

# Landing Helicopter Dock (LHD) Project

## FOR MORE INFORMATION CONTACT

BAE Systems Australia  
Nelson House, Nelson Place  
WILLIAMSTOWN VIC 3016  
Telephone +61 (0)3 9244 4000  
Fax +61 (0)3 9244 4400  
[www.baesystems.com/australia](http://www.baesystems.com/australia)  
BAE SYSTEMS AUSTRALIA



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The integrated amphibious capability offered by the BAE Systems Australia-Navantia LHD has utility at all levels of military operations, including:

- presence or deterrence
- stabilisation and reconstruction operations
- policing operations
- special recovery operations
- warfighting
- sea lift.

This fourth generation LHD will empower the Australian Defence Force (ADF) to exploit the synergy derived from combining sea, air and ground forces in the littoral manoeuvre space. The LHD will permit the ADF to apply unified effects at a time and place of political choice, entirely independent of shore infrastructure.

BAE Systems will deliver two Canberra Class LHD ships between 2013 and 2015 under Joint Project 2048 Phase 4A/4B - the LHD component of the Amphibious Deployment and Sustainment capability.

As the Prime Contractor and leader in naval systems integration, amphibious platforms and capability, BAE Systems will manage the overall project in close cooperation with subcontractors Navantia, Saab and L-3 Communications.

Navantia will build up to the flight deck in Spain with BAE Systems constructing the superstructure and consolidating the ship at Williamstown, Victoria.

## Surface Operations

A state of the art perforated steel beach, central steel baffle and inclined well dock floor ensure that landing craft can support a decision to execute the Surface Assault Schedule. Four LCM and a mix of smaller craft or two LCM and one LCAC may be transported and operated from the well dock.

## Air Operations

Air operations are launched from six medium lift helicopter flight spots or four heavy lift helicopter flight spots on the port side of the flight deck. A port side ski jump, with a 12-degree slope, is capable of supporting the operations of STOVL aircraft like AV-8B and JSF.

Aircraft elevators forward and aft of the superstructure facilitate the deployment of aircraft between the flight deck, hangar and light cargo garage.

## Seabasing

Essential tactical and operational agility is retained as the embarked force can be supported afloat and ashore for extended periods. Seabasing of support elements ensures that the ADF footprint ashore is restricted to essential personnel, thereby enhancing total force security.

## Command Facilities

Purpose designed C4I facilities and high performing communications systems will support Network Centric Amphibious Operations. Two Joint Operations Rooms, a Supporting Arms Coordination Centre and supporting C2 facilities are all within the superstructure.

