Project Data Summary Sheet²⁴⁰

Project Number	SEA 1439 Phase 3
Project Name	COLLINS CLASS
	SUBMARINE
	RELIABILITY AND
	SUSTAINABILITY
First Year Reported	2009-10
in the MPR	
Capability Type	Upgrade
Acquisition Type	Australianised MOTS
Service	Royal Australian Navy
Government 1st	N/A
Pass Approval	
Government 2nd	Sep 00
Pass Approval	
Total Approved	\$411.7m
Budget (Current)	
2014-15 Budget	\$13.7m
Project Stage	Integration and Test
Complexity	ACAT III



Section 1 – Project Summary

1.1 Project Description

SEA 1439 Phase 3 is a program of upgrades to Collins Class platform systems and shore infrastructure to improve the Class reliability, sustainability, safety and capability for each of the six submarines.

1.2 Current Status

Cost Performance

In-year

This year the underspend of \$2.7m is primarily due to delays and cost savings by Australian Industry.

Project Financial Assurance Statement

As at 30 June 2015, project SEA 1439 Phase 3 has reviewed the approved scope and budget for those elements required to be delivered by the project. Having reviewed the current financial and contractual obligations of the project, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget remaining for the project to complete against the agreed scope.

Contingency Statement

Project SEA 1439 Phase 3 does not have a formal contingency allocation.

240 Notice to reader

Future dates and Sections: 1.3 (Major Risks and Issues), 4.1 (Measures of Materiel Capability Delivery Performance), 5.1 (Major Project Risks) and 5.2 (Major Project Issues) are out of scope for the ANAO's review of this Project Data Summary Sheet. Information on the scope of the review is provided in the *Independent Review Report by the Auditor-General* in **Part 3** of this report.

Schedule Performance

The project consists of 22 separate sub-projects of which the outstanding elements are aligned to the Collins Class Submarine Integrated Master Schedule (IMS). The IMS depicts the submarine maintenance periods where project implementation can be performed. Submarine installations are consistent with the approved Materiel Acquisition Agreement (MAA) schedule; however, each installation is dependent on the Full Cycle Docking (FCD) program, consequently completion dates vary according to maintenance availability.

Installation of engineering enhancements were completed on HMAS *Dechaineux* on completion of the **Mid-Cycle Docking (MCD)** and continue on HMAS *Farncomb* during the scheduled docking period. HMAS *Collins* FCD was re-scheduled to commence in 2016 due to a baseline change to the IMS, however preliminary work is **progressing** to take advantage of the pre-FCD period which allows access to the platform. The project continues to progress non-platform activities pertaining to the Diesel Land Based Test Facility with completion of the **diesel engine and dynamometer configuration stage of the project. Final Materiel Release (FMR) is expected to be achieved in August 2022.**

Materiel Capability Delivery Performance

Only two sub-projects provide new capabilities; Special Forces Upgrade and the Torpedo Decoy. The remaining sub-projects are medium to low complexity engineering enhancements. The Special Forces upgrade provides three capabilities. Two have achieved Operational Release (OR), while the remaining capability (Exit & Re-entry) has been delayed due to the requirement to implement safety modifications identified during the manned Sea Verification Trial. These safety modifications have been **installed** and **harbour and sea acceptance testing** on HMAS *Dechaineux* **completed post** MCD **in June 2015**.

Torpedo Decoy received Initial OR on 2 May 2014 by Chief of Navy.

Fourteen engineering enhancements have been completed by the project. The remaining enhancements will be implemented progressively until 2022 subject to the submarine availability and the FCD program.

Note

The capability assessments and forecast by the project are not subject to the ANAO's assurance review.

1.3 Project Context

Background

In 1999, Government sponsored the '*McIntosh and Prescott Report*' into submarine capability, which was followed by a subsequent review by Head Submarine Capability Team who identified capability, reliability and sustainability issues with the Collins Class platform and associated shore infrastructure. In 2000, Government approved project funds to design and implement engineering enhancements for as many of these capability and materiel deficiencies as possible within the allocated budget. Government also approved a "global budget" whereby Head Maritime Systems could approve transfer of funding between SEA 1439 Phase 3, SEA 1439 Phase 4B (Improvements to Collins Sensors), SEA 1439 Phase 4A (Replacement Combat Systems) and SEA 1429 (Replacement Heavyweight Torpedo) to achieve optimum capability. Under the global budget there have been reductions in funding allocations to SEA 1439 Phase 3 in favour of SEA 1439 Phase 4A and SEA 1429, with a commensurate reduction in the number of engineering enhancements to be implemented through SEA 1439 Phase 3.

