

Project Data Summary Sheet¹³²

Project Number	SEA 4000 Phase 3
Project Name	AIR WARFARE DESTROYER
First Year Reported in the MPR	2008-09
Capability Type	New
Acquisition Type	Australianised MOTS
Capability Manager	Chief of Navy
Government 1st Pass Approval	May 05
Government 2nd Pass Approval	Jun 07
Total Approved Budget (Current)	\$9,090.1m
2016-17 Budget	\$674.0m
Project Stage	Detailed Design Review
Complexity	ACAT I



Section 1 – Project Summary

1.1 Project Description

This project will acquire three *Hobart* Class Air Warfare Destroyers (AWD) and their support system for the Australian Defence Force (ADF). The capability provided by the AWDs will form a critical element of the ADF's joint air warfare defence capability and will contribute to a number of other joint warfare outcomes.

1.2 Current Status

On 4 June 2014 the Minister for Defence announced this project as a Project of Concern.

Cost Performance

In-year

In line with providing financial information in accrual terms, the AWD Program was underspent by \$141.3m against the approved budget in Financial Year 2016-17. Compared to the cash outcome, \$44.0m of the \$141.3m variation is due to the approved budget being on a cash basis and the actuals being on an accrual basis. The following breakdown of variation explains the detail in cash terms where the variation is an underspend of \$97.3m against the approved budget for the same period. Of the cash underspend, \$53.6m was due to stoppage of payments in June coordinated by Chief Finance Officer (CFO) Group which consisted of \$27.5m against Foreign Military Sales (FMS) payments for AEGIS and Harpoon and \$26.1m against Alliance Based Target Incentive Agreement (ABTIA) costs for work performed attributed to labour and contractor fees. The remaining \$43.7m underspend was primarily due to efficiencies made against the ABTIA Contract due to Navantia being inserted into the Shipyard which includes savings against Indexation estimates and Direct Project Costs \$47.8m. Further underspends were against various Program Management Office contracts, Petrol, Oil and Lubricants (POL) and Outfit Allowance List (OAL) of \$32.6m plus milestone delays of \$10.6m against the Platform System Designer's (PSD) Contract due to the focus being on Provisional Acceptance of Ship 1. Higher than expected disbursements throughout the year resulted in greater payments against the AEGIS FMS case of \$45.6m plus overall Spares costs were \$1.8m higher than anticipated due to payments for the Sonar Dome Towed Assembly.

Project Financial Assurance Statement

Notwithstanding the issues disclosed at Section 5.2, as at 30 June 2017, SEA 4000 Phase 3 has reviewed the approved scope and budget for those elements required to be delivered by the program. Having reviewed the current financial and contractual obligations of the program, current known risks and estimated future expenditure, Defence considers, as at the reporting date, and following the completion of the AWD Reform strategy in December 2015, which included a Real Cost Increase of \$1.2 billion to the AWD budget, being approved in July 2015 and provided in September 2015, there is sufficient budget remaining for the Project to complete against the agreed scope.

Contingency Statement

The project has not applied contingency in the financial year.

132 Notice to reader

Forecast dates and Sections: 1.2 (Material Capability Delivery Performance), 1.3 (Major Risks and Issues), 4.1 (Measures of Material Capability Delivery Performance), and 5 (Major Risks and Issues) are excluded from the scope of the ANAO's review of this Project Data Summary Sheet. Information on the scope of the review is provided in the *Independent Assurance Report* by the Auditor-General in Part 3 of this report.

Schedule Performance

On 6 September 2012, following a stakeholder review of resource considerations and support for a schedule extension, the then Minister for Defence announced that the AWD schedule had been re-baselined. The revised AWD delivery dates were:

- HMAS *Hobart* (Ship 1) – March 2016;
- HMAS *Brisbane* (Ship 2) – September 2017; and
- HMAS *Sydney* (Ship 3) – March 2019.

These delivery dates represented delays of 15, 18 and 21 months respectively against the dates contracted in October 2007.

Following further concerns with AWD delivery, the delivery schedule has been further re-baselined as part of the AWD Reform. The post-Reform contracted delivery dates are:

- HMAS *Hobart* (Ship 1) – June 2017;
- HMAS *Brisbane* (Ship 2) – July 2018; and
- HMAS *Sydney* (Ship 3) – December 2019.

These new delivery dates represent delays of 30, 28 and 30 months respectively against the dates contracted in October 2007.

