase Two was a non-tactical, amphibious training activity targeting over ramp and beach driving training for drivers from units assigned to the ARE landing force. While both activities were deemed successful, it highlighted a number of aspects for improvement and provided a much needed starting point for the remaining block training. Block One Phase Three was a pre-landing force concentration period, bringing together the landing force reconnaissance and snipers and the maritime elements, including clearance divers and deployable geospatial teams. This was a skills sharing and task delineation activity, followed by a tactical phase where intelligence, surveillance and reconnaissance battlespace management concepts were designed and proven.

Block Two was the first time that the entire ARE joint force came together for a tactical exercise. Commencing with combat enhancement training and force integration training, the exercise was also utilised to generate and confirm standing operating procedures for the ARE. Block Two also saw concepts put to the test that had only been planned previously, including the deployment of the pre-landing force, the execution of a non-combatant evacuation operation from the sea, security and stability operations, and raids.

Block Three, the culminating activity for the year, was a joint exercise led by the Deployable Joint Force Headquarters and focused on the planning and conduct of amphibious contingency missions, such as raids, tactical recovery of aircraft and personnel, and joint force entry operations. The exercise was conducted within the Exercise Talisman Sabre 13 scenario.

Amphibious Force’s Logistic Capacity

I now want to touch on the enormity of the logistic challenge for the amphibious force. The future force will contain significantly more amphibious shipping than did the former force based on the Kanimbla-class landing platforms amphibious and the landing ship heavy, HMAS Tobruk. It is notable that the future shipping will have 3.5 times the linear metres (a unit of measurement for vehicle space) of the old shipping. The difference between the new embarked force and the former one is similar in magnitude.

Let me try to put this amphibious capability into context so that you might gain an insight into the enormity of managing the logistics, but also to appreciate what this amphibious force can provide towards military support options such as humanitarian assistance and disaster relief. In a single move, Choules alone can transport a total load of up to 26 M1A1 main battle tanks, about 70 light vehicles and over 200 tonnes of ammunition, an amount equivalent to 75 C-17 Globemaster or more than 180 C-130 Hercules transport aircraft loads. Similarly, an LHD equates to 156 x C17s and 375 x C130s; and the total ARG to 387 x C17s or 930 x C130s. Perhaps you think I am being a bit disingenuous as clearly air will get there quicker. So let us say the destination was 12 days steam for our amphibious task force, a distance that the C17 might cover in a single leg. The LSD (Choules) would arrive in 12 days with equipment that is combat ready to be employed as soon as it is unloaded. If we could use four C17s to move this cargo and assuming they could generate the necessary rate of effort, it would still take them 52 days to deliver the stores. One would also have to assume that the planes had permission to overfly countries en route and host nation support in the receiving nation, which would also need an airfield suitable for strategic airlift.
As just mentioned, unique to amphibious operations is that equipment is delivered in the combat configured state, ready to go out the gate, or off the line-of-march. This is not the case with our normal logistic chain. If those elements were to be air or sea lifted, they would arrive in a warehoused state and you would then have to add a good period of time for reception, staging and integration into a force that you would have had to establish on the ground in advance.

Sea-basing
In terms of the entry operation, modern thinking has moved away from a static lodgement and subsequent build-up of combat power and equipment at a beachhead prior to breaking out. Modern thinking in amphibious warfare is more centred around distributed manoeuvre, aiming for high mobility and rapid tempo manoeuvre focused directly on the objective, or multiple objectives. Beaches become littoral penetration points, secured and operated only as long as necessary to enable manoeuvre.

This approach will typically aim to maintain a sea-based logistic approach, drawing on the resources within all shipping and aiming to minimise the footprint ashore. This approach requires a networked fires and robust command and control capability for strong coordination. Clearly, in a permissive environment and when undertaking military support operations, many of these challenges should be easier to manage, but they still require a high level of coordination.

We have very little experience in such concepts and indeed the landing force will struggle with the limitations imposed by the reduced sustainment in the ATF and an irregular logistics chain. It will take some time, and perhaps operational experience to truly explore the capabilities and limitations of this concept, and understand the true benefits of sea-basing.

Embarkation
So how do we get all the equipment to the area of operations (AO)? There are essentially two variations to loading ships: tactical stowage, or administrative stowage.

Administrative stowage aims to load and maximise space with no, or minimal consideration to the order of how it would be unloaded. This is essentially a sealift task, something that commercially-contracted shipping could probably do cheaper than utilising amphibious ships.