The scope of this project is limited to the reliability and sustainability issues identified in the 1999 review and not the more contemporary reliability and sustainability issues relating to diesel engines, generators, batteries or the main motor; those issues are being addressed under the submarine sustainment program.

Many of the engineering enhancements can only be installed during the submarine FCD program and although most design and development activities are complete, submarine upgrades are contingent on the FCD program, which will run to 2022.

A total of 24 platform upgrades were originally identified in the initial MAA. However, two were removed due to one being technically infeasible and the other overlapping with another project. The remaining 22, consisting of two new capabilities and 20 engineering enhancements, have been identified for action under the project. **Fourteen** engineering enhancements have been completed and the two new capabilities are being implemented. However, completion of the remaining **six** engineering enhancements is priority driven and will be continually reassessed throughout the project.

The two new capabilities and core engineering enhancements managed by the SEA 1439 Phase 3 project, which represent the highest priority and spend profile, and specifically disclosed in this report include:

• Special Forces Upgrade (New Capability): To provide three basic levels of capability and to further

Part 3. Project Data Summary Sheets

enhance the capabilities to a fully deployable state in two submarines.

- Torpedo Counter Measures Internal Stores (Torpedo Decoy) (New Capability): To provide a programmable counter measure against torpedos.
- Fire Fighting Upgrade (Engineering Enhancement): Upgrade to the fire fighting systems onboard, including greater protection from fire and its toxic by-products.
- Sewage System Upgrade (Engineering Enhancement): Automation of the sewage discharge system and thereby reduce the risks of exposure to toxic gases.
- Fast-Track modifications to HMA Ships Collins, Farncomb, Waller and Rankin (Engineering Enhancement): Address platform build deficiencies in a holistic get-well program.

The remaining platform upgrades (engineering enhancements) are outlined in ANAO Report No. 17 2010-11: 2009-10 Major Projects Report.

Uniqueness

Project SEA 1439 Phase 3 installs prioritised engineering enhancements and acquires replacement materiel as a part of ensuring continuous improvement of the Submarine fleet. Engineering enhancements were undertaken by ASC Pty Ltd (ASC) under an annualised cost-plus Through Life Support Agreement (TLSA); however as of 1 July 2012 this work is now contracted under an In Service Support Contract (ISSC) initially as a cost-reimbursement arrangement with a subsequent three year target based incentive period. Implementation of the ASC contract scope of work is linked to the boat IMS and driven by availability requirements mandated by Chief of Navy and General Manager Submarines.

Budget management under the cost reimbursement arrangement of the ISSC presents a major challenge for the project in achieving monthly expenditure. This is due to the alignment of phased expenditure and the supplier's ability to move work within the total work program to achieve contracted performance goals.

Major Risks and Issues

Engineering enhancements are managed on a prioritised basis within the funding **and skilled resources** available, with implementation aligned to the IMS which is not controlled by the project. Where schedule slip occurs, there is the potential for impact on project cost performance.

Another major risk is that the current design of the Outboard Stowages and installation options may be deficient in a number of areas. Conceptual design options to mitigate these risks are currently being presented by ASC to the project.

Other Current Sub-Projects

SEA 1439 Phase 3.1 Collins Obsolescence Management - Integrated Ship Control Management and Monitoring System Obsolescence: Project scope includes remediating obsolescence of the Integrated Ship Control Management and Monitoring System in the Collins Submarines and shore facilities. Stage One includes purchasing two boat sets and completion of the first installation.

SEA 1439 Phase 4A Replacement Combat System: To provide Collins Class Submarines with the US Navy Tactical Command and Control System: minor improvements to the Combat System Augmentation; sonar and shore facilities for integration, testing and training.

SEA 1439 Phase 4B Weapons and Sensor Enhancements: Acquire endorsed supplies to address deficiencies identified, in the area of Submarine weapons and sensors.

SEA 1439 Phase 5B1 Communications Mast and Antenna Replacement Class Fit: The project aims to fit five submarines with the communications fit developed and tested under Project SEA 1439 Phase 4B, along with one spare antenna, one spare mast raising equipment and spares.

SEA 1439 Phase RCE3 EHF Covert Communications Capability: Extreme High Frequency (EHF) Covert Communications Capability for a single Collins Class Submarine.