Since July 2016 the following major events have occurred:

- **August 2016 – Ship 1 Dock Trials completed**
- **September 2016 – Ship 1 Builder's Sea Trials completed**
- **December 2016 – Ship 2 Float Off completed**
- **February 2017 – Ship 2 Main Generator Light Off completed**
- **March 2017 – Ship 1 Category 5 Sea Acceptance Trials completed**
- **March 2017 – Command Team Trainer delivered and accepted**
- **June 2017 – Provisional Acceptance of Ship 1**

Materiel Capability Delivery Performance

All significant government specified capability is currently planned to be achieved and in some warfare areas, the capability will be exceeded. Procurement of the Electronic Warfare Radar – Electronic Attack (R-EA) sub-system has been deferred as its performance, based on currently available technology, does not represent a cost-capability benefit given that more capable second generation technology is expected to be available in the 2017-18 time frame. The R-EA budget has been preserved to support the more capable system being installed in the AWD. Decisions made by the program in conjunction with the Capability Manager will ensure that AWD is delivered with the expected capability.

Note

Forecast dates and capability assessments are excluded from the scope of the review.

1.3 Project Context

Background

In May 2005 the Government granted first pass approval to the Program, allowing commencement of Phase 2, the Design phase.

Phase 2 oversaw the development of two platform designs:

- The 'Existing' design based upon a modified version of the Navantia designed and built F-100 warship as the Australianised military off-the-shelf option; and
- The 'Evolved' design produced by Gibbs & Cox developed from an in-house design utilising design features of the US Navy class of Aegis Guided Missile Destroyers.

In May 2005, the Government selected ASC AWD Shipbuilder Pty Ltd as the shipbuilder for the AWD Program and determined that the ships should be built in Adelaide. Raytheon Australia Pty Ltd was chosen as the Combat System Systems Engineer.

In October 2005, Defence sought and received Government approval to acquire three Aegis Weapon Systems to provide the core air warfare capability of the AWD. The Commonwealth subsequently entered into a United States (US) Foreign Military Sales (FMS) agreement for the acquisition of the Aegis weapons system and associated engineering services and integrated logistic support.

In June 2007, at Second Pass, the Government granted approval to commence construction of the *Hobart* Class AWD utilising the existing design. This decision initiated the current phase of Project SEA 4000 Phase 3, the construction phase.

Phase 3 includes detailed design, procurement, ship construction, and set to work of the Aegis Combat System and the F-100 based Platform Systems. This culminates in the delivery of three *Hobart* Class AWDs together with the ships support systems including initial spares and ammunition outfits, and initial crew training.

Phase 3 concludes with the delivery to the Royal Australian Navy (RAN) of the third AWD, HMAS *Sydney*.

At Second Pass, the Government approved Defence's proposal to close SEA 4000 Program Phase 2, Design, and Phase 3.1, Aegis acquisition activities, and combine the remaining Phase 2 and Phase 3.1 scope and funding with SEA 4000 Program Phase 3.

The Government announced the implementation of an AWD Reform Strategy on 4 June 2014 following an Independent Review of the AWD Program and heightened concern regarding program schedule and forecast cost increases. These concerns resulted in the Program being designated a Project of Concern in June 2014.

As part of the Reform strategy, the Commonwealth entered into agreements with both BAE Systems and Navantia to participate in