Tactical stowage is driven by the off-load requirements, that is, the land force commander’s scheme of manoeuvre ashore in the AO. Be it in a hostile environment or a military support operation such as providing humanitarian assistance or disaster relief. During the tactical unload, or ship-to-shore movement of troops, equipment and supplies by organic air or surface craft, it is vital that cargo is delivered ashore at the prescribed time, at the correct location and in the sequence required to support the land force commander’s scheme of manoeuvre. So in order to ensure that the load configuration supports this we need to ensure the ships are loaded in the correct sequence at our point of departure.

This works well in a deliberate and planned deployment though how often would we do this? Not very often I would put it to you, particularly during a crisis. Typically, amphibious operations planning continues after the amphibious task force has sailed and therefore the landing plan continues to evolve. It might subsequently be further adjusted should a rehearsal be conducted. For this reason, we aim to only load amphibious shipping to 80 per cent capacity to enable a tactical re-stow en route. Our adherence to this doctrine, though, has not been good traditionally – as history shows, we sail to the gunwales with equipment and subsequently have limited ability to move equipment around at sea.

It often seems that the landing force can never bring enough equipment, which is understandable given the typical combat power they would seek to generate in a conventional land environment. Hopefully, with the much larger capacity in the future the ARG, we can be more disciplined in this regard, but I fear that stakeholders will seek to challenge this most times.

As an example, a tactical re-stow occurred as recently as category 5 tropical cyclone Ita when the landing force was already embarked in Choules during an exercise off North Queensland in April. The ARE was put on notice and was poised to support civilian emergency services if the need arose. Our load configuration was not ideal but the team was able to undertake a tactical re-stow at sea to ensure we had access to the right equipment to go ashore and provide immediate aid to the community. As it turned out, the cyclone damage was not as severe as anticipated and the Queensland emergency services had the capacity to deal with it.

Disembarkation
Moving troops and equipment ashore in a tactical environment is a hugely complex and resource intensive task. Whilst there are numerous methods to conduct the ship-to-objective manoeuvre, the quickest method will always be over the wharf. However, in environments where that is not possible, such as when port infrastructure is damaged or the hydrographic environment is uncertain or not conducive for berthing alongside, or the security situation simply does not allow, organic air and surface lift can be utilised. The LHDs with their four embarked landing craft can move significant amounts of equipment. Supplemented by embarked air lift, the logistic offload is very flexible. Choules, with her embarked landing craft and helicopter deck, has additional capability with its ‘mexeflote’, a series of self-propelled pontoons capable of shifting very large amounts of stores, albeit in fairly benign conditions.

Sustainment at Sea
Within a wider campaign, the amphibious operation may be supported by a joint logistic plan utilising an integrated air, sea and land lift plan that reaches back into the national support base. In such cases, the
operational logistic plan must be heavily influenced by the requirements to support the ARE.

Sealift of stores equipment will typically be undertaken by non-amphibious shipping but it naval auxiliaries or commercially-contracted vessels. Potentially the LSD may be employed in a follow on sealift task depending on the logistic flow requirements.

Across the amphibious spectrum of operations in the maritime domain, there is the scope to poise, or indeed simply to be deployed for extended periods. During a protracted operation or at a distance from the national support base, direct support from naval sustainment shipping will be integral to the operation.

The ability of ships to remain at sea for extensive periods is well practised. Indeed, as recently as last April, the Royal Australian Navy task group involved in the search for Malaysian Airlines Flight MH370 remained at sea for 5-6 weeks with the support of auxiliary sustainment shipping.

In 2006, as commanding officer of the landing platform amphibious, HMAS Kanimbla, and in company with the frigate Newcastle and the replenishment oiler Success, I remained at sea for 6 weeks in international waters prepared to conduct operations in Fiji should it have been required. This capacity to maintain presence, however, does require supply ships to conduct port logistics visits to collect food, fuel and consigned cargo for the task group, and not unusually take the task group’s rubbish back to a port, one of the more unpleasant tasks for them.

Biosecurity
These days, biosecurity is a major challenge for any operation overseas. It is a major overhead that consumes significant resources to meet Australian Quarantine and Inspection standards. As you can appreciate, anytime we put equipment ashore, be it helicopters into a landing zone or vehicles over the beach and into the hinterland in an overseas location, they are exposed to foreign hazards. The re-embarkation of that equipment and the personal stores of the landing force, and the potential for contamination of the amphibious shipping, will require careful consideration during the logistics planning phase to ensure there is a robust plan to deal with those issues.

