

INDEPENDENT VERIFICATION & VALIDATION: The above project performance report review process has been repeated for this current edition of ADBR, with additional reference to Parliamentary Joint Standing Committee on Foreign Affairs, Defence & Trade/Defence Subcommittee hearing transcripts in April 2009, as well as papers relating to the Defence portfolio released in the Budget Lock-up on 12 May. All projects were then reviewed against more recent *Defence Industry & Aerospace Report* (DIAR.com) OLYO database entries, as they stood through to 31 May 2009.

ADBR's synthesis of the aforementioned information sources has then tabulated (*refer separate Insert Table 'A' or download from http://www.adbr.com.au/download/What_the_DMO_is_Admitting.pdf*) new and legacy projects in a manner which tracks movements in approved project expenditures based on the caps declared in May's PBS, and cross-referenced to approved increases for 2008/09, as initially influenced by declarations in the November 2008 PAES. All PBS-reported Land projects and some Air projects (principally related to ground force operations), were reported in ADBR's 2009 Land Projects Review (*see http://www.adbr.com.au/data/Land_Proj.htm*).

As a sign of the maturity of each individual project – and for the purposes of assigning a risk profile – the insert table provides an indication of the estimated budget proposed to be spent to 30 June 2009, as well as the budget allocation for expenditure over 2009/10, along with a brief statement (see column headed DPPE) explaining any major changes in annual project expenditure outlook or capability delivery circumstances. Further information is provided in the paragraphs below.

One new addition to the table in 2009 is an indication of whether the subject project is still being administered to its original contract, or whether the original contract has subsequently been amended to account for expenditure or schedule slippage, or completely re-baselined. For example, a re-baselined project will immediately exhibit an improved performance reporting outlook, until the desired capability is delivered on-time and on-schedule, or underperformance again creeps into the capability outlook.

Confirmatory data on whether the nominated outcomes for 2009/10 are actually being delivered will be undertaken in the next substantive edition of ADBR reviewing 2009/10 Defence Budget PAES (early-2010) in detail. The table also indicates whether the project is subject to standard tender-based acquisition, or is being progressed through formal government-to-government means as with the US Foreign Military Sales (FMS) program.

In looking to assess the true performance of the DMO in delivering complex military acquisition projects – the *raison d'être* for the expenditure of millions of dollars of taxpayers funds in upskilling the organisation – ADBR has consistently argued that high achievement in the delivery of FMS-style projects should be discounted, given the bulk of administrative effort and project management is undertaken by foreign militaries and their supporting administrative agencies, not the Defence Materiel Organisation.

On the basis of all the above information – along with data collected from key military capability supply stakeholders (by way of open-source data or exclusive interviews) – Australian Defence Business Review researchers have then reviewed the script of each official project or phase report to extract an additional sense of achievement (or under-achievement).

This sense of achievement (or under-achievement) expressed in the form of Earned Value Management (EVM) measures, involves the making of a judgement on adherence to Expenditure (E) targets, the maintenance of program Schedule (S), and whether or not the equipment or service subsequently to be delivered will be up to scratch in terms of the Capability (C) first anticipated by relevant military capability planning officials.

Trouble strikes AWD calm

The quest to build Australia's new air warfare destroyers has had its first public controversy following the nomination of preferred contractors to undertake module builds, with allegations that political influences and a failure to properly research the commercial bona fides of potential tenderers is encouraging the re-activation of dormant engineering capability, whilst more established shipbuilding capacity is left to languish.

■ Canberra Bureau Report

Phase 3 of project Sea 4000 seeks to build three 'Hobart'-class air warfare destroyers in Adelaide based on the Spanish F-104+ series designed by Navantia.

The 2009 Defence White Paper indicated the case for a fourth vessel in the series would continue to be assessed "against further changes in the strategic assessment and, consistent with that assessment, the most rational public investment in further defence platforms." An original contract option for the fourth destroyer, extended until July 2009 by DMO General Manager-Programs, Warren King, will thus have to be re-negotiated to give effect to this decision.

