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# Amphibious Warfare: Lessons from the Past for the ADF's Future

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The Australian Defence Force faces a number of challenges in developing its amphibious warfare capability. The acquisition of the new landing craft and the Canberra Class LHDs are just one small element in these developments. Just as important will be overcoming the cultural barriers to the adoption of the maritime strategy laid out in the 2009 Defence White Paper. One way of overcoming these issues is for the Australian Defence Force (ADF) to reconnect with its past. Here the ADF can find some exceptionally important lessons on training, doctrine, joint operations and cooperation with allies; especially in relation to Australia's only modern maritime campaign, the South West Pacific Area 1942-45.<sup>1</sup>

## Culture, History and Heritage

For a number of years now it has been widely acknowledged that the Australian Defence Force (ADF) is in need of an amphibious warfare capability.<sup>2</sup> In 2009 this was enshrined in the Defence White Paper, *Defending Australia in the Asia-Pacific Century: Force 2030* and has been reinforced by the decision of the Army to allocate the 2<sup>nd</sup> battalion Royal Australian Regiment (2RAR) to "spearhead the push to acquire a new amphibious force" under the recently announced Plan Beersheba.<sup>3</sup> Such an amphibious capability it is argued will be able to

deliver balanced naval, land and air forces [that] will be required for almost every defence contingency in the future. This includes securing our offshore territories, denying bases to an enemy posing a direct threat to the mainland, moving large forces around Australia, deploying to overseas operational areas and supporting disaster and humanitarian missions.<sup>4</sup>

Integral to this strategy has been the decision to acquire a new range of amphibious craft and ships, the most ambitious project being the decision to

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<sup>1</sup> The author would like to thank the reviewers and the editors of *Security Challenges* who provided excellent advice and clear and thoughtful notes on improving this article.

<sup>2</sup> Howard Anson, 'Amphibious Manoeuvre: On and Off the Water', *Defender*, Spring 2004, pp. 31-6.

<sup>3</sup> Chief of Army Lt-Gen David Morrison as quoted in Mark Dodd, 'Marine Role for Returned Soldier', *The Australian*, 19 December 2011. The Chief of Army's comments are indicative that this is the starting point for the development of amphibious capabilities in the Army not the end point. As the CO of 2<sup>nd</sup> battalion Royal Australian Regiment (2RAR) Lt-Col Chris Smith noted in the same article "The intention at the moment is not that 2RAR will become the permanent marine battalion of the army; it's a capability that will be shared by the entire army".

<sup>4</sup> Peter Leahy, 'The Army after Afghanistan', *Security Challenges*, vol. 7, no. 2 (Winter 2011), p. 11.

purchase two Canberra Class amphibious assault ships (LHD).<sup>5</sup> But as has been noted:

Acquiring this equipment, however, is but a small part of the challenges that lie ahead. To turn the new hardware into capability the ADF will need new concepts, new doctrine, new procedures and most importantly new and innovative ideas.<sup>6</sup>

At the core of developing this amphibious capability will be the need for the ADF, and in particular the Army, to adapt to and accept the cultural changes that are needed for a maritime strategy.

In order to achieve this outcome the ADF needs to go back and rediscover its historical roots in this area, most significantly in the South West Pacific 1942-45. This conflict was where the Royal Australian Navy (RAN) developed an excellent tradition from which to draw on through its involvement with the United States Navy (USN) in landing operations throughout the Pacific. The Royal Australian Air Force (RAAF) in New Guinea and throughout the South West Pacific Area, via the First Tactical Air Force, was heavily involved in maritime and amphibious operations. The Australian Army can draw on its largest ever operations, the reconquest of New Guinea, (that included large scale air-landing as well as amphibious operations), and the operations in Borneo at Tarakan, Balikpapan and Brunei for its cultural heritage in amphibious warfare.

In addition, the ADF needs to continue to absorb and integrate the lessons of recent operations in the Primary Operating Environment (POE).<sup>7</sup> Even though the ADF needs to develop the capabilities for intensive war fighting, operations such as those conducted in East Timor and the Solomon Islands will most likely be at the forefront of future ADF deployments.

As Bruce McLennan and Gregory Gilbert have noted, “expeditionary operations are no easy option for navies or armies—they are specialised and costly activities that, if attempted, need to be taken seriously.”<sup>8</sup> Doctrine and training will be two of the key elements for the development of this capability

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<sup>5</sup> Department of Defence, *Defending Australia in the Asia-Pacific Century: Force 2030*, Defence White Paper, (Canberra: Commonwealth of Australia, 2009), p. 73.

<sup>6</sup> J.G. Caligari, ‘Foreword’, in A. Palazzo, A. Trentini, Lt-Col. J. Hawkins and Capt. M. Brailey, *Projecting Force: The Australian Army and a Maritime Strategy* (Canberra: Land Warfare Studies Centre (LWSC), June 2010). Major General Caligari is Head of Modernisation and Strategic Planning for the Australian Army. See also ‘Amphibious Warfare and an ADF Maritime Expeditionary Strategy’, *Naval Forces*, vol. 31 (2010), p. 45.

<sup>7</sup> The Primary Operating Environment (POE) is defined by the White Paper as the area that “extends from the eastern Indian Ocean to the island states of Polynesia, and from the equator to the Southern Ocean. That area contains all Australian sovereign, offshore and economic territories, such as Cocos (Keeling) Islands, Christmas Island, Heard and McDonald Islands, Macquarie Island, Norfolk Island and also waters adjacent to the Australian Antarctic Territory.” *Defending Australia in the Asia-Pacific Century: Force 2030*, p. 51.

<sup>8</sup> Bruce McLennan, and Gregory P Gilbert, ‘Amphibious Ships—Bigger is Better’, *Quadrant* (Sydney), vol. 50, no. 9 (September 2006), pp. 52-9.

to ensure that amphibious warfare can be used effectively within the strategic framework in which it has been conceived. It is from the past that many of the lessons for the future may be learned and the critical requirements of a tradition and culture of amphibious operations can be rediscovered.