Specialist Capabilities and Equipment
Most of these logistic principles I have touched on will apply across the spectrum of amphibious operations. If prior planning allows, the load plan will include specialist equipment to support the operation. Examples of this might include water purification plants or field hospitals for a humanitarian aid or disaster relief mission, or special forces capabilities for an uncertain or hostile non-combatant evacuation. Irrespective, the logistic principles are broadly similar in terms of supporting the execution of the amphibious operation once in theatre. We must keep in mind, though, that once the amphibious group has sailed, it is too late to remember we left a vital bit of equipment behind that is essential for the initial amphibious lodgement.

Health Support
One of the unique capabilities of the LHD will be its health capability, inherent with its own unique logistic challenges. With two operating theatres, a 6-bed resuscitation unit, both high and low dependency wards, radiography, pathology and pharmacy, this is the most capable medical care asset since World War II. However, it is only as good as the people that we man it with, this alone being a challenge for the ADF.

It is important to note though that the principal role of this capability is preservation of our own forces. Further, it is not intended for long-term patients. The moving of casualties from the point of wounding to the LHD for stabilisation and potential emergency surgery, before their subsequent tactical aeromedical evacuation to a tertiary level care facility or strategic aeromedical evacuation to Australia, is another tough logistic challenge for the force. While doctrine development in this space progresses well, there is some way to go to develop the capability.

The use of this capability during a humanitarian aid or disaster relief operation could be quite broad. Force preservation would take primacy, however the health practitioners might support those agencies on the ground, be they military or civilian. As to whether the LHD facility would be used for the local population, this would need to be a unique determination for each operation.

Conclusion
So in summary, it is vital that the amphibious logistics plan is flexible, mobile and responsive, to meet the landing force scheme of manoeuvre during any amphibious operation. If part of a wider campaign or enduring operation, the joint logistic support plan must enable the amphibious task force to function effectively.

Amphibious operations are renowned for being one of the most complex military processes, if only perhaps because of the logistics challenges. The logistics support plan, though, is fundamental to the very independent nature of amphibious task group operations.

If we are to enjoy success in an amphibious operation, bringing the logistics plan together, both at the tactical and operational level, is a significant challenge. A robust logistic plan will be essential to an effective operation.

The Author: Captain Jay Bannister is Commander of the Australian Amphibious Task Group and Fleet Battle Staff. In an amphibious operation or exercise, he commands the Amphibious Task Force. He attained dual specialisations as a Mine Warfare and Clearance Diver, and as a Principal Warfare Officer – Surface Warfare. His sea service included commands of the coastal minehunter, HMAS Gascoyne, and the landing platform amphibious, HMAS Kanimbla. He recently commanded the training establishment, HMAS Watson, and was the training authority for maritime warfare. In 2013, he deployed to the Middle East as the chief-of-staff in the Australian National Headquarters. [Photo of Captain Bannister: Colonel J. M. Hutcheson, MC]
Seventy years ago: the Desert Air Force in Italy, 1944

In May-June 1944, during the Italian campaign of World War II, the Luftwaffe mounted a desperate effort to counter Allied air superiority, but it would prove to be in vain.

Seventy years ago in May-June 1944, during the Italian campaign of World War II, the Luftwaffe mounted a desperate effort to counter Allied air superiority. This followed the Allies’ break-out from the attritional battles at Anzio and Cassino, but it would prove to be in vain.

The night of 11 May 1944 was set for the fourth battle to begin, the hoped for final battle for Cassino and the Monte Cassino Monastery. With the bulk of Eighth Army now added to Fifth Army, the Allies planned to throw overwhelming force at the mountain bastion. In a concentration of numbers, firepower and a massive artillery bombardment, they intended to smash their way through the Gustav Line and north onto Highway 6. It was not just a pincer movement of break-throughs out of Anzio and Cassino. The German Army found in retreat that they were under constant attack from Allied air forces.