Section 2 – Financial Performance

Date	;	Description	\$r	n	Notes
		Project Budget			
Sep	00	Original Approved		72.0	
Apr	01	Real Variation – Transfers	3.7		1
Jul ()1	Real Variation – Scope	302.8		2
Sep	02	Real Variation – Transfers	(42.0)		3
Aug	04	Real Variation – Budgetary Adjustments	(0.3)		4
Aug	05	Real Variation – Budgetary Adjustments	(0.5)		5
Oct	06	Real Variation – Scope	7.5		6
		·		271.2	
Jul 1	0	Price Indexation		74.4	7
Jun	15	Exchange Variation		(5.9)	·
Jun	15	Total Budget		411 7	
Jun	10	Fotal Budget		411.1	
		Project Expenditure			
Prio	r to Jul 14	Contract Expenditure – ASC Pty Ltd	(231.2)		
		Other Contract Payments / Internal Expenses	(112.6)		8
				(343.8)	
FY t	o Jun 15	Contract Expenditure – ASC Pty Ltd	(10.6)		
		Other Contract Payments / Internal Expenses	(0.4)		
		(11.0)			
Jun	15	Total Expenditure		(354.8)	
		· · · ·			
Jun	15	Remaining Budget		56.9	
Note	s				
1	Transfer fr	om SEA 1439 Phase 1B			
2	Implement	ation of a reliable and sustainable Platform (full so			
2	Transfer to	\sim SEA 1439 Phase 4A as part of initial approval	000).		
4	Administra	tive Savings harvest			
+ F	Skilling of	Australia's Defense Industry hervest			
2	Skilling Of			allina Class a l	
0	Real Cost	Increase for Special Forces Upgrade modification	to an additional C		narine.
1	Up until J	uly 2010, indexation was applied to project budg	gets on a periodi	the project buc	Inulative
	result of ou	it-turning was a further \$7.7m having been applied	to the remaining	life of the project	t.
8	Other expe	enditure comprises \$54.6m against multiple minor co	ontracts with Defe	nce companies (including
	Australian	companies), contractor and consultancy services	associated with th	ne delivery of thi	s project
	and projec	t specific travel expenses. Other examples of sign	nificant expenditur	e include \$12.3r	n for the
	system an	d sonobuov. \$9.3m for the Towed Array Handli	ing System \$74	m for general o	perating
	expenditure	e, \$4.7m for contractor service providers, \$4.1m for	minor contracts,	\$3.7m with Thale	es for the
	Underwate	r Telephone, \$3.1m for Torpedo decoy pro	ocurement, and	\$1.7m for g	enerator
	procurem	ent.			

2.1 Project Budget (out-turned) and Expenditure History

Estimate	Estimate	Estimate	Explanation of Material Movements
PBS \$m	PAES \$m	Final Plan \$m	
7.3	13.7	13.7	The variance from PBS to PAES was due to the re- phasing of expenditure based on the new ISSC with ASC and the bringing forward of planned work on HMA Ships <i>Collins</i> and <i>Farncomb</i> .
Variance \$m	6.4	0.0	Total Variance (\$m): 6.4
Variance %	87.7	0.0	Total Variance (%): 87.7

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
			FMS	This year the underspend of
			Overseas Industry	\$2.7m is primarily due to
		(2.0)	Local Industry	delays and cost savings by
			Brought Forward	Australian Industry.
		(0.7)	Cost Savings	
			FOREX Variation	
			Commonwealth Delays	
			Additional Government	
			Approvals	
13.7	11.0	(2.7)	Total Variance	
		(19.7)	% Variance	

2.3 Details of Project Major Contracts

		Signatura	Price at				Eorm of	
Contrac	ctor	Date	Signature \$m	30 Jun \$m	15	Type (Price Basis)	Contract	Notes
ASC Pty Ltd		Jul 12	N/A	N/A	Variable (Cost Reimbursement)		ASDEFCON	1
Notes								
1	The co	ontract is struct	ured as follow	s;				
 Initial two year Transition Period 1 July 2012 to 30 June 2014 - Cost Reimbursement arrangement with Direct Project Costs (DPCs) reimbursed subject to defined rules and constraints and an agreed Budget Cost Estimate of DPCs for the Period. Subsequent five year mature Performance Periods from 1 July 2014 - Target Cost Incentive Mod arrangements with DPCs reimbursed subject to defined rules and constraints and an agreed Targ Cost Estimate of DPCs for the five year Period, reset at the end of three years. 							in agreed ive Model ed Target	
Contrac	tor		Quantities as	at		Scope		Notes
Contrac	,101	Signa	ture 30	Jun 15		Scope		NOLES
ASC Pty Ltd N/A N/A See 1.3 Project Context: Background for further information.								
Major e	Major equipment received and quantities to 30 Jun 15							
A total continue	of 22 p e to be p	latform upgra	des (consistin each of the six	g of two n submarine	ew ca es - su	apabilities and 20 eng	gineering enhan	cements)