## **Culture and the Australian Way of War**

Doctrine and training need to be understood within the context of strategic culture. As John Hattendorf has noted, “strategists think in the context of the prevailing cultural and national attitudes that surround them.”<sup>9</sup> This is critically important as Australia is a maritime country without a maritime culture—and our defence force, in particular the Army, is the same.<sup>10</sup> Australia’s strategic culture and approach to war has been affected by its “continental rather than maritime identity”. We are dominated “by a powerful sense of landscape in which the country is seen first and foremost as a continent and not as an island.”<sup>11</sup>

In order to develop an effective amphibious capability, the ADF must adapt to and accept the cultural changes inherent in implementing a maritime strategy. This is not an inconsiderable task. In many ways then the 2009 Defence White Paper with its emphasis on a maritime defence strategy is working against the prevailing culture both nationally and within large sections of the ADF. As Jeffrey Grey has pointed out, Australia’s approach to war fighting has always been distinguished by the quality of its expeditionary infantry, who are usually sent overseas as part of a wider coalition and depend on a larger ally for logistical and other support.<sup>12</sup>

This expeditionary nature of the Australian military’s operations means that in one sense the Army and the ADF has culture on its side. The historical tradition from the Boer War to Vietnam, through the Gulf Wars, Iraq and Afghanistan has revealed an expeditionary character in the Australian military tradition and the vital linkage between statecraft, strategy and the dominance of political interest. This expeditionary mentality should serve then to underpin the current maritime strategy, reinforced by the ADF’s ongoing involvement in East Timor and the Solomons type operations which

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<sup>9</sup> John Hattendorf as quoted in Beatrice Heuser, *The Evolution of Strategy: Thinking War from Antiquity to the Present* (Cambridge: Cambridge University Press, 2010), p. 21.

<sup>10</sup> At the 2010 RAN Sea Power conference the then Chief of Army Lieutenant-General Ken Gillespie acknowledged that amphibious operations “will require a major cultural change for the Australian Army.” See ‘Joint Expeditionary Operations Doctrine’, *Semaphore*, Newsletter of the Sea Power Centre Australia, issue 2, March 2011, p. 1.

<sup>11</sup> Michael Evans, *The Tyranny Of Dissonance: Australia’s Strategic Culture and Way of War 1901–2004*, Land Warfare Studies Centre, Study Paper No. 306 (Canberra: Land Warfare Studies Centre, 2005), pp. ix, 35. Evans also argues that a “genuine maritime consciousness [has] [n]ever dominated the mainstream of Australian strategic thought”, p. 34.

<sup>12</sup> Grey, *A Military History of Australia* (Melbourne: Cambridge University Press, 2000), p. 5.

sit comfortably within the 2009 Defence White Paper's clearly defined POE.<sup>13</sup>

However, for the Australian Army this historical foundation is to an extent offset by its traditional role in defence policy. During the 1920s and 1930s when Australia relied on an Imperial Defence Policy, via the Singapore Strategy, the Army's role was restricted to defeating 'raids' on the mainland.<sup>14</sup> The fall of Singapore exposed the fallacy of a one-dimensional strategy and led to the only time that the broader Australian military has been involved in a conflict that truly embraced a maritime strategy. But the South West Pacific Area (SWPA) operations of 1942-45 are at such a distance that the institutional memory of these campaigns is all but lost. Compounding this time lag is the fact that the dominating memory in Australia is of a series of events that sit outside this maritime experience. Tobruk and Kokoda, together with later Cold War and post-Cold War operations, might have relied on maritime sustainment, but none required the Army or RAAF to operate as part of a joint maritime force.<sup>15</sup>

With Australia continuing to rely on its great and powerful friends in the Cold War era the ADF never had the need to develop an amphibious expeditionary force like the US Marine Corps or the British Royal Marines.<sup>16</sup> This deficiency was compounded by a succeeding defence strategy which was concerned with denying the

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<sup>13</sup> It should be noted though that the ADF has never fully embraced its expeditionary character, especially as expeditionary warfare involves not only capability but also a clearly defined doctrine and in particular an expeditionary mindset. See J. Jones, 'Expeditionary Maneuver Warfare', *Marine Corps Gazette*, vol. 86, no. 2 (February 2002), pp. 36A-36L. Jones, at the time Commandant of the US Military College (USMC), noted that "The Marine Corps expeditionary advantage is derived from combining our maneuver warfare philosophy, expeditionary culture, and the manner in which we organize, deploy and employ our forces."

<sup>14</sup> For the most recent discussion of the Singapore Strategy and Australian Defence Policy see Augustine Meaher, *The Australian Road to Singapore: The Myth of British Betrayal* (Melbourne: Australian Scholarly Publishing, 2010). David Stevens (ed.), *In Search of a Maritime Strategy: The Maritime Element in Australian Defence Planning since 1901*, Working Paper No. 119 (Canberra: Strategic and Defence Studies Centre, ANU, 1997) especially the chapter by David Horner on the Australian Army as part of a maritime force.

<sup>15</sup> This includes Australian peace keeping and military observer operations, for example Cambodia, Namibia, Iran, Pakistan, Sinai, the exception to this has been the operations in East Timor and the Solomon Islands. For the period 1988-1991 see David Horner, *Australia and the 'New World Order': From Peacekeeping to Peace Enforcement*, Volume 2, Official History of Australian Peacekeeping and Humanitarian and Post-Cold War Operations (Melbourne: Cambridge University Press, 2011). For an overview of Australian amphibious operations see Russell Parkin, *A Capability of First Resort—Amphibious Operations and Australian Defence Policy 1901-2001*, Land Warfare Studies Centre, Working Paper No. 117 (Canberra: Land Warfare Studies Centre, 2002).

<sup>16</sup> This is not to overlook the fact that the first two major operations undertaken by the post-Federation Australian military, the seizure of German New Guinea and the Gallipoli landings, were in fact expeditionary amphibious operations.

northern maritime approaches to Australia, or the 'sea and air gap' to an enemy, by emphasising the capabilities of 'strike and interdiction' based on naval and air forces.<sup>17</sup>

The priority for the Army under this strategy was continental or land defence, behind the first lines of air and naval power. This meant that anyone,

with experience of the development of maritime littoral manoeuvre during the late 1990s—will understand how difficult it has been to adapt the Army's mindset towards an acceptance of amphibious operations ... amphibious warfare specialists have always been peripheral figures in the ADF and represent the 'unarmed prophets' of Australian military thought.<sup>18</sup>

The question then, is how the ADF with its culture of land warfare based around expeditionary infantry, is going to adapt its culture and methods to operating within a maritime environment? One of the ways it can attempt to overcome this culture gap is to look into its past to draw out the elements that will provide both a tradition and culture of amphibious warfare. This is no easy step given that the "ADF as a whole place[s] little premium on preserving its own history."<sup>19</sup> Nevertheless, historical insights do have the ability to 'capture' appropriate lessons, which can then be passed on "to ensure that the ADF's institutional memory is not lost, or distorted."<sup>20</sup> Such history, if used correctly, can also provide insights into a way forward for both developing a specialist amphibious warfare capability within the Army as well as spreading the doctrine, training and capability across large sections of the ADF.