In one instance on 14 May, No. 239 Wing Royal Air Force (RAF) of the Desert Air Force (DAF), which included the Kittyhawks of Nos. 3 and 450 Squadrons Royal Australian Air Force (RAAF), targeted some 200 or so vehicles trying to withdraw at Subiaco. By the day’s end, there were an estimated 120 destroyed or damaged. In the last six days of May, Allied fighters and fighter-bombers claimed 1148 vehicles of all types destroyed and 766 damaged. This may have even been under-stated. Between Cori and Artena on the Adolf Hitler Line, Fifth Army counted 211 vehicles wrecked clearly by air strikes, whereas air force claims had only estimated 173.

The fighter-bombers were only able to go about their destructive work because of the air superiority asserted and sustained day after day and around the clock by Allied fighters, particularly those of DAF, against the Luftwaffe. Australian airmen were prominent throughout RAF squadrons, an example being the night-fighters of No. 600 Squadron RAF. In the early hours of 15 May at 0230, Australian Flying Officer S. F. Rees and Flying Officer D. C. Bartlett of 600 Squadron lifted off their Beaufighter Mk VIF AI (No. V6574) from their base at Marcianise. North of the River Tiber sometime after 0400, they made radar contact with a bogey and gave chase. When close enough they identified a Ju88. At 0441 Rees shot down the German bomber and returned to Marcianise at 0520 h.

On 21 May near Anzio, more than twenty of the Luftwaffe’s formidable Focke-Wulf Fw190 fighter-bombers were about to begin their bombing runs on Allied lines. Eight Spitfires of No. 145 Squadron RAF cut them off. Squadron Leader Neville Duke shot down two, and Flying Officer Joe Ekbury three, in a total of eight Fw190s destroyed, plus one probable and one damaged. Against the strongest air-to-ground operation the Luftwaffe could muster at that time, it was a crushing blow. And so it went on as Allied air power thwarted the Luftwaffe’s attempts to get back into the air war. By the beginning of September, those Luftwaffe day fighter units still surviving in northern Italy were forced to transfer to Germany.

DAF was made up of both air force formations and individual airmen from nearly every Allied nation. From the early years, Australians, British, Canadians, New Zealanders and South Africans were prominent, either in their own national wings or squadrons, or in RAF formations within DAF. Later, DAF embraced airmen from many other Allied nations and gained its strength and esprit de corps from its very diversity. A common cause welded them together. Many Australian airmen in both RAF and RAAF squadrons, such as No. 3 and No. 450 Squadrons, DAF, were prominent.

The DAF had first established air superiority over the Luftwaffe during the battles at El Alamein in July–November 1942, and then held it as the Desert campaign continued on through Libya, Tunisia, and Sicily. Later, in Italy from August 1943 to the end of the war, decisive air power was maintained through countless battles, such as at Salerno, Termoli, Anzio, Cassino, the Gothic Line, and the final battle for the Argenta Gap and the River Po, as DAF and Eighth Army fought as one entity.

The pioneering tactics developed by DAF for the close support of ground forces on the battlefield provided a template which was copied by air forces in other theatres during the Second World War. Marshal of the Royal Air Force Lord Tedder GCB, who was the founder of the DAF and its commander in its early years before he became Deputy to Eisenhower, stated that the DAF played a lead role, and in his view was ‘... the key to the ultimate victory in Europe’. Certainly, Allied air power, particularly the DAF, was a decisive factor in bringing Allied victory in North Africa and Italy.

Bryn Evans

---

Bryn Evans, secretary of the Institute, is a military historian. This note is based on: Bryn Evans (2014), The decisive campaigns of the Desert Air Force 1942-1945 (Pen and Sword Books: UK). Signed first editions may be purchased from the author [Email: bryn.evans@ozemail.com.au T: 02 9438 1939]. Part of the proceeds will be remitted to the Institute.
BOOK REVIEW

The backroom boys: Alfred Conlon and Army's Directorate of Research and Civil Affairs, 1942-46

by Graeme Sligo

Big Sky Publishing: Newport, NSW; 2013; 380 pp.; ISBN 9781921941122 (hardback); RRP $34.99 ~ Ursula Davidson Library call number 355 SLIG 2103

When I was serving in the then United States Lieutenant General Ray Odierno's staff in Iraq in 2008, I recall the influential presence of a British female civilian ‘political advisor’, and somewhat bemused that the General's Iraqi culture advisor was a former New York City taxi driver. War has a habit of bringing together strange bedfellows. Graeme Sligo's The Backroom Boys is the story of similarly strange bedfellows during World War II.