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<p>the Reform Interim Phase from December 2014 until 31 July 2015.</p> <p>On 22 May 2015, the Minister for Finance and the then Minister for Defence jointly released a media statement suggesting that the project will require an additional \$1.2 billion. This funding was approved in July 2015 at the expense of other Defence acquisitions.</p> <p>A limited tender process was initiated on 29 May 2015 seeking proposals to either insert a managing contractor into ASC AWD Shipbuilder Pty Ltd for the remainder of the AWD build, or to further enhance ASC capability through a partnering agreement.</p> <p>After completion of the Reform Interim Phase the Departments of Finance and Defence conducted a Limited Tender for Shipbuilding Management Services (SMS) and jointly agreed that Navantia was the preferred company to provide an experienced shipbuilding management team for insertion into ASC AWD Shipbuilder Pty Ltd.</p> <p>The Departments of Finance and Defence have worked together to implement Long-Term Arrangements (LTAs) (in the form of Shipbuilding Management Services) aimed at ensuring the successful completion of the AWD Program with greater efficiency and effectiveness and consistent with international productivity levels.</p> <p>The SMS contract was signed on 5 December 2015 and is a subcontract under ASC AWD Shipbuilder Pty Ltd.</p> <p>Concurrently with the AWD build program, the AWD Transition Support Period (TSP) arrangements strategy is underway. Contract signature was achieved in December 2016 and the TSP Managing Contractor is working onsite with the Commonwealth sustainment office.</p> <p>Ship 1 was Provisionally Accepted by the Department of Defence on 16 June 2017.</p>
<p>Uniqueness</p> <p>The SEA 4000 Air Warfare Destroyer Program is currently one of Australia's largest and most technically complex Defence projects.</p> <p>The AWDs have been designated by the RAN as <i>Hobart</i> Class Guided Missile Destroyers (DDGs) and will be the RAN's first Aegis capable ships.</p> <p>The AWDs are being delivered through an Alliance based contract arrangement involving ASC AWD Shipbuilder, Raytheon Australia, and the Commonwealth, represented by Defence.</p>
<p>Contractual Framework</p> <p>The Alliance based contract arrangement was signed in October 2007. Key features of the AWD Alliance and the operations of the Alliance based contract arrangement include:</p> <ul style="list-style-type: none"> • The Alliance Industry Participants (Raytheon Australia and ASC AWD Shipbuilder) are jointly and severally responsible for the delivery of the three ships and their support systems. Each party remains individually responsible for compliance with all statutory requirements. • The Alliance is neither a legal body, nor a joint venture. • The legal and commercial basis for the Alliance is established through the Alliance Based Target Incentive Agreement (ABTIA) contract signed by all three participants. This establishes a virtual organisation under the governance of the AWD Alliance Board. <p>The Commonwealth entered into a Platform System Design contract with Navantia, the ship designer, in October 2007. This contract is managed by the AWD Alliance under the Alliance based contract arrangement.</p> <p>The Aegis combat system is being procured by the Commonwealth under the FMS agreement with the US Navy. This agreement is also managed within the AWD Alliance project team.</p> <p>While Navantia and the US Navy (and its equipment supplier, Lockheed Martin) are not part of the Alliance, they work closely with the Alliance and are treated in an alliance like manner.</p>
<p>Major Risks and Issues</p> <p>The major challenges the project faces are:</p> <ul style="list-style-type: none"> • Integration of the <i>Hobart</i> Class Combat System; • Capability Acceptance; • Achieving maximum productivity levels through efficient shipyard operation and change management; • Managing the level and timing of changes to the production baseline to minimise production rework; • Meeting the consolidation, test and activation schedules within the constraints of a new build in a new Australian shipyard; • Managing the timely delivery of equipment and fittings from a large number of subcontractors located in Australia and overseas through the AWD Alliance; • Delivering an effective, efficient and sustainable through-life support system for the <i>Hobart</i> Class DDGs.
<p>Other Current Sub-Projects</p> <p>SEA 4000 Phase 3.2 – Standard Missile SM-2 Missile conversion and upgrade. The conversion of the missiles will allow them to be used in the AWDs and provide an enhanced anti-aircraft and anti-ship missile defence capability. This project is managed by Joint Systems Division within Defence.</p> <p>SEA 4000 Phase 3.3 – This project is to deliver a tailored 20 week United States Navy (USN) Combat System Sea Qualification Trials (CSSQT) activity for each of the three AWDs. The project is to deliver the services component of the Hobart Class CSSQT which requires use of USN range facilities, analysis and assets. The USN CSSQT is a component of the SEA 4000 Operational Test and Evaluation program being executed by the Royal Australian Navy.</p>
<p>Notes</p>
<p>Major risks and issues are excluded from the scope of the review.</p>

Section 2 – Financial Performance

2.1 Project Budget (out-turned) and Expenditure History

Date	Description	\$m	Notes
Project Budget			
Jun 07	Original Approved	7,207.4	1
Jan 14	Real Variation – Transfer	(109.9)	
Sep 15	Real Variation – Real Cost Increase	1,199.5	2
		1,089.6	3
Jul 10	Price Indexation	1,173.2	
Jun 17	Exchange Variation	(380.1)	
Jun 17	Total Budget	9,090.1	
Project Expenditure			
Prior to Jul 16	Contract Expenditure – AWD Alliance	(4,819.3)	4
	Contract Expenditure – US Government	(1,076.9)	
	Contract Expenditure – Navantia	(424.4)	
	Contract Expenditure – NATO Consortium	(72.4)	
	Other Contract Payments / Internal Expenses	(248.7)	
		(6,641.7)	
FY to Jun 17	Contract Expenditure – AWD Alliance	(435.9)	4
	Contract Expenditure – US Government	(72.6)	
	Contract Expenditure – Navantia	(1.6)	
	Other Contract Payments / Internal Expenses	(22.6)	
		(532.7)	
Jun 17	Total Expenditure	(7,174.4)	
Jun 17	Remaining Budget	1,915.7	
Notes			
1	In January 2014, a real cost decrease was approved to transfer project funds to Defence Estate and Infrastructure Group which has responsibility for AWD facilities related deliverables.		
2	In September 2015, following advice and approval from Government in July 2015, a revised Budget Approval Notice was provided authorising the Real Cost Increase to the AWD Budget. Included in the RCI was an estimated \$167.0m to cover indexation costs.		
3	Up until July 2010, indexation was applied to project budgets on a periodic basis. The cumulative impact of this approach was \$854.8m. In addition to this amount, the impact on the project budget as a result of out-turning was a further \$318.4m having been applied to the remaining life of the project.		
4	Other expenditure comprises: Operating expenditure, minor contract expenditure and other capital expenditure not attributable to the listed contracts.		