Section 3 – Schedule Performance

3.1 Design Review Progress

Review	Major System/Platform Variant	Original Planned	Current Planned (Note 1)	Achieved/Forecast (Note 1)	Variance (Months)	Notes				
Final Design	Special Forces Upgrade	N/A	N/A	Dec 04	N/A	2				
Review	Torpedo Decoy	Jun 10	N/A	Jul 10	1					
	Fire Fighting Upgrade	N/A	N/A	Jun 04	N/A	2				
	Sewage System Upgrade	N/A	N/A	Nov 04	N/A	2				
	Fast Track Enhancements	N/A	N/A	N/A	N/A					
First of Class Implementation	Special Forces Upgrade (COLLINS)	Jun 05	N/A	Oct 07	28	3, 4				
	Torpedo Decoy	Jun 10	N/A	Jun 10	0					
	Fire Fighting Upgrade (RANKIN)	Jul 06	N/A	Oct 07	15					
	Sewage System Upgrade (WALLER)	Jul 06	N/A	Jul 08	24					
	Fast Track Enhancements (RANKIN)	May 01	N/A	Jun 06	61					
Full Class Implementation	Special Forces Upgrade (COLLINS)	May 08	May 18	May 18	120	3, 4, 5				
	Torpedo Decoy	Oct 13	N/A	Dec 13	2	6				
	Fire Fighting Upgrade (DECHAINEUX)	Sep 22	N/A	May 22	(4)	7				
	Sewage System Upgrade (COLLINS)	Mar 17	N/A	May 18	14	5				
	Fast Track Enhancements (WALLER)	Jul 06	N/A	Nov 07	16					
Notes										
1 The abor independ critical p activities capability some ind as define	The above data represents rolled-up information within the listed sub-projects each of which has many independent design review activities associated with over 100 Configuration Change Proposals. As the critical path for these sub-projects was broadly defined by the submarine docking program, individual activities within each of the above sub projects were allowed to move provided the delivery of the capability was not impacted adversely by delaying the completion of the specific docking. Although some individual activities were ahead or behind schedule the project has maintained the critical path as defined by the submarine docking program.									
2 In some maintena annually activities upgrade Fast Tra Class In changes approval	In some instances, the original planned schedule for sub projects was incorporated into the submarine maintenance schedule which was maintained by ASC. ASC update the maintenance schedule annually and do not retain original schedule information. Consequently, apart from post June 2005 activities supported by a MAA, it is not possible to provide the original planned dates for some platform upgrade projects, which were scheduled to occur during an unstable FCD Program. Fast Track was initially installed on two submarines and managed under SEA 1446 Phase 1 Collins Class Interim Minimum Operating Capability. SEA 1439 Phase 3 is responsible for rolling out those changes to the remaining four submarines. As such, all design and associated design review and approval was achieved under SEA 1446 Phase 1.									
3 HMAS C two of th diver saf	ollins received modifications for e three Special Forces capabi ety following sea trials conduct	or Multi Swi lities. The th ted in HMA	mmer Relea hird (Exit an S <i>Collins</i> in	ase and Float on/Floa d Re-entry) required r 2008.	t off which co edesign to in	omprise ncrease				

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4	The Special Forces Upgrade safety modifications identified during the manned Sea Verification Trial have been installed and harbour and sea acceptance testing on HMAS <i>Dechaineux</i> completed post MCD in June 2015 .
5	Full class implementation will be achieved on the completion of HMAS <i>Collins</i> FCD which is scheduled for May 2018 in accordance with the IMS.
6	Full class implementation has been achieved with the approval of the Configuration Change Instruction. Variance is a result of minor delays in the Configuration Management process.
7	Installation of Fire Fighting Upgrades are planned to be finalised early on HMAS <i>Sheean</i> during MCD (January 2018) with final class installation on HMAS <i>Dechaineux</i> occurring during FCD (May 2022).