The Backroom Boys is the remarkable, but little known, story of how a varied group of talented intellectuals were drafted into the Australian Army in the dark days of 1942 and provided high-level policy advice to the Commander-in-Chief of Australia’s military forces, General Thomas Blamey, and through him to the Government. This band of academics, lawyers and New Guinea patrol officers formed a unique military unit, the Directorate of Research and Civil Affairs, under the command of an eccentric and masterful string-puller, Alf Conlon; who in his civilian capacity was also Chairman of the Prime Minister's Committee on National Morale. A controversial figure, Conlon emerged as a skilled advisor to Blamey with an ability to relate to men of power.

Graeme Sligo is a colonel in the Australian Army who has served overseas in East Timor and Iraq. He is a graduate of the Royal Military College, Duntroon, the Canadian Forces Command and Staff College, Toronto, the National Defence University of Pakistan, the University of New South Wales and the University of Melbourne. Sligo’s own service has exposed him to many strange and exotic bedfellows.

The war brought a huge expansion of the Army in functional as well as numerical terms, particularly after Japan's entry. The Army had a host and growing number of unfamiliar tasks in developing itself for the purpose of fighting the war: defending Australia; liberating what became Papua New Guinea (PNG), and other Pacific islands, and subsequent administration of PNG; the reconquest of North Borneo; and plans for the invasion of Japan and post-invasion military government.

What exactly did the Directorate do? The more suspicious saw it as “an intelligence group, an undercover operation which is shrouded in mystery”. This was most certainly not the case. It was, in its essence, ‘a policy advice bureau’ on a range of politico-military, manpower and scientific issues.

According to one of the directorate’s illustrious staff, the poet James McAuley, "Alf's army directorate was, of course, an extraordinary organisation, and it had in it some of the elements of a Renaissance court, with Alf as a Medici prince."

The Directorate has been depicted as a haven for underemployed poets or meddlesome soldier-politicians. Based on his wide-ranging research, Sligo reveals a fuller and more fascinating picture. The fierce conflicts in the wartime bureaucracy between public servants and soldiers, in which the Directorate provided critical support to Blamey, went to the heart of military command, accountability and the profession of arms.

The Directorate was a pioneer in developing approaches to military government in areas liberated by the combat troops. The Directorate's central effort was for PNG. Work in the first instance centred on the period of military government, following the progressive expulsion of the Japanese forces. Conlon certainly had a gift for looking beyond the situation immediately at hand. Conlon’s endeavours addressed many aspects of the post-war development of PNG. Improving educational standards meant a government school system in a field that had hitherto been dominated by the missions. Economic development of the territory required documentation of the geography and geology of the land, and research on the requirements of agriculture.

Staff training and development was a major innovation brought about during World War II. Conlon thought it had a major part to play in preparing for the post-war world, in territories occupied by Australian troops but above all in PNG. The new administration was to have a well-trained workforce, centrally and in the field. This was the origin of what eventually became the Australian School of Pacific Administration, eventually located in Sydney.

As the war in the Pacific drew to a close, the Directorate was deeply involved in the prospective military government of the North Borneo territories until the British could fully resume their stewardship of the area.

The Backroom Boys includes a large number of illustrations and several clear maps. It also has a list of abbreviations, ranks and notes on a significant number of the characters included in the book. There are three annexes listing the Directorate's members as well as the staff and students of each course it ran. Sligo has included a meticulous set of end notes and a comprehensive bibliography. In all, Sligo has produced a first-class book on a little known and elusive topic.

The Backroom Boys provides a detailed historical example of how post-war occupations can be planned and successfully implemented – an issue of enduring importance as the recent ‘stability operations’ in Iraq and Afghanistan have demonstrated. While the topic cannot be easily digested by contemporary military and government practitioners, translating its enduring lessons into contemporary multi-agency doctrine should be a priority for Defence and its Australian Civil-Military Centre.

Marcus Fielding
BOOK REVIEWS

Climax at Gallipoli –
the failure of the August offensive

by Dr Rhys Crawley

University of Oklahoma Press: Norman, USA; 2014; 364 pp.; ISBN 9780806144269 (hardback); RRP $71.00

The story of Australia’s part in the Gallipoli Campaign has become a central part of our national story and identity. On the eve of the campaign’s centenary it is a story that runs the risk of becoming more mythical in nature. Thank goodness, then, for Climax at Gallipoli which might put some objective balance back into the Anzac Centenary proceedings.