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
725.5	675.7	674.0	PBS-PAES: The financial variation between the Budget Estimate and the Revised Budget Estimate is due to reprogramming of forecasted expenditure of the Alliance contract and Foreign Military Sales forecasted payments. PAES-Final Plan: Variance is due to MYEFO & 2017-18 Pre-ERC Forex Updates.
Variance \$m	(49.8)	(1.7)	Total Variance (\$m): (51.5)
Variance %	(6.9)	(0.3)	Total Variance (%): (7.1)

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2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(94.5)	Australian Industry	The AWD underspend for Financial Year 2016-17 \$141.3m. See Section 1.2 for further detail.
		(10.2)	Foreign Industry	
			Early Processes	
		(82.0)	Defence Processes	
		45.4	Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
674.0	532.7	(141.3)	Total Variance	
		(21.0)	% Variance	

2.3 Details of Project Major Contracts

Detailed Direct Project Major Contracts						
Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 17 \$m			
US Government	Oct 05	842.7	1,090	FMS	FMS	1, 2
AWD Alliance	Oct 07	4,323.1	6,734.8	Variable with Pain/Gain Share	Alliance	3
Navantia	Oct 07	373.6	578.8	Fixed with indices escalation	Alliance based	3
NATO Consortium	Dec 09	78.5	72.4	FMS (NATO)	FMS (NATO)	2
Notes						
1	<p>The FMS Case established pre-Second Pass involved three contractual steps (initial version and two amendments); October 2005 for initial engineering services, April 2006 for long lead items and July 2006 for three ship sets of core Aegis Combat System Equipment. The resulting scope was in accordance with Government approval of SEA 4000 Phase 3.1. Post-Second Pass, there have been five further amendments to the FMS Case for additional equipment and services for both the AWD Program and the AWD Alliance. These amendments are in accordance with Government approval at Second Pass for the full scope of SEA 4000 Phase 3. There will be further amendments to the FMS Case to cover additional equipment and services for the project. The Price at Signature excludes \$167.5m spent in previous phases of the project.</p> <p>The Price at 30 June 2017 includes an increase of USD \$20m as per Amendment 10 of the LOA and excludes a current Alliance cost of \$208.2m for the purchase of FMS equipment to be supplied under the ABTIA contract.</p>					
2	Contract value as at 30 June 2017 is based on actual expenditure to 30 June 2017 and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable).					
3	As a result of the AWD Reform Strategy, the AWD Alliance (ABTIA) and Navantia (Platform System Design) contracts were renegotiated and new contracts signed in December 2015. The price is the value as per the new contract in out turned dollars (as at June 2017) using the Commonwealth cumulative escalation indices and includes ABTIA Direct Project Costs, Target Fee, Procurement Fee and the Shipbuilding Management Services costs.					
Contractor	Quantities as at		Scope	Notes		
	Signature	30 Jun 17				
US Government	3	3	Aegis Combat System			
AWD Alliance	3	3	Air Warfare Destroyer			
Navantia	N/A	N/A	Platform System Design and Services			
NATO Consortium	Classified	Classified	Evolved Sea Sparrow Missiles (ESSM)	1		
Major equipment received and quantities to 30 Jun 17						
See Section 1.2 Schedule Performance.						
Notes						
1	Quantity being acquired is classified.					

Section 3 – Schedule Performance

3.1 Design Review Progress

Review	Major System /Platform Variant	Original Planned	Current Planned	Achieved /Forecast	Variance (Months)	Notes
System Requirements	AWD Program	Mar 08	N/A	Apr 08	1	
Preliminary Design	AWD Program	Dec 08	N/A	Feb 09	0	1
Critical Design	AWD Program	Dec 09	N/A	Feb 10	0	2
Support System Detailed Design Review	AWD Program	Jun 10	N/A	Aug 10	0	3
Notes						
1	The Preliminary Design Review (PDR) was conducted as scheduled in December 2008 and resulting actions completed as scheduled by February 2009.					
2	The Critical Design Review (CDR) was conducted as scheduled in December 2009 and resulting actions completed as scheduled by February 2010.					
3	The Support System Detailed Design Review (SSDDR) was conducted as scheduled in June 2010 and resulting actions completed August 2010.					

