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Keynote Address

The LHD in Australia's maritime strategy

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The Australian Defence Force is on track to deliver a new joint amphibious capability based on two new Canberra-class Landing Helicopter Dock (LHDs) ships and focused on security, stabilisation, humanitarian assistance and disaster relief tasks. The first milestone, a humanitarian assistance, disaster relief and non-combatant evacuation capability, is due towards the end of 2015. It will be based on one LHD and a rifle company-sized landing force. The full capability, with a light infantry battalion-sized landing force, is due for delivery in 2017. It should enable response across the spectrum of military contingencies.

Key words: Australia; amphibious assault ship; landing-helicopter-dock; maritime strategy; humanitarian assistance; disaster relief; non-combatant evacuation.

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 2013*¹, 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.

¹Department of Defence (2013). *Defence White Paper 2013* (Commonwealth of Australia: Canberra) paragraph 8.14, page 77.

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.

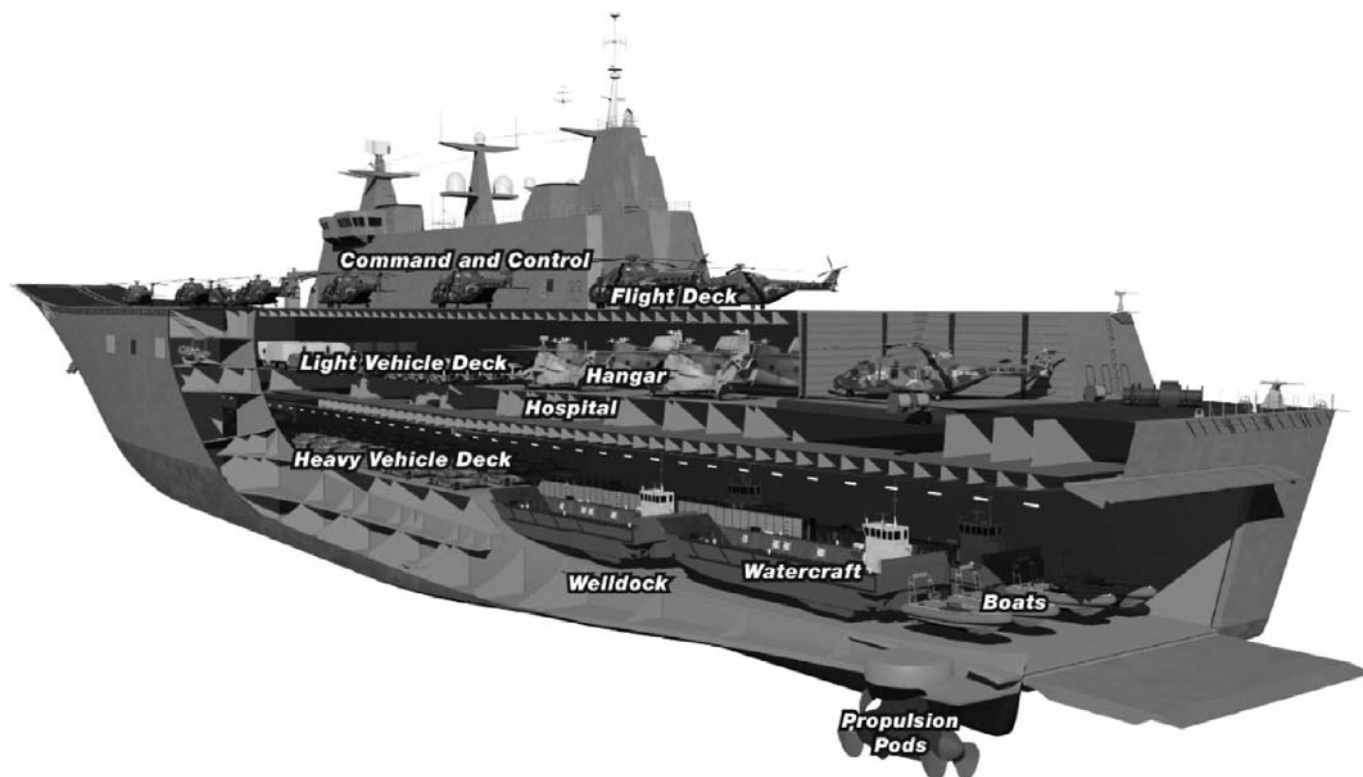
And we must never forget that an amphibious operation is not simply a transport task – it is but one phase of a much bigger maritime campaign.

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 regions². The LHDs are jointly crewed with personnel from Navy, Army and Air Force to form a ship's company of approximately 400.

²In a military context, the littoral zone refers to the coastline and adjacent waters, including estuarine and reef-enclosed waters.



Diagrammatic representation in cross-section of a Canberra-class landing helicopter dock (LHD)
[Diagram: Department of Defence]

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 manoeuvre³, ship-to-objective manoeuvre (STOM)⁴, distributed manoeuvre

(DM)⁵ and sea basing⁶. 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 deterrence 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

³Littoral 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.

⁴In 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.

⁵Distributed manoeuvre utilises multiple entry points and high mobility focused directly on the objective, or multiple objectives.

⁶A 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 gradually introduced over the coming years commencing with the MRH-90 troop lift helicopter, the Tiger armed reconnaissance helicopter and the CH-47F Chinook medium lift helicopter.

Joint Nature of Amphibious Capability

A key component of the joint force is the role the Deployable Joint Force Headquarters (DJFHQ) is taking in coordinating the ADF's amphibious capability. Commander DJFHQ is responsible for leading the joint and Army development of the amphibious capability. This headquarters continues to develop joint amphi-

bious doctrine and concepts for operations in support of the amphibious capability. Under the lead of Commander DJFHQ, 2013 proved to be a very important year to trial our joint amphibious procedures and command and control concepts ahead of next year's operational sea trials to achieve the initial operating capability milestone.

In the last 12 months, DJFHQ has designed an Amphibious Pre-deployment Training Programme, similar in concept to the proven United States Marine Corps Pre-deployment Training Programme. The Amphibious Pre-deployment Training Programme is aligned with the Army training continuum and will commence when the amphibious infantry battalion and enablers have met individual and collective training proficiencies within their respective core trades.

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]