Climax at Gallipoli examines the performance of the Allies’ Mediterranean Expeditionary Force (MEF) in the August Offensive of the Gallipoli Campaign. Crawley’s examination of the Campaign is rigorous, dispassionate and timely. His key message is that the August Offensive was flawed from the outset and destined to fail.

Dr Rhys Crawley is a historian with the Strategic and Defence Studies Centre at the Australian National University. He has received several research scholarships and given talks on aspects of his research on the Gallipoli campaign at the University of Birmingham, the Imperial War Museum, the Australian War Memorial and the Istanbul Medeniyet University.

Crawley reminds us that in 1915, the second year of the war, the Allies were still adapting to a new form of warfare, with static defence replacing the manoeuvre and offensive strategies of earlier British doctrine. In the attempt, both the MEF at Gallipoli and the British Expeditionary Force on the Western Front aimed for too much and the result was all too typical of the Great War – an aggregation of sacrifices as futile as they were heroic. To explain why, he examines in detail the operational level of war in the campaign, critically scrutinizing planning, command, mobility, fire support, inter-service cooperation, and logistics. Crawley links these elements into a military ‘system’ and his work draws on unprecedented research in the United Kingdom and Australia.

Crawley is critical of the nationalistic rhetoric associated with the Gallipoli Campaign in general and the August Offensive in particular. “Gallipoli has gone down in history as something that was on the brink of succeeding,” says Crawley. “Victory was assured, the story goes, ‘if only’ the Allies had pushed a little harder, or had been the recipients of some simple good luck. But when we take a step back, and view it as a case study in the how and why of 1915 warfare, we see a very different picture. It was not unlike what happened on the Western Front. This was a new kind of war, and all armies were struggling to figure out how to adapt and defeat their enemy. It was years before the technology and tactics advanced to a stage where victory was possible.”

The Gallipoli Campaign has also been portrayed as one in which the British foolishly sent Anzac soldiers to their death, resulting in the loss of about 8700 Australians and 2700 New Zealanders. This is a popular misconception that Crawley also disputes. “Contrary to what many believe to be the case, the British officers in charge of the campaign were not bumbling fools who joyfully sent men to their death in ill-conceived plans,” he says. “Rather, they were experienced men who had an intimate knowledge of their profession. The popular narrative forgets that the British lost many more troops at Gallipoli with around 34,000 killed throughout the campaign.”

Crawley also reminds us that Gallipoli is not just a story about the Anzacs. “The Anzacs were a relatively small component of the Allied army of Indian, French, and British troops that landed on the Gallipoli Peninsula. Their role deserves to be part of our national narrative, as does their sacrifice,” he said. “By talking of the Anzacs at the expense of all others, we have afforded ordinary Australian volunteers, of all ages and walks of life, superman status. We have blown their actions and achievements out of all proportion, and have developed a national history of Gallipoli that is devoid of historical context.”

Climax at Gallipoli is highly recommended for all those interested in the Gallipoli Campaign and in the operations of the First World War as a whole. The price may put off casual readers, but at the same time reflects the high academic standard of his research and prose. Crawley should be commended for producing an objective account of the August Offensive based on primary source material, but sadly I fear it will become more a reference book for further research than a popular bestseller.

Marcus Fielding

Australia and the Vietnam War

by Peter Edwards

NewSouth Publishing: Sydney; 2014; 304 pp.; ISBN 9781742232744 (hardback); RRP $49.99; Ursula Davidson Library call number XXX EDWA 2014

This book is a great high-level examination of Australia’s South-East Asian wars between 1948 and 1975. Indeed, despite the title’s focus on the Vietnam War this is really a single volume version of the nine volumes of the Official History of Australia’s Involvement in Southeast Asian Conflicts 1948–1975 published between 1992 and 2012. In this regard, Edwards, the official historian for the series, describes Australia and the Vietnam War as the equivalent to C. E. W. Bean’s single volume Anzac to Amiens and Gavin Long’s The Six Years War.

(Continued on page 35)
BOOK REVIEWS

Australia and the Vietnam War…
(Continued from page 33)

Edwards is a writer, historian and biographer, who has published extensively on Australian and international history and politics. He is currently an Adjunct Professor at Deakin University, Melbourne, and has in recent years held professorial appointments at Flinders University in Adelaide and the University of New South Wales, Canberra.