3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System/Platform Variant	Original Planned	Current Planned	Achieved /Forecast	Variance (Months)	Notes
System Integration	Ship 1 – Complete Hull Integration	Dec 12	Mar 14	Mar 14	15	1, 3
	Ship 1 – Start Combat System Light Off	Dec 13	Nov 15	Nov 15	23	2, 3, 4
	Ship 2 – Complete Hull Integration	Mar 14	Dec 15	Dec 15	21	3, 4
	Ship 2 – Start Combat System Light Off	Mar 15	Apr 17	Apr 17	25	3, 4
	Ship 3 – Complete Hull Integration	Jun 15	Aug 17	Aug 17	26	3, 4
	Ship 3 – Start Combat System Light Off	Jun 16	Sep 18	Sep 18	27	3, 4
Acceptance	Ship 1 – Commencement of Category 5 Trials	Aug 14	Sep 16	Jan 17	29	3, 4
	Ship 1 – Provisional Acceptance	Dec 14	Jun 17	Jun 17	30	3, 4, 5
	Ship 2 – Commencement of Category 5 Trials	Nov 15	Dec 17	Mar 18	28	3, 4
	Ship 2 – Provisional Acceptance (Materiel Release 2)	Mar 16	Jul 18	Jul 18	28	3, 4
	Ship 3 – Commencement of Category 5 Trials	Feb 17	Jun 19	Jul 19	29	3, 4
	Ship 3 – Provisional Acceptance (Materiel Release 3)	Jun 17	Dec 19	Dec 19	30	3, 4
Notes						
1	Complete Hull Integration was achieved when the last erection joint was completed and has been structurally inspected and accepted.					
2	Start Combat System Light Off verified the readiness of the first set of installed combat system equipment for CAT 4 testing.					
3	In 2010 difficulties were encountered in relation to the engineering and construction of some of the first AWD hull blocks. This resulted in the reallocation of block work between BAE, Forgacs and Navantia and a revision to the delivery schedule. On 6 September 2012, the then Minister for Defence announced, that the AWD schedule would be re-baselined and that the revised AWD delivery dates would be March 2016, September 2017, and March 2019.					
4	In May 2015, following a Comprehensive Cost Review conducted by the AWD Alliance held in February, the then Minister for Defence announced that the delivery schedule had been changed to June 2017, September 2018 and March 2020 respectively. With the introduction by Navantia of an expert shipbuilding management team into the shipyard as part of the AWD Reform Long Term Arrangements for the AWD Reform, the delivery schedule for Ships 2 and 3 was brought forward by up to three months from prior schedule extension.					
5	Provisional Acceptance was achieved on 16 June 2017, however Initial Materiel Release (IMR) has not been declared and is forecast for September 2017. The Materiel Acquisition Agreement states IMR should be declared as close as possible to Navy's declaration of Initial Operational Release, which is forecast to be achieved (with caveats) in September 2017.					

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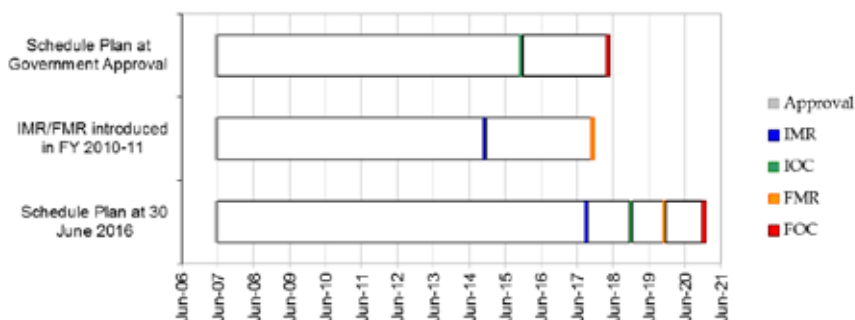
3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Dec 14	Sept 17	33	1, and see also Note 3 and 4 above
Initial Operational Capability (IOC)	Dec 15	Dec 18	36	1, and see also Note 3 and 4 above
Final Materiel Release (FMR)	Dec 17	Dec 19	24	
Final Operational Capability (FOC)	May 18	Jan 21	32	2

Notes

1	The IMR and IOC dates have been reviewed and are expected to be approved with the release of a revised Materiel Acquisition Agreement 2.0 .
2	FOC is scheduled 12 months after MR3.