## **Options for Amphibious Warfare**

The Army Land Warfare Studies Centre publication *Projecting Force: The Australian Army and a Maritime Strategy* sets out three possibilities for the Army's way forward in developing its amphibious capability:

**Option One:** Configuring one battle group with enablers as the amphibious specialist battalion.<sup>21</sup>

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<sup>17</sup> Evans, *The Tyranny Of Dissonance*, p. 65.

<sup>18</sup> See Michael Evans, 'Strategic Culture and the Australian Way of Warfare: Perspectives', in D. Stevens and J. Reeve (eds.), *Southern Trident: Strategy, History, and the rise of Australian Naval Power* (Sydney: Allen & Unwin, 2001), pp. 83–98; and Michael Evans, 'Unarmed Prophets: Amphibious Warfare in Australian Military Thought', *Journal of the Australian Naval Institute*, vol. 25, no. 1 (January-March 1999), pp. 10-9.

<sup>19</sup> Alan Ryan, *Thinking Across Time Concurrent Historical Analysis on Military Operations*, Land Warfare Studies Centre, Working Paper No. 114 (Canberra: Land Warfare Studies Centre, July 2001), p. 2.

<sup>20</sup> *Ibid.*, p. 5.

<sup>21</sup> As per the comment in footnote 3 the announcement on 12 December 2011 of 2RAR adopting the role of spearheading the development of Army's amphibious capabilities is not indicative of the Army settling on Option One. Rather 2RAR's role is to form the "core" of this capability and "spearhead" the role for the Army. This means that all three options laid out in

**Option Two:** A brigade grouped as a combined arms task force for amphibious operations.

**Option Three:** Annual changeovers between the Army's ten battle groups so as to permit broad exposure to amphibious capability.<sup>22</sup>

Option One gives the Army depth but little breadth. Given the orientation of the ADF to a maritime strategy and the commitment to operating two *Canberra* class LHDs and other amphibious assets, the adoption of such a path might lead to serious questioning of the Army's commitment to the 2009 White Paper. It would also place severe restrictions on the level and flexibility of the joint force that the ADF could project and sustain at short notice.<sup>23</sup>

With the ongoing necessity for short notice operations, the concept of readiness is one of the key features of modern expeditionary operations. The need for high readiness forces means "contrary to their forebears of the First and Second World Wars, contemporary armed forces cannot take months or years to train and equip" for operations. This means that Option One would be especially restrictive. Furthermore to accept the principle that "globalised security [is] marked by an increased need for force readiness"<sup>24</sup> is to also condemn not just Option One but also the credibility of Option Three, which provides breadth but no depth.<sup>25</sup>

These critical factors seemingly leave Option Two as the only viable path for the Army to follow.<sup>26</sup> There are also indications to suggest that the current Army preference is for the Townsville based 3<sup>rd</sup> Brigade to develop this option for its amphibious capability.<sup>27</sup> In many ways the 3<sup>rd</sup> Brigade with its

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*Projecting Force: The Australian Army and a Maritime Strategy* are all still open for evaluation by the Army in determining how it will achieve this capability in cooperation with the RAN.

<sup>22</sup> Palazzo, Trentini, Hawkins and Brailey, *Projecting Force: The Australian Army and a Maritime Strategy*, pp. 50-1; see also Chief of Army's Address to Sea Power 2010 Conference, 27 January 2010.

<sup>23</sup> The creation of an expeditionary force includes the requirement to provide a broad range of capabilities and high readiness, something that would be exceptionally difficult to achieve with the allocation on only one battle group which would necessitate only one company group being able to deploy at short notice. Such a small force would exclude the ability to conduct forcible entry operations at short notice.

<sup>24</sup> Evans, *The Tyranny Of Dissonance*, p. v.

<sup>25</sup> Thierry Gongora, 'Expeditionary Operations: Definition and Requirements', *Military Technology*, vol. 28, no. 6 (June 2004), p. 108.

<sup>26</sup> It must be noted here to that the dedication of a brigade of the ADF to amphibious warfare does not mean a reduction in non-amphibious deployable capability. A brief study of the experience of the US Marine Corps or, more importantly, the British Royal Marines in Iraq and Afghanistan will show that the barriers to non-amphibious operations are not restrictive.

<sup>27</sup> Chief of Army's Address to Sea Power 2010 Conference, 27 January 2010; Cpl. Garry J. Welch, 31st MEU, '31st MEU Shares Knowledge of Amphibious Operations with Australian Service Members', 8 May 2011, <<http://www.marines.mil/unit/31stmeu/Pages/31stMEUsharesknowledgeofamphibiousoperationswithAustralianservicemembers.aspx>>

three (with the relocation of 3RAR in December 2011) light infantry battalions and its location in Townsville near the Shoalwater Bay training area, where joint amphibious exercises have routinely been held with the United States Marine Corps (USMC), makes it a logical choice.<sup>28</sup> However Option Two has the potential to create a niche capability within the ADF. While this would provide both depth and a high readiness force it could very well deny the rest of the Army's combat units adequate training in amphibious operations. As Albert Palazzo has noted "there is a need for the ARG [Amphibious Ready Group] to be robust [but] the Army will have to guard against the rest of the force trending towards hollowness."<sup>29</sup>

But there is a fourth option that the Army should consider—that is one that makes the best use of the depth to be found in Option Two and the breadth that can be provided by Option Three; covering the need for both a sizable immediately deployable force and a breadth of amphibious capabilities across the Army.<sup>30</sup> Both of these factors are critical in being able to provide for undertaking both multiple and sustained operations. The addition of a breadth of knowledge across the Army and the ADF would move the operational capability beyond that which a single trained brigade would be able to deliver. A way forward in this area can found by looking at how the Australian military had to quickly adapt to the need to develop an amphibious warfare capability in the SWPA in 1942.

## **South West Pacific Area 1942-1945**

The operations in the SWPA are of critical importance to the current Defence White Paper strategy for a number of reasons. This includes the fact that they were:

- The last time that the Australian military undertook major amphibious operations;
- The largest and most complicated operations ever undertaken by the Australian military;
- Integral components of a highly effective maritime strategy; and

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[Accessed 15 January 2012]; Max Blenkin, 'Amphibious Ships Make Waves in Our Region', *Canberra Times*, 8 October 2011, p. 8.