Australia and the Vietnam War actually examines the Malayan Emergency and the Indonesia-Malaysia Confrontation as well as the Vietnam War (aka the second Indo-Chinese war, or from the Vietnamese perspective the ‘American War’) – each of which occurred in the wider context of the Cold War and decolonisation.

Australia and the Vietnam War is not an ‘in the weeds’ tactical account of the wars, but an examination of why we went to these places, and what political, diplomatic, social and military factors impacted on the management of the deployments. Those seeking SAS-like war stories should go elsewhere.

Edwards probes some important questions – Was Vietnam a case of Australia fighting ‘other people’s wars’? Were we really ‘all the way’ with the United States? How valid was the ‘domino theory’? Did the Australian forces develop new tactical methods in earlier Southeast Asian conflicts, and just how successful were they against the unyielding enemy in Vietnam?

With the benefit of decades contemplating the topic, Edwards has done a masterful job of analysing the factors that led to high-level decisions. He makes some thoughtful comparisons between the ways in which the Malayan Emergency, the Indonesia-Malaysia Confrontation and the Vietnam War were handled by successive Australian governments. He also ‘busts’ a number of myths that have developed over the years regarding Australia and the Vietnam War. For example, national service was not introduced because of the commitment to the Vietnam War, and there were consistently more volunteers for national service than men who refused to be drafted. The result is a comprehensive, balanced and easily understood account of a complicated and contentious period in Australian history.

While he does leverage the New Zealand records, Edwards does not draw heavily from United States sources or indeed from North Vietnamese records that might also provide alternate perspectives on decision drivers and events. The last chapter titled “Lessons, Legacies and Legends” is where Edwards’ tremendous analytical skills come to the fore. He makes some very valuable observations and reflections on strategic and defence policy, foreign policy, operational methods, counter-insurgency operations, conscription and the post-war experiences of Vietnam War veterans.

Australia and the Vietnam War includes some good images, but the one colour map of South Vietnam is too small a scale to be of any real utility. The front and rear inside covers have been used to place two maps of South-East Asia – the first from 1945 and the second from 1965-1974 – but the changes are too subtle. The text includes two black and white maps of Phuoc Tuy Province and the Dat Do barrier minefield. Overall, however, the excellent text might have been burnished by a better series of maps throughout the text.

The book includes a list of abbreviations and a chronology of events at the start which are useful to readers unfamiliar with the subject. There are appendices showing the number of troops deployed to South Vietnam over time; the key political and military appointees between 1962 and 1973 (albeit too small a font to read); and short biographies on all those named in the book. Edwards also includes a useful section recommending further reading broken down by theme. A comprehensive index will assist researchers.

Edwards should certainly be congratulated for his commitment, professionalism and dedication to recording Australia’s military history by not only completing the nine volumes of the official history, but then going the extra mile for this additional ‘unofficial’ volume. It is a legacy of which he can be justifiably proud.

Marcus Fielding

The digger’s view: WWI in colour

by Juan Mahony

The Digger’s View Pty Ltd: New Lambton, NSW; 2014; 270 pp.; ISBN 9780957969612 (hardback); RRP $50.00

On the eve of the Anzac Centenary this book and the project to create it deserve high praise. The Digger’s View is a magnificently produced high quality book that will create a connection with any reader. The book is crammed with rare colourised photos and diary entries that provide a very personal perspective of some of the Australian soldiers who served during World War I. The Digger’s View was five years in the planning and production. The collaboration between Juan Mahony and Kent Rowe Digital Print has resulted in a unique and fresh look at Australia and World War I. The project sought to better appreciate what Australian soldiers experienced; and to explain what they observed and reflected on during the war.

All the images in the book have been painstakingly colourised to accurately portray what the diggers’ world looked like. Each high resolution image takes between one day to one month to complete, and the attention to detail in the colouring process achieves results far superior to automated recolouring techniques. The results are nothing less than spectacular.

The narrative text from the participants further enhances the personal perspective. The book includes a comprehensive glossary, list of abbreviations, and chronology of events as well as statistics about the First Australian Imperial Force. Group photos have all the individuals identified and there is also a biographical note for all those that feature in the book as well as a comprehensive names index.

The Digger’s View is available in bookshops and on-line at www.thediggersview.com.au where sections of the book can be viewed. At $50.00 RRP this book is terrific value for money and would make a handsome gift. If you only buy one book to mark the Anzac Centenary The Digger’s View should probably be it.

Marcus Fielding