Schedule Status at 30 June 2017



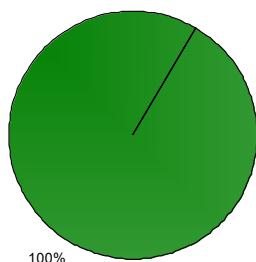
Note

Forecast dates in Section 3 are excluded from the scope of the review.

Section 4 – Materiel Capability Delivery Performance

4.1 Measures of Materiel Capability Delivery Performance

Pie Chart: Percentage Breakdown of Materiel Capability Delivery Performance

Green:

The Program currently expects to meet materiel capability requirements as expressed in the suite of Capability Definition Documentation and in accordance with the requirements of the relevant Technical Regulatory Authorities.

Amber:

N/A

Red:

N/A

Note

This Pie Chart represents Defence's expected capability delivery. Capability assessments and forecast dates are excluded from the scope of the review.

4.2 Constitution of Initial Materiel Release and Final Materiel Release

Item	Explanation	Achievement
Initial Materiel Release (IMR)	One <i>Hobart</i> Class Ship System with up to Category 5 (sea acceptance) trials, testing and certification completed. Initial sustainment arrangements in place to support IOC. Training of the <i>Hobart</i> Class Systems for the commissioning crew to support IOC. IMR is expected to be achieved in September 2017.	Not yet achieved.
Final Materiel Release (FMR)	All three <i>Hobart</i> Class Ship Systems with up to Category 5 (sea acceptance) trials, testing and certification completed. All sustainment arrangements in place to provide materiel support to the <i>Hobart</i> Class. FMR is expected to be achieved in December 2019.	Not yet achieved.

Section 5 – Major Risks and Issues

5.1 Major Project Risks

Identified Risks (risk identified by standard project risk management processes)	
Description	Remedial Action
<p>1. Integration of the <i>Hobart</i> Class Combat System.</p> <p>Key Risks:</p> <ul style="list-style-type: none"> The current version of the Aegis Weapons System has not been previously integrated in the platform. Integration of Electronic Warfare and Communications Systems. Equipment selections may impact on the topside design. Sonar – the software development and integration. 	<p>The risks associated with the integration of the Aegis Weapons System are being actively managed through regular reviews between the Alliance, Platform System Designer, US Navy and Lockheed Martin (the Aegis equipment supplier to the US Navy). Action is taken to ensure emerging issues are identified and addressed in a timely manner.</p> <p>Electronic Warfare and Communications and Information Systems procurement strategies have been developed with a wide range of stakeholder engagement. These strategies are aimed at ensuring that the customer will be satisfied with the contracted solution and that the solution will have minimal impact on the platform design.</p> <p>The Integrated Test Team (ITT) comprised of Aegis specialists commenced on site to conduct Combat System set-to-work activities.</p> <p>With Ship 1 successfully completing its CAT 5 trials in March 2017 and its Provisional Acceptance in June 2017, the risk to the program is now considered low.</p> <p>Sonar – See Remedial Action at Risk 3.</p>
<p>2. Capability Acceptance: Certification requirements are unclear for some equipment, and US Navy and some Original Equipment Manufacturers are not disclosing requested objective quality evidence.</p>	<p>The Project Certification Plan has been agreed with the RAN. The Program is working closely with the US Navy and Original Equipment Manufacturers to obtain the required objective quality evidence. Working with RAN to establish processes, procedures and principles to achieve certification.</p> <p>As the project progresses, the risk of missing objective quality evidence is being mitigated as deficiencies in evidence are not being realised.</p> <p>All Safety certification required under FMS has been delivered to Alliance, no outstanding data.</p>
<p>3. Subcontractor Performance: Subcontractor performance may result in poor quality product, delays or changed requirements.</p>	<p>The performance of some subcontractors has required active management and intervention.</p> <p>This risk is being mitigated, as all blocks have been delivered to the Adelaide shipyard and integration of Ship 3 is well underway. There is an outstanding remuneration claim from one of the constructors regarding block work.</p> <p>Sonar – The Alliance is actively working with the Sonar Original Equipment Manufacturer (OEM) at all levels, including the embedding of Alliance staff on-site to manage risk associated with software development and integration.</p> <p>While some tests of the Variable Depth Sonar were completed during Acceptance Trials, further testing will be completed post Provisional Acceptance. Testing of the hull mounted sonar has been successfully completed.</p>