<sup>28</sup> For instance Exercise Talisman Sabre 2009 and 2011 both of which involved amphibious landings by the 3rd Marine Expeditionary Brigade, USMC, at Shoalwater Bay.

<sup>29</sup> Albert Palazzo, 'Towards a Marine Force', *Security Challenges*, vol. 7, no. 2 (Winter 2011), pp. 42-3.

<sup>30</sup> The Chief of Army identified the need for "exposure to sea-lift and follow on operations for the remainder of the Army." See Chief of Army's Address to Sea Power 2010 Conference, 27 January 2010, p. 8.

- Modern operations—in that they included the large scale use of air power.

Just as important is their geographical relevance. As noted in *Projecting Force*,

The success of the Australian campaigns against the Japanese represents a compelling argument for the advantages of a maritime strategy, not only because of the allied success but also because the land for which they fought is the same region that received consideration in the 2009 Defence White Paper.<sup>31</sup>

Another important factor is that the SWPA, as an operational theatre, was well behind Europe and the Central Pacific areas in terms of priorities for resources. As a result all of its operations were undertaken using limited shipping, manpower and equipment. This meant that the Commander in Chief, General Douglas MacArthur, had to adopt a manoeuvrist strategy based on limited naval assets and land-based air power. The other significant factor in these successful operations was that the Australian military, despite lacking a strong tradition in amphibious operations, was able to bring together contemporary doctrinal thinking on the subject and work exceptionally effectively with our US allies.

### **Training for Amphibious Warfare: The Joint Overseas Operational Training School**

During 1942, MacArthur's General Headquarters South West Pacific Area (GHQ) as well as the Australian Commander-in-Chief, and Commander Allied Land Forces, General Sir Thomas Blamey's headquarters (LHQ) set about the enormous task of planning for the reconquest of Rabaul. MacArthur, a land commander, quickly realised that the key to his mission was the adoption of a maritime strategy and the development of an amphibious warfare capability. After discussions with Blamey the decision was made to establish a Joint Overseas Operational Training School (JOOTS). This school was designed as a joint US-Australian, Army-Navy-Air Force, operation and MacArthur described its mission as

Training of Land Forces in overseas operations in conjunction and cooperation with Naval Forces and Air Forces, both land and carrier based ... The task will involve the combat loading of ships, the disembarkation of troops and supplies in small boats in the face of an enemy, the landing on hostile shores, a rapid and strong thrust inland, and the occupation of

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<sup>31</sup> Palazzo, Trentini, Hawkins and Brailey, *Projecting Force: The Australian Army and Maritime Strategy*, pp. 14-5. For a discussion of maritime strategy in this area see also John Reeve, *Maritime Strategy and Defence of the Archipelagic Inner Arc*, Working Paper No. 5 (place: Royal Australian Navy Sea Power Centre, March 2001).

hostile coast lines with continued operations into the interior, all tasks in coordination with Naval and Air support.<sup>32</sup>

JOOTS was originally set up at Port Stephens on the New South Wales mid north coast. This locality was also the base area for the RAN's training school for boat handling in amphibious warfare, the aptly named HMAS *Assault*, under Commander F. N. Cook, RAN.<sup>33</sup> The first students graduated from JOOTS on 25 September 1942.

Initially JOOTS was heavily theoretical and designed to run courses to train senior officers at division, brigade and battalion level who would then return to their formations and units to pass on relevant information and establish amphibious warfare training programs. The Deputy Chief of the General Staff, Major General Frank Berryman, noted to First Australian Army HQ that the course would

Standardise the training of the Allied forces in Combined Operations<sup>34</sup> and train selected representatives from each of the services in order that they in turn may form a nucleus of trained instructors for further training of their formations.<sup>35</sup>

JOOTS was also soon supported by the First Australian Army Combined Warfare School which was established at Toorbul Point near Brisbane. This school was originally responsible for training the deployable US and Australian divisions, regiments/brigades and battalions in amphibious operations, later it was to come under the direct control of JOOTS. In addition JOOTS was quickly expanded to run a range of specialist programs consisting of courses on communications, navigation, reconnaissance, logistics and shore parties, for all ranks.

In order to achieve its mission JOOTS was provided with a demonstration battalion, initially provided by the 3<sup>rd</sup> battalion, 127<sup>th</sup> Infantry Regiment, 32<sup>nd</sup> US Infantry Division until an Australian unit, 19<sup>th</sup> battalion (Australian Military Forces), was specially trained to take over the role. Due to a worldwide shortage of equipment the early training at JOOTS was completed with the bare minimum of amphibious craft and this initially restricted troops to training in small boats. The desperate nature of the situation is revealed by the fact that this school, the major training ground for both the US and Australian army and navy units in MacArthur's maritime strategy, had only

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<sup>32</sup> Memo 'Combined Training for Offensive Operations', MacArthur to Blamey, 4 June 1942, United States National Archives and Record Administration (NARA), College Park, Maryland, Record Group (RG) 496, Box 667.

<sup>33</sup> Landenberger to Barbey, 26 April 1962, Barbey Papers, US Naval History and Heritage Command Archives (NHHHC), Washington Naval Yard, Washington DC, Correspondence, Box 2.

<sup>34</sup> In the nomenclature of the time British and Commonwealth countries used the term "Combined Operations" the United States used "Joint Operations" for amphibious landings and operations.

<sup>35</sup> 'Training in Combined Ops', DCGS (Major General F. H. Berryman) to First Australian Army, 26 September 1942, National Archives of Australia (NAA), Canberra, MP508/1, 323/701/804.

six small landing boats on hand until March 1943. Improvisation was the major feature up until this time with ship's cargo nets hung over cliffs and the construction of simulated ramps and ships in order to undertake realistic training.<sup>36</sup>

## **Training and Certifying Combat Units**

Despite these limitations the operations of JOOTS was expanded in November 1942 when it was decided to include training and certifying combat units in amphibious operations at Port Stephens. The initial orientation course for combat units that was based on five key areas:

1. An outline of amphibious operations concepts and doctrine
2. Organisation
3. Mission
4. Planning
5. Training and Rehearsals

This orientation course was capped off with a joint operations exercise in order to practice and assess the newly taught skills. The major instructors of each of these courses and their various components were a combination of US and Australian personnel. During the rehearsal and exercise phase regimental officers from the combat units were paired with naval commanders down through the ranks. After the rehearsals and training exercises a debriefing and critique was provided by both army and navy officers—a system which was deemed “very effective”.<sup>37</sup> The completion of this program was not the end of the unit's involvement with the school. In addition to developing their own training programs, mainly based around dryshod (away from the sea) training, units were often required to attend JOOTS for advanced training, especially when they were preparing for or refitting after a major operation, returning from a tasking in a different operational setting, or after the unit had absorbed large numbers of replacements due to combat losses or the transfer of personnel. Deputy Chief of the General Staff , Major-General Frank Berryman, noted that by 1943 the Army's policy on combined (amphibious) operations laid down that in order to achieve a high degree of proficiency and readiness and to “meet

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<sup>36</sup> Daniel Barbey, *MacArthur's Amphibious Navy* (Annapolis: United States Naval Institute, 1969), p. 35.