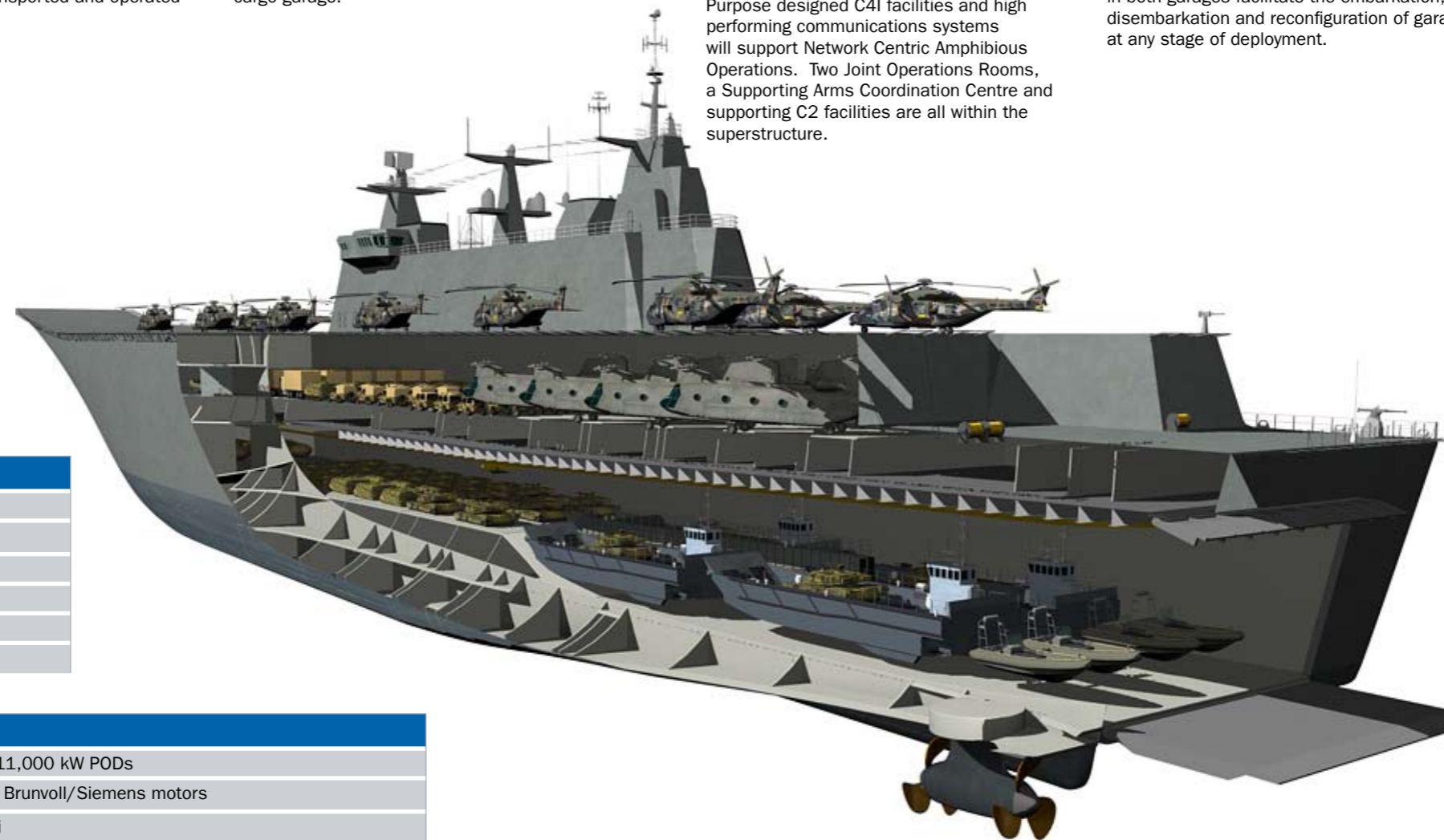
## Hangar and Garages

The adjoining hangar and light cargo garage support MRH-90, ARH and CH-47 (blades removed) helicopters, vehicles and cargo up to 16 tonnes. The heavy cargo garage accommodates a large number of heavy vehicles (including M1A1 Abrams) and cargo.

Two starboard side ramps, two aircraft elevators, an internal vehicle ramp and vehicle elevator, the Dock and 18 tonne gantry cranes in both garages facilitate the embarkation, disembarkation and reconfiguration of garages at any stage of deployment.

## Supporting Capabilities

- **Hospital:** Comprehensive medical facilities include two operating theatres, intensive care and dependent care wards, laboratory, X-Ray, pharmacy and a dental surgery.
- **Combat Management System (CMS):** The Saab CMS will be based upon the latest open architecture 9LV CMS and provides commonality with the ANZAC CMS.
- **Survivability:** Damage Control systems designed to military standards and a highly capable citadel afford exceptional survivability and flexibility during operations.
- **Recreation:** Eighteen recreation rooms, two gymnasiums, two reading rooms, video, TV, music, telephones and internet facilities.



Platform Characteristics	
Length Overall	230.8 m
Length Waterline	207.2 m
Beam	32 m
Design Draft	7.18 m
Full Load Displacement	27,831 t
Crew and Embarked Forced Accommodation	1,403

Machinery	
Propulsion	2 x Siemens 11,000 kW PODs
Bowthruster	2 x 1,500 kW Brunvoll/Siemens motors
Stabilisers	2 x Fincantieri
Generators	1 x 22,000 kW GE LM2500 Gas Turbine and 2 x 7,680 kW Diesel
Integrated Platform Management System	Navantia - Sistemas
Fresh Water	6 x Reverse Osmosis Plants (each 25 t/day)
Sewage	2 x Treatment Plants

Performance	
Maximum Speed	20+ kts
Economic Speed	15 kts
Maximum Range	9,250 nm
Endurance	45+ days

Capacity	
Flight Deck	4,750 m <sup>2</sup>
Dock (including ramp)	1,165 m <sup>2</sup>
Heavy Cargo Garage	1,410 m <sup>2</sup>
Light Cargo Garage	1,880 m <sup>2</sup>
Hangar	990 m <sup>2</sup>
Garages, Hangar and Well Dock	1,350 lane metres (2.9 m wide)
General Store Rooms	1,079 m <sup>2</sup>
Future Growth Margin	672 t