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4. Support System: current data available to the Alliance and/or the Commonwealth may not be mature enough to achieve an optimised support system (maturity of Life Cycle Cost data, loss of project data that supports Through Life Support).	Mitigation strategies are in place to minimise the risk and work is in hand with the Alliance to develop strategies to progressively seek the data required to support the development of an optimised support system. Logistics Information Management System Management plan completed, implementation has begun including prototype data loading. Working with the Alliance to migrate and validate data between systems. In March 2017, the Commonwealth accepted the Command Team Trainer at HMAS Watson, which was the first entire system delivered by the Alliance.
5. Inadequate Configuration Management impact on Ship Acceptance.	Early engagement and agreement on the process and expected deliverables is required to support ship Delivery and Acceptance. The Ship Certification Plan addresses how product conformance will be established, whilst the AWD Functional Configuration Audit and Physical Configuration Audit Plan provides direction on how these elements of the Design will be assessed. The AWD Acceptance Plan provides the overall framework for Delivery and Acceptance of the AWDs and other items of Supplies as detailed in the ABTIA. The Alliance PMO has appointed an Acceptance Manager and established an Acceptance Team who hold weekly meetings with the CoA to review progress on all delivery and acceptance related matters. The first major item of supplies (Hobart Class Command Team Trainer) has been Delivered and Accepted by the CoA, hence providing increased confidence in the delivery and acceptance framework and processes.
6. Impacts to Test and Activation and Sea Trials due to equipment failure.	The underlying risks have been retired or downgraded following successful completion of Builders Acceptance Trials for Ship 1. Engagement with OEMs and Navantia to ensure stocks of equipment and spares are adequate. Spares are being maintained according to manufacturers' specifications.
Emergent Risks (risk not previously identified but has emerged during 2016-17)	
Description	Remedial Action
N/A	N/A

5.2 Major Project Issues

Description	Remedial Action
1. The delivery of FMS elements of the AWD supplies may not be possible, or may be delayed or compromised in integrity, due to the budget for FMS Engineering and Technical Assistance (ETA) not being sufficient.	Development and implementation of Follow On Support business case framework and associated cases will allow sustainment of Ships 1 and 2 to be funded through CN40 (as required by Navy). The increased stability in the shipbuilding schedule due to AWD reform implementation has reduced risk of delays to delivery. Opportunities have been identified and taken to reduce expenditure of ETA.
2. Shipbuilding Delay: The AWD Alliance will not meet contracted delivery dates for the three ships.	This issue has been retired. The implementation of the AWD Reform has brought stability into the shipbuilding schedule.
3. Change Management: Change introduced to the existing platform design as a result of: <ul style="list-style-type: none"> Legislative or regulatory requirements, Safety requirements, Equipment obsolescence, Errors in the original design, and Interrelated projects (e.g. AIR9000) Will impact cost and possibly schedule. Severity of the cost and schedule impacts to the Commonwealth will be dependent on the scope and timing of the change	A Design Chill was implemented in 2011 to reduce the level of change rolling into the production baseline. Effective engagement with key stakeholders has been critical to ensure the implications of change requests, approval and subsequent implementation are fully understood. Robust mechanisms to control the authorisation of change have been established within the Alliance and Program Office. The change management approval and implementation process has undergone a number of evolutions to expedite change as efficiently as possible. Delays in approval can result in significant cost and schedule impacts.

implementation relative to Ship completion.	AWD Reform long term arrangements embed the designer on-site in order to reduce the change management overhead. This issue has been partially mitigated as all known changes have been assessed and treated; the final safety changes agreed for Provisional Acceptance of Ship 1. The change management process for minor change is in place with Navantia and is effective.
<p>4. Shipyard Productivity.</p> <p>AWD shipbuilding productivity has been independently reviewed and benchmarked since 2011. The current low level of shipbuilding productivity is considered a major issue in terms of the overall AWD program and to date the issue has only been partially addressed by ASC, the AWD Shipbuilder. Unless there is a near term improvement in shipbuilding productivity then the current shipbuilding performance, which is in excess of plan and budget, will negatively affect other components of the AWD program.</p>	<p>Annual independent reviews have been undertaken by First Marine International, a company internationally recognised for its expertise in shipbuilding productivity benchmarking. The most recent review was conducted late 2016.</p> <p>Reform long term arrangements commenced December 2015 placing Shipbuilding Management responsibility with Navantia.</p> <p>This issue has been retired. The implementation of the Reform arrangements has improved shipyard performance, and stabilised cost and schedule performance.</p>
<p>5. Intellectual Property rights are not clear resulting in risk exposure during Through-Life Support.</p>	<p>Issue previously raised as part of Risk 4, now realised as an issue to promote visibility and management. Delivery of accurate and complete IP data is an Alliance responsibility and requires close Commonwealth monitoring. The Alliance is currently undergoing an IP data remediation process.</p> <p>This issue has been retired. The Alliance has developed and implemented a 'make good' plan with records to be transferred from the Product Lifecycle Management system to the Team centre system.</p>
Note	
Major risks and issues in Section 5 are excluded from the scope of the review.	