<sup>37</sup> Jamison to Barbey, December 1960, Barbey Papers, Correspondence Box 2.

and overcome difficulties in advance”, units needed continuous and ongoing training.<sup>38</sup>

## **Mobile Training Units**

During 1943 it became apparent that the Port Stephens locality was causing a major strain on resources, as it was located too far from the majority of troops, who had been concentrated in far north Queensland or in the rear combat areas in New Guinea and the Solomon Islands. As a result JOOTS developed three mobile training units, two under the command of US Army officers and one under the command of an Australian Army officer. These units, a highly integrated mix of US and Australian army and navy personnel, trained troops based on availability and schedule not nationality. For instance, the 3<sup>rd</sup> Mobile Training Unit under Major C. L. Woodcliff (US Army) trained the 6<sup>th</sup>, 7<sup>th</sup>, and 9<sup>th</sup> Australian Divisions in Cairns during 1944 while the 1<sup>st</sup> Mobile Training Unit under Lieutenant-Colonel C. T. Barton (AIF) trained the 33<sup>rd</sup>, 43<sup>rd</sup>, and 40<sup>th</sup> US Infantry Divisions as well as the 112<sup>th</sup> US Cavalry Regiment and 6<sup>th</sup> US Ranger Battalion in New Guinea and New Britain in 1943-1944.<sup>39</sup> With the front line moving steadily northwards and as a result of the success of the mobile training teams, the facility at Port Stephens was closed down in October 1943 and moved to Toorbul Port and from there it was moved to Milne Bay in New Guinea in February 1944 and to Subic Bay in the Philippines in 1945.

## **Doctrine**

Despite having some limitations, JOOTS was a well organised and highly effective training school. Instructors were sourced from the US and Australian armies and navy, the US Marine Corps and the RAAF. The Australians initially relied largely on instructors who had attended the British Combined Training Centre at Kabrit, Egypt (including one British Army officer and one British Royal Marine on loan to the Australian Army). Further instructors were added in February 1943 when a number of 9<sup>th</sup> Division AIF officers who had received instruction at this centre returned from the Middle East and were posted to JOOTS.<sup>40</sup>

Doctrine was originally a mixed affair with Australians relying on British *Combined Operations Doctrine* (1942) and *Combined Operations for Unit Commanders* (1941) and their own Australian Military Forces (AMF) *Combined Operations Pamphlet No. 1 (Provisional)*. The US military did, of course, prefer their own approach to joint operations. Their methods being based on *FM 31 Landing Operations on a Hostile Shore* (1941), *FM 31-5 Landing Operations on a Hostile Shore [Air Operations]* (1941), *USN Joint*

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<sup>38</sup> 'Combined Operations (General)', Papers of Lt-Gen Sir Frank Horton Berryman, Australian War Memorial, PR84/370, Item 40, Notes on Combined Operations.

<sup>39</sup> Jamison to Barbey, 14 November 1961, Barbey Papers, Correspondence Box 2.

<sup>40</sup> Landenberger to Barbey, 26 April 1962, Barbey Papers, Correspondence Box 2.

*Action Doctrine* (1927), and USN *Landing Operations* (1938) doctrine. This combination of British and US Navy, Army and Air Corps doctrine did cause some tensions. Colonel B. Q. Jones (US Army), the original Commandant of JOOTS until superseded by Brigadier General Volkenburgh (US Army), initially found these difficulties tiresome and complained about his problems with Australian/British methods to MacArthur's GHQ's operations chief, Brigadier General Stephen Chamberlin. He noted that

We constantly have to deal with our Allies. Their system, their methods and their line of thought are different from ours. In many cases measured by our own standards, these methods appear most inefficient.<sup>41</sup>

Conversely Lieutenant Colonel Walker (Royal Marines) noted that the Americans were too rigid theoretically and their training methods were based on "rather out of date theory from American Army textbooks."<sup>42</sup> Despite these problems agreed methods were reached and training was able to move forward rapidly. This was particularly important as the first formation to undergo training in 1942 was the 41<sup>st</sup> US Infantry Division. This unit was then under the command of First Australian Army, which was responsible for the establishment of their "combined training program" utilising the graduates of JOOTS at the Combined Warfare Training School at Toorbul Point.

At the beginning of February 1943 the commander of the newly created 7<sup>th</sup> Amphibious Force, Rear Admiral Daniel E. Barbey, was given control over all amphibious warfare training.<sup>43</sup> Barbey was to become one of the most successful amphibious warfare commanders in history, and by the end of 1945 he had commanded fifty-six successful amphibious operations. One of his first moves was to appoint Commander 'Red' Jamison (USN) as the commanding officer of JOOTS and to add more US and Australian army and navy officers to the staff, mainly combat veterans with experience at Guadalcanal, North Africa, New Guinea and Malaya.<sup>44</sup>

Barbey standardised equipment and doctrine based on US Navy Fleet Training Publication *FTP 167 Landing Operations Doctrine*. This was a relatively smooth transition. Barbey noted that this was a result of the fact that there was "little difference in the two techniques [British and American] and they were readily integrated into the training program".<sup>45</sup> The only problems were that "A few differences in communication procedures [that] cropped up and caused minor problems."<sup>46</sup> He was, however, insistent that if Australian troops were to be mounted in American vessels then "they must

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<sup>41</sup> B. Q. Jones to S. Chamberlin, Chamberlin Papers, Douglas MacArthur Memorial Archives, Norfolk Va, RG36, Box 1, 17 September 1942.

<sup>42</sup> Walker as quoted in Parkin, *A Capability of First Resort*, p. 20.

<sup>43</sup> 'Combined Operations—RAN Beach Commandos', National Archives of Australia, B6121, 194B, p. 2.

<sup>44</sup> *Ibid.*

<sup>45</sup> Barbey, *MacArthur's Amphibious Navy*, p. 36.