The 'Hobart' class will be the Navy's first Lockheed Martin 'Aegis' combat system-equipped ships, and along with AN/SPY-1D(V) radar antennas, will receive the most modern version (Baseline 7.1/Block 10) of the system installed in a non-USN ship. Critical Design Review is scheduled for December 2009. Techport Australia's Common User Facility, and construction of the ASC shipyard, is said to be on time & budget to be finished by February 2010.

The AWD Alliance selected 9 May Newcastle (NSW)-based Forgas Group, and Cairns (Qld)-based AIMTEK (trading as NQEA Australia) as preferred suppliers to construct 70% of the hull and superstructure blocks required for the project Sea 4000 air warfare destroyers. NQEA will build 36 blocks, made up of more than 3,000 tonnes of steel and 1,500 tonnes of equipment and materials, and requiring a work-

force of more than 300 over a five-year period.

Forgacs will build 30 blocks – made up of 1,500 tonnes of steel and 600 tonnes of equipment and materials – and requiring a workforce of more than 200 over a five-year period. The combined work is worth approximately \$450m. The completed blocks will be transported by ship or barge to ASC's Osborne (SA) facility. The remaining 27 blocks (30%) will be built by ASC.

Fabrication (fit-out & ship integration) of the first ship is to begin later in 2009. Steel cutting for first block construction will be in September. Illawarra (NSW)-based BlueScope Steel was also awarded a contract in May (worth up to \$20m over six years), to supply steel for the first of the RAN's new AWDs. The contract will see BlueScope Steel produce around 3,000 tonnes of steel per ship for the three-ship build.

GE Marine confirmed 25 February it would supply ASC Shipbuilding with six LM2500 gas turbines to power the three new air warfare destroyers. Each AWD will incorporate two LM2500s, which will be configured into a Combined Diesel and Gas (CODAG) turbine arrangement with two other diesel engines. The LM2500 gas turbines will be manufactured at GE's Evendale (Ohio) facility, with the base and enclosure assemblies to be manufactured by Thales Australia in Bendigo (Victoria).

A purpose-built AWD Systems Centre at the SA Government-owned Techport Australia complex in Adelaide is to provide accommodation for 300 staff spanning the Commonwealth, ASC, Raytheon Australia, Navantia, Bath Iron Works, Lockheed

MARITIME (SEA) PROJECTS

GUIDED MISSILE FRIGATE UPGRADE: Phase 2.1 of the \$1,527m project Sea 1390 seeks to complete the upgrade of the last four (of originally six) ‘Adelaide’-class guided missile frigates (FFGs), to deliver upgraded and integrated combat systems (including sensors, missile launchers, associated platform systems and a training system).

The new capability fills an air warfare defence gap created since decommissioning of the three ‘Charles F Adams’-class destroyers, and the introduction into service of the three new ‘Hobart’-class air warfare destroyers (see project Sea 4000). Former Defence Minister Fitzgibbon had berated the program’s “serious difficulties, running over four years behind schedule, and \$150m over budget.”

Following a contract re-negotiation, these now seem to be being addressed by way of the delivery of upgraded software for the Australian Distributed Architecture Combat System, and the promise of the ships re-assuming operational activities.

Contractual acceptance of HMAS ‘Melbourne’ was achieved at end-2008, HMA Ships ‘Sydney’ & ‘Darwin’ were accepted in August 2008 – albeit with acknowledged deficiencies in their underwater warfare, electronic support and combat systems. The DMO announced it had agreed to contractual hand back and provisional acceptance of HMAS ‘Newcastle’ on 29 May from Thales Australia. The transaction was said to have occurred within the amended schedule agreed to in May 2006. Project completion is set for 31 December 2009.

Whilst ongoing electronic support and torpedo defence systems technical issues are being addressed, and in the run up to consideration

of full acceptance by the Royal Australian Navy (or some agreed level of acceptance albeit at reduced capability levels), the ships are being utilised for a wide variety of roles in local and regional deployments, and the training of Navy personnel.

FFG STANDARD MISSILE UPGRADE: Phase 4B of the \$629m project Sea 1390 constitutes the bridge to the new air warfare destroyers (which the Defence White Paper has indicated will be equipped with the 200+ nautical mile range SM-6 missile), from their obsolete SM-1 missiles to the more capable SM-2 missile. The DMO is the procurement coordinator, supported by the US Department of Defense under a FMS arrangement and commercial contracts.