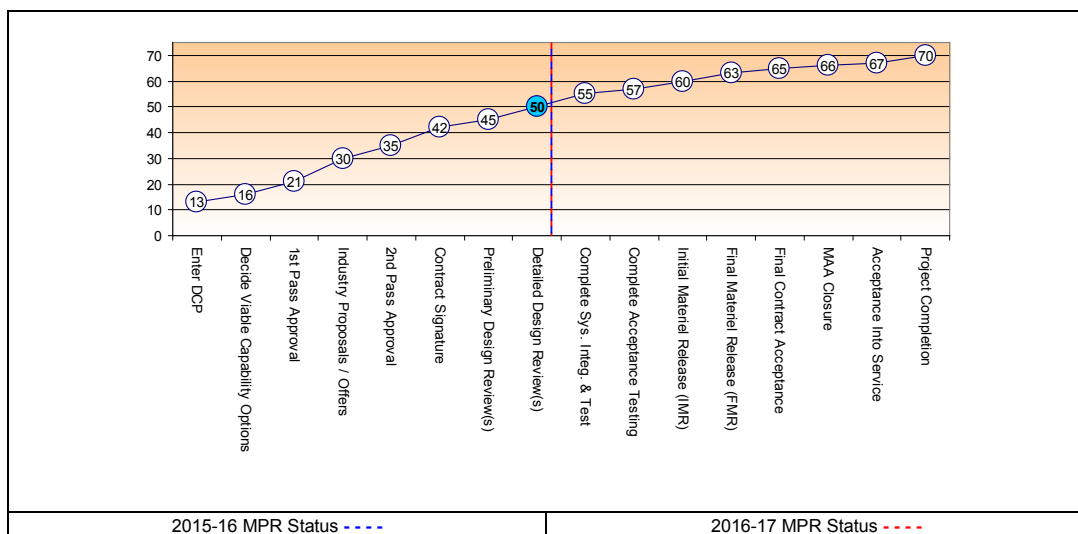
Section 6 – Project Maturity

6.1 Project Maturity Score and Benchmark

Maturity Score		Attributes							Total
		Schedule	Cost	Requirement	Technical Understanding	Technical Difficulty	Commercial	Operations and Support	
Project Stage	Benchmark	7	7	7	8	7	7	7	50
Detailed Design Review	Project Status	7	7	8	8	8	6	7	51
	Explanation	<ul style="list-style-type: none"> • Requirement: Reflects the successful completion of the Support System Detailed Design Review in August 2010. • Technical Difficulty: Reflects the completion of Communication Information System subsystem CDR. • Commercial: Reflects the lower than expected contractor performance in terms of shipbuilding productivity. 							

Project Data Summary Sheets

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Section 7 – Lessons Learned

7.1 Key Lessons Learned

Project Lesson	Categories of Systemic Lessons
Formation of the Alliance, a new organisational structure takes time and effort to develop the culture necessary to achieve improved outcomes. An external facilitator was engaged to assist in the initial and ongoing development of the Alliance and this has proved invaluable.	Governance
The Program Office, originally located in both Canberra and Adelaide was relocated to Adelaide to improve operations and interactions with the Alliance. The relocation involved considerable effort and a resultant loss in knowledge of staff who did not relocate. Earlier consolidation of the Program Office would have been beneficial.	Resourcing
The interpretation of the requirements of fitness for purpose of drawings is different between contracting parties. A review of all product types prior to contract and interrogation of the delivery schedule to confirm sufficient time for reviews and incorporation of comments is necessary.	Contract Management
The shipbuilding capacity of shipyards involved in a project like AWD needs to be assessed in detail in terms of precise capacity to undertake production engineering as well as the workload constraints of facilities, production supervision and overall workforce numbers taking into consideration the total contracts conducted at the shipyard in parallel.	Resourcing First of Type Equipment
The schedule that plans the transition from design to production needs detailed evaluation by the designer(s) and the production shipyard(s) to ensure the balance between commencing production and completing very detailed design is appropriately balanced and agreed.	Schedule Management

Section 8 – Project Line Management

8.1 Project Line Management in 2016-17

Position	Name
General Manager Ships	Mr Alan Nicholl (to Feb 2017) Mr Patrick Fitzpatrick (Acting Feb 2017–current)
Program Manager	CDRE Craig Bourke, RAN
Deputy Program Manager	Mr Greg McPherson