<sup>46</sup> *Ibid.*

follow the entire American technique.”<sup>47</sup> Despite Barbey's insistence of this measure, the SWPA was so low in the priority allocation for amphibious (and all other) resources in 1943 that the 7<sup>th</sup> Amphibious Force had to modify standing doctrine to account for a force based mainly around smaller, often improvised landing ships and landing craft with little support from APD's (high speed destroyer transports) and large landing ships. Subsequently Commander Jamison and his Allied staff at JOOTS were charged by Barbey with “developing this new and untried technique.”<sup>48</sup> Thus JOOTS became not only the school for the training of both instructors and units in amphibious warfare but also the specialist in the development of doctrine. These new approaches were formalised through the establishment of Standard Operating Procedures (SOP) for the 7<sup>th</sup> Amphibious Force; for instance the adoption on 31 August 1943 by GHQ of the SOP for *Boat Teams in Small Boats* that had been developed by JOOTS.<sup>49</sup>

Until JOOTS was up and running and in charge of all training and doctrine development, Barbey had to improvise training programs. One of the first was for the US 1<sup>st</sup> Marine Division that was stationed in Melbourne, recovering from the Guadalcanal operations. To do so he drafted the RAN ship HMAS *Manoora* (Landing Ship Infantry-LSI) and the USS *Henry T Allen* (Amphibious Attack Ship-APA), as well as a Free French and a US destroyer to provide naval gunfire support. Barbey used a USMC regiment as a demonstration unit and brought a large group of Allied observers of all ranks and formations, including the staff at JOOTS, down for a training demonstration and post operation analysis. Soon afterwards he made the RAN LSI's *Manoora*, *Westralia* and *Kanimbla* available for training operations at JOOTS.<sup>50</sup>

With a new doctrine to initiate and with new ships containing highly inexperienced crews, Commander Jamison and his allied training staff at JOOTS had a daunting task. However within two months the staff had expanded from approximately 400 to 2,500 US and Australian personnel and they had in training some 20,000 combat personnel made up of the Australian 7<sup>th</sup> and US 32<sup>nd</sup> Infantry Divisions.

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<sup>47</sup> Notes from Conference, GHQ, 18 January 1943, NARA, RG496, Box 667, 'Amphibious Training Oct 1942-Oct 31 1943'.

<sup>48</sup> Barbey, *MacArthur's Amphibious Navy*, pp. 48-9.

<sup>49</sup> Memo Commander Seventh Amphibious Force to C-in-C SWPA, 31 August 1943, NARA RG496 Box 667 'Amphibious Training Oct 1942-Oct 31 1943'. GHQ issued the order for its adoption on 4 September 1943 and it was put into circulation after amendments on 14 October 1943. JOOTS had been working on doctrine development since mid-1942. Its first attempt was *Reference Data on Joint Operations for Battalion Landing Group: For Use at the Joint Overseas Training School, SWPA, Australia* (1942). However this document was largely designed on summarising and merging standing 1942 US Navy and Army doctrine and providing a series of checklists and diagrams to help the JOOTS instructional staff.

<sup>50</sup> Barbey, *MacArthur's Amphibious Navy*, pp. 36-8.

## Joint Training

One of the major keys to the effectiveness of JOOTS was that it had developed from a largely army controlled operation to an integrated joint services training school. It included RAN and USN ships and amphibious crews and craft and the demonstration troops under the command of Lt-Col Rose AIF.<sup>51</sup> The RAAF contributed by providing meteorologists as well as a RAAF photography team who took pictures of the training program, demonstrations and exercises to produce training slides.<sup>52</sup> In addition, RAAF air liaison officers including personnel and aircraft from the 5<sup>th</sup> Army Cooperation Squadron based at Williamstown were brought in to provide theoretical and practical training on the use of air power in amphibious operations. The only area in which cooperation was not secured was from the US Army Air Corps, which argued that scarce resources and other priorities precluded their involvement. This situation was to lead to difficulties in cooperation between this service and the US and Australian Army and Navy planners and formations in operations throughout 1943-44.

One of the most significant factors was the high level of cooperation not just between the three services, but between the United States and Australia. Both the 7<sup>th</sup> Amphibious Force commander, Admiral Barbey, and the CO of JOOTS, Commander Jamison, were particularly complimentary about working with their Australian counterparts, as were the Australian personnel. Captain J. Louis Landenbeger, USN, one of Barbey's key staff officers who was also "very closely associated with the training operations at Port Stephens, Toorbul Bay and other places" noted that the "comradeship between the Australians and the 7<sup>th</sup> Amphibious Force was most cordial at all times" believing that "I am convinced that this period of training [JOOTS] was well worth while."<sup>53</sup>

JOOTS is a fine example of cooperation undertaken in the most stressful of circumstances. All of these activities were enormously successful and undertaken with the minimum of equipment, during the development of a new doctrine with army, navy, marine corps and air force personnel from two systems and three countries and it was done in the spirit of (almost) total cooperation. This was evident in the thorough success of the amphibious operations that were undertaken in the SWPA from 1943-45.

## JOOTS—Lessons for the ADF's Future?

A contemporary version of the JOOTS concept is something the ADF needs to give serious consideration to. JOOTS had a number of critically important roles. It provided training for senior officers in amphibious warfare, in addition to offering specialist courses to all ranks, training and certifying

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<sup>51</sup> Jamison to Barbey, 31 August 1962, Barbey Papers, Correspondence Box 2.

<sup>52</sup> Jamison to Barbey, 4 March 1960, Barbey Papers, Correspondence Box 2.

<sup>53</sup> Landenberger to Barbey, 24 January 1961, Barbey Papers, Correspondence Box 3.

combat units and developing doctrine. Such an effect could be best achieved in the contemporary environment by using the conceptual ideals and lessons of JOOTS to establish a Joint Expeditionary Warfare School.

Training and developing capability should be one of the key elements of such a school. In order to achieve a broad base of knowledge in amphibious warfare in the Australian Army, the first priority for JOOTS in 1942 was to provide courses for those officers who had been tasked to be instructors and for brigade, battalion and company commanders and their senior staff officers. In the contemporary context, a joint course would be of considerable value in developing a solid understanding of the requirements of these operations across a broad range of command and staff positions in the ADF. From here a much more detailed course for the development of junior officers should be developed.<sup>54</sup>

After the establishment of the senior officers' course, JOOTS progressed into the development of specialist training for all ranks and services in areas such as logistics, communications, joint fires and boat handling as well as the training and certification of units. In addition to this capstone war fighting capability this contemporary school should place considerable emphasis on humanitarian assistance, disaster relief and peacetime engagement, activities which will most likely form the vast majority of future operations for this capability. It should also provide an intellectual home for innovation and the development of new SOPs, techniques and doctrine for amphibious operations in partnership with the United States.