The concept to upgrade the FFGs with mid-course guidance capable SM-2s was conceived over a decade ago, however, the contract for the guided missile launching system was not awarded until January 2008. Initial ship outfit and inventory stock missiles have now been acquired, with final deliveries expected to be completed in July 2009. The actual number of missiles acquired may, however, be limited as the FFGs are planned to retire from 2013 as the new SM-6 equipped project Sea 4000 air warfare destroyers are progressively delivered.

Integration of the Weapon Control System software in the US is said to have been achieved, with the Stage 1 Critical Design Review held in late-August 2008. Demonstration of the SM-2 initial operational capability is scheduled for late-2009. The US Navy continues to fund upgrades to the SM-2 missile, and announced 23 January successful combined combat system ship qualification test flights of the SM-2 Block IIIA and SM-2 Block IIIB missiles.

The latter is described as an anti-air warfare weapon system for long-range ship self-defence with a range of 90 nautical miles (167km),

Martin and the US Navy. In early-2010, staff currently located in Felixstow will move to the new purpose-built facility, which is adjacent to the AWD construction shipyard.

SA Premier, Mike Rann opened in February the new \$5m Maritime Skills Centre at Techport Australia. A ‘Supplier Precinct’ and a Techport Australia Commercial Campus (that will house the AWD Systems Centre and Raytheon Australia’s

new South Australian Engineering Centre) are also reported as taking shape. Contracts for all the AWD combat sub systems have now been awarded.

UK-based Ultra Electronics will supply the sonar system, while French-based Sagem Défense Sécurité will supply its VAMPIR/EOMS infra red search & track system. The Alliance has also selected: Denmark-based Terma’s Mk137 decoy launchers; Fremantle-based L-3 Comms/

Nautronix’s L-3 SAM Electronics X-Band Navigation Radar, and L-3 SAM Electronics’ ‘Voyage Data Recorder’ DEBEG 4300.

It has further contracted: L-3 Communications Aviation Recorders Division to supply their ‘Protec-S’ Automatic Identification System (\$3.1m); Kongsberg Defence & Aerospace’s Australian Tactical Interface Phase One; and the Mark 45 Mod 4 five-inch gun from BAE Land & Armaments. BAE Systems Australia was also

selected at end-2008 to supply its maritime satellite communications terminals, known as MASTIS.

More recently (May), Raytheon Missile Systems was selected to provide its very short range defence ‘Phalanx’ Mk15 Block 1B close-in weapons system (CIWS), while Adelaide-based Babcock Strachan & Henshaw Australia are to supply Mk32 Mod9 Surface Vessel Torpedo Tubes (SVTT). **ADBR**



FIRST CONTROVERSIES MARK PROJECT SEA 4000: ASIC documents indicate that after struggling to stay afloat through to 2006, Cairns (Qld)-based NQEA was acquired by industrial development company AIMTEK, who is reported to have since turned to the Queensland Government to help it honour guarantees required to secure a multi-million dollar air warfare destroyer (far L) module contract. Newcastle (NSW)-based Forgas has been the recipient of a series of Government interventions going back to the Whitlam Government’s RED Scheme, which helped finance a floating dock (L) located adjacent to its works. The company was next awarded a substantive contract to overhaul two former US Navy tank landing ships – now HMA Ships ‘Manoora’ & ‘Kanimbla’ (R) – but came in for severe criticism by former Howard Government Defence Minister, Ian McLachlan, when project costs were found to have doubled. Four antennas destined for the future HMAS ‘Hobart’ were installed in Lockheed Martin’s Moorestown (New Jersey)-based ‘Aegis’ production test centre in mid-March (far R) marking the full system’s transition from production to testing, with completion expected in November 2009. The Government confirmed 26 February it was abandoning the full privatisation (ie: sale) of ASC Pty Ltd, whilst media reports of ballooning tension between the DMO and ASC management saw the company’s CEO, Greg Tunny, resign in May.