While this school would need to have the development of the amphibious warfare capability at its core, it should also develop the broader concept of expeditionary manoeuvre warfare, including ship-to-objective manoeuvre, sea basing, operational manoeuvre from the sea and the use of air bridges and air power. This would further align the ADF with developments in this field being undertaken by the US and United Kingdom military and in particular the USMC, which is specifically configured, through its Marine Air-Ground Task Forces (MAGTF), for such operations. As a truly 'joint' School this would also help to break down the barriers between the single services and to foster the ADF's joint philosophy of war fighting.

In addition to JOOTS fostering a joint approach to amphibious operations, one of the most critical elements to its success was the relationship that it helped forged between the Australian and US militaries. The USN and the USMC in 1942 were regarded as one of, if not the world's leading exponents of amphibious and expeditionary warfare and this remains so today. The importance of this capability is being reinforced by the present-day thinking

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<sup>54</sup> In the USMC this is done through a forty week training course for captain level officers. The other option would be for the ADF to arrange for Australian officers to attend the USMC course at Quantico Va.

in the USMC and USN. As their commitments in Iraq and Afghanistan wind down, the USMC is re-establishing itself as an expeditionary force as opposed to another land army.<sup>55</sup> They are committed to revitalising their “amphibious capabilities, capacities and expertise in order to meet the instability and uncertainty challenges in the 21<sup>st</sup> century.”<sup>56</sup> Thus along with the British Royal Marine Commandos they remain our key partners for accessing doctrine and contemporary thinking in expeditionary and amphibious warfare. They both have long established defence strategies centred on expeditionary maritime operations and their insights, experience and knowledge will be critical to the implementation of the contemporary ADF amphibious capability.

Knowledge transfer is but one element of this relationship. The ANZUS alliance remains at the centre of Australian defence strategy and with the current debate in US politics on grand strategy, on both sides of the political spectrum, moving more and more towards US allies carrying a greater share of the burden of international security<sup>57</sup> such relationships will be even more important in the future. This is further compounded by the rising importance of the Asia-Pacific region in US and international affairs.

It is also widely accepted that coalitions will be an integral part of expeditionary warfare into the future.<sup>58</sup> The experience of JOOTS highlighted the need for a common understanding of doctrine in amphibious warfare, and while the 2009 White Paper calls for the ADF to be able to undertake independent operations,<sup>59</sup> this does not mean that Australian doctrine and operational techniques should differ greatly from the United States. This is especially the case given the fact that the United States is both the leading exponent of this type of war fighting as well as Australia’s most likely partner in both military and non-war like operations in the Asia-Pacific region. As Thierry Gongora has argued

the fact that most international operations take place in a multination context creates a requirement for interoperability with other coalition partners. Even the most deployable force will not be considered by a coalition if once deployed it cannot operate effectively with other members due to language, or doctrinal barriers, or incompatibility in equipment and supplies.<sup>60</sup>

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<sup>55</sup> See Adam Holmes and David Fuqea, ‘Amphibious Training: From Ugly To Good’, *United States Naval Institute Proceedings*, no. 137 (August 2011), pp. 60-5.

<sup>56</sup> USMC, *Amphibious Operations in the 21<sup>st</sup> Century*, 2009, p. 9.

<sup>57</sup> Carl Ungerer, ‘National Security Note 3: The Debate Over US Grand Strategy’, Australian Strategic Policy Institute (ASPI), Policy Analysis, 15 September 2011, p. 2.

<sup>58</sup> J. L. Jones, ‘Expeditionary Maneuver Warfare: Marine Corps Capstone Concept’, *Marine Corps Gazette*, vol. 86, no. 2 (February 2002), p. A-8. Jones was the commandant of the Marine Corps when this article was published. See also, Gongora, ‘Expeditionary Operations’, p. 108.

<sup>59</sup> *Defending Australia in the Asia-Pacific Century: Force 2030*, pp. 13, 48, 53, 58, 63.

<sup>60</sup> Gongora, ‘Expeditionary Operations’, p. 108.

Of note here is Admiral Barbey's insistence in 1943 that US doctrine and techniques must be followed when Australian troops were in US vessels. This should give rise to consideration by the ADF as to what would transpire if such a situation was to arise in the future? With only two Canberra class LHD's in service, this appears highly likely.<sup>61</sup>

The announcement by President Barack Obama of the rotation of 2500 US Marines through northern Australia also raises a number of questions. While the numbers of troops are small this commitment provides a platform for future growth and also raises the possibility of the USMC taking up the load for an amphibious force in the region. This increase in USMC involvement in the region could conversely raise the possibility of burden sharing whereby Australia takes on the role of regional stability enforcement, negating the need for high end amphibious capabilities in the ADF. However the 2009 Defence White Paper's commitment to mid level warfare fighting capability and independent operations in this sphere means that preparations for major operations are necessary under the current strategic guidance. Either way, as a force designed to be able to work from stability operations through to high intensity conflict the ADF must be able to operate in tandem with our US partners and this requires a high degree of interoperability. A convergence of doctrine in this area between the ADF and the US military would help to facilitate a successful outcome.

As such, the ADF should actively seek officers from the US and United Kingdom services to be posted to this Australian school while ADF personnel, both officers and senior NCO's, need to spend time overseas with their USN, USMC and British RM counterparts. In addition, this cooperative approach should not just be restricted to our traditional partners. The POE extends into considerable parts of the world to the west of Australia and the dedication of a brigade to amphibious operations in the Indian military provides an opportunity to further our ties with this important strategic partner.

One of the final moves, but also one of the most critical lessons for the current ADF, was JOOTS' development of its mobile training units. The ADF should also make strong use this idea as it will be critical to providing broad ranging depth of knowledge in amphibious warfare, moving the Army beyond its current, and rather limiting, three option proposal. Such joint training units/teams from a Joint Expeditionary Warfare School would be able to move around the country to provide tailored packages in theoretical instruction, training exercises and certifications of units, regular and reserve. This would help to provide for the requirement of a breadth of knowledge of joint amphibious and expeditionary operations across a full range of combat and combat support units in the Army, Navy and Air Force.

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<sup>61</sup> And vice versa with RAN ships carrying USMC or US Army troops.

## Commitment to the Amphibious Concept in the ADF

The 2009 Defence White Paper details the strategic maritime approach and the need for an expeditionary amphibious capability. As noted, there is a solid historical foundation to build upon, but there needs to be a strong commitment from all areas of the ADF to overcome the cultural as well as doctrinal and capability issues. This is no easy task. It cannot be achieved by superficial changes to equipment and doctrine. What is required here is the development of a shared joint expeditionary cultural mindset. As Major General Stephen Day, Head of Joint Capability and Coordination noted in October 2011:

getting the best from this [amphibious capability will] require contributions from all three services and also from allies such as the US and Britain which have far more relevant experience. Australia would need to shift its focus from being a frigate force to an amphibious force while the RAAF would need to understand their significant role in defending the air space to ensure safe passage of these vessels ... for its part ... Amphibious thinking needs to permeate throughout the Army.<sup>62</sup>

These encouraging thoughts were echoed in the RAN's thinking on this issue, highlighted by the 2010 Sea Power Conference which concentrated on Combined and Joint Operations from the Sea and "aimed at informing how Australia's new expeditionary capabilities may be best introduced into service and used to advantage."

Yet while these comments are highly encouraging, it remains to be seen how far the 'permeation' of amphibious thinking will go across the ADF, particularly given the unique challenges that need to be faced. One of the greatest limiting factors is the culture of single service orientation.<sup>63</sup> Paul Hendley noted in 2005:

each service understands its conventional business very well, but has only a superficial understanding of how it must adapt to become part of a cross environmental manoeuvre force ... despite making all the right noises the underlying single service culture are just that, single-Service. They see archipelagic manoeuvre operations and amphibious operations in particular, as secondary to their traditional roles.<sup>64</sup>

Such concerns still remain. In an article entitled 'The Adaptive Army Post-Afghanistan: The Australian Army's Approach Towards Force 2030' in a

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<sup>62</sup> Major General Stephen Day as quoted in Blenkin, 'Amphibious Ships Make Waves in Our Region', p. 8.

<sup>63</sup> Despite the high degree of joint cooperation that the three services developed in the Second World War, especially in the SWPA, for the thirty years following the war little thought was given to joint operations. See David Horner, *Making of the Australian Defence Force*, Volume IV, The Australian Centenary History of Defence (Melbourne: Oxford University Press, 2001).

<sup>64</sup> Paul Hendley, 'Archipelagic Manoeuvre Warfare for the ADF', *Defender*, Winter 2004, p. 34. See also Lieutenant Commander Robert Moyses, Royal Australian Navy, 'Manoeuvre Operations in the Littoral Environment', in Glenn Kerr (ed.), *Peter Mitchell Essays 2003* (Canberra: Sea Power Centre Australia, 2005).

recent edition of *Security Challenges* (Winter 2011) Major-General John Caligari, the Australian Army's Head of Modernisation and Strategic Planning, did not even mention maritime strategy and referred to amphibious operations only twice—once in terms of past capability. In the same edition James Brown, an ex-Army officer and Lowy Institute analyst, saw *Force 2030* as “long on maritime and aviation capabilities and short on ground forces.”<sup>65</sup> This was the only time he mentioned ‘maritime’ capabilities or strategy in an article on ‘innovation’, indicating the often misguided assumption that a maritime strategy is inherently linked to the navy and not to all three services. Amphibious warfare did not even rate a mention.

Air power is the other key consideration. One of the most relevant lessons of World War II in the SWPA was the profound effect that air power had on the nature of sea control and the prosecution of MacArthur's maritime strategy. This started with the battle of the Coral Sea, which ultimately turned back the Japanese amphibious invasion force bound for Port Moresby and led to the protracted ground campaign for Papua. From this point onwards, land based air power became the key to the Allies ability to undertake amphibious operations in the SWPA. The lack of cooperation between the Allied Air Force (mainly the US Army Air Corps) commanders and JOOTS caused major problems in planning amphibious operations in the SWPA in 1943. The question remains of how the RAAF is going to adapt to the support of an amphibious warfare capability?<sup>66</sup> The dual requirement for developing both an expeditionary air force as well as providing for the defence of the Australian mainland was one of the key lessons for the RAAF in the SWPA during World War II. Yet while some key figures and sections of both the navy and army have made public commitments to support this new capability, the RAAF has remained relatively quiet on how it will transform to meet the operational requirements for amphibious warfare.<sup>67</sup> This is exceptionally important as “a nation that cannot project sustained air power into a non-permissive environment cannot lay claim to a maritime strategy, only a sea denial strategy”<sup>68</sup> and a sea denial strategy will make the survivability of any amphibious force ambiguous at best.

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<sup>65</sup> James Brown, ‘The Challenge of Innovation in the Australian Army’, *Security Challenges*, vol. 7, no. 2 (Winter 2011).

<sup>66</sup> It should be noted that the RAAF is the only service that currently has units that identify with expeditionary warfare in their name; Expeditionary Combat Support Squadrons (ECSS), however given aerospace technology, unmanned aerial vehicles and joint expeditionary requirements, the RAAF is the Australian service that may well be least well-adjusted to the future. (The author is indebted to the analysis of one of the reviews for this later point.)

<sup>67</sup> It should be acknowledged that in the RAN publication *Semaphore* (March 2010) noted that at the 2010 RAN Sea Power on Combined and Joint Operations “that they [the three services chiefs] essentially spoke with one voice demonstrates just how much the ADF's conceptual thinking on expeditionary operations has advanced over the last ten years or so.”

<sup>68</sup> Moyses, ‘Manoeuvre Operations in the Littoral Environment’, p. 72.

In the end,

Effective amphibiosity requires appropriate shipping for sea control, air defence, sea transport, ship-to-shore fire support, across-the-beach landings, logistic resupply and medical support tasks. It also requires versatile and marinised rotary-wing aircraft, well-equipped troops, flexible communications and logistic systems, and sound doctrine and training.<sup>69</sup>

This is a big challenge for the ADF—bigger than what many in the single services currently seem to imagine. However, the history of the Australian military can provide both relevant historical examples for future directions as well as a critically important cultural heritage platform in amphibious operations. As noted by the Land Warfare Centre “The ADF’s implementation of a maritime strategy will be facilitated by remembering the lessons of the past.”<sup>70</sup> Here the ADF can find some exceptionally important lessons on training, doctrine, force structures, joint operations and cooperation with her allies.

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<sup>69</sup> Anson, ‘Amphibious Manoeuvre’, p. 32.

<sup>70</sup> Palazzo, Trentini, Hawkins and Brailey, *Projecting Force: The Australian Army and Maritime Strategy*, p. 15.