3.2 Contractor Test and Evaluation Progress

Te: Eva	st and aluation	Major System/Platform Variant	Original Planned	Current Planned (Note 1)	Achieved/Forecast (Note 1)	Variance (Months)	Notes		
Ha Ace	rbour ceptance	Special Forces Upgrade (COLLINS)	Jun 05	N/A	Sep 06	15			
Tes	st (HAT)	Torpedo Decoy	Jun 10	N/A	Jun 10	0			
		Fire Fighting Upgrade (RANKIN)	Oct 13	May 14	May 14	7	2		
		Sewage System Upgrade (WALLER)	Jul 06	N/A	Mar 07	8			
		Fast Track Enhancements	N/A	N/A	N/A	N/A			
Sea Special Forces Upgrade Aug 05 N/A Dec 07 28 Acceptance (COLLINS) Aug 05 N/A Dec 07 28							3		
Tes	st (SAT)	Torpedo Decoy	Jul 10	N/A	Jul 10	0			
		Fire Fighting Upgrade	N/A	N/A	N/A	N/A			
		Sewage System Upgrade (WALLER)	Aug 06	N/A	Oct 07	14			
		Fast Track Enhancements	N/A	N/A	N/A	N/A			
No	tes								
1	1 The original planned schedule for all sub-projects was incorporated into the submarine maintenance schedule, the IMS. ASC update the maintenance schedule pertaining to specific dockings as required to achieve schedule performance and do not retain original schedule information. Additionally, test and evaluation is linked to the post docking test and trials, therefore, the true variance will reflect the variance in Section 3.1. Fast Track was initially installed on two submarines and managed under SEA 1446 Phase 1. SEA 1439 Phase 3 is responsible for rolling out those changes to the remaining four submarines. As such, HAT and SAT was achieved under SEA 1446 Phase 1.								
2	2 Variance was attributed to the change in schedule completion of HMAS <i>Rankin</i> FCD from October 2013 Version (IMS V3.3) and the current baselined IMS.								
3	HMAS Coll the three S following se been insta in June 20 accordance	ins received modifications for M pecial Forces capabilities. The a trials conducted in HMAS C Iled and harbour and sea a 015. Redesigned safety modif with the IMS, upon completion	lulti Swimme third (Exit a collins in 200 cceptance ications for HAT and S	er Release a nd Re-entry)8. The rede testing on HMAS <i>Col</i> AT will be co	nd Float on/Float off w) required redesign to i esigned safety modifica HMAS <i>Dechaineux</i> co <i>lins</i> FCD are schedule inducted.	hich compris ncrease dive titons identifie mpleted po ed for May	e two of er safety ed have st MCD 2018 in		

\sim	Due aure e e	Taxaad	NA - t	Delesse			0	the Mile states
. 1	Prodress	Toward	wateriei	Release	and	perational	Lananii	ITV IVILLESTONES
0.0	11091000	romana	matorioi	11010000	and o	poradorial	oupubli	ity minootorioo

3.3	Progress Toward Materiel Releas	e and Operational C	apability Milestones							
Item		Original Planned	Achieved/Forecast	Variance (Months)	Notes					
Initia	al Materiel Release (IMR)	N/A	Jan 11	N/A						
Initia	Initial Operational Capability (IOC)									
Initia Forc	al Operational Release Special ces Upgrade (DECHAINEUX)	Nov 10	Mar 16	64	1					
Initia Dec	Initial Operational Release Torpedo Aug 10 May 14 45 2 Decoy									
Fire (RA	Fire Fighting Upgrade Oct 13 May 14 7 3 (RANKIN)									
Sew (WA	age System Upgrade LLER)	Aug 06	Oct 07	14	4					
Fast	Track Enhancements	N/A	N/A	N/A	5					
Fina	I Materiel Release (FMR)	Oct 22	Aug 22	(2)	6					
Fina	l Operational Capability (FOC)	•	·							
Ope Forc	rational Release of Special ces Upgrade	Jun 07	Mar 17	118	7					
Ope Dec	rational Release of Torpedo oy	Jun 14	Dec 15	18	8					
Fire (DE	Fire Fighting Upgrade Jun 14 May 22 95 9 (DECHAINEUX)									
Sew (CO	Sewage System Upgrade Jun 14 May 18 47 9 (COLLINS)									
Fast	Fast Track Enhancements Jul 06 Nov 07 16 10 (MALLER)									
Note										
1	Special Forces Upgrade modifi modifications identified during th installed and harbour and sea June 2015.	cations have been d ne manned Sea Veri a acceptance testin	lelayed due to the req fication Trial. These sa g on HMAS <i>Dechaine</i>	uirement to imple afety modification: eux completed p	ment safety s have been ost MCD in					
2	Torpedo Decoy received Initial due to a combination of delay OR due to the appointment of	OR on 2 May 2014 b ys in acceptance o a new Chief of Nay	by Chief of Navy. The f the safety case and vy.	delay in schedu a delay in app	le has been roval of the					
3	IOC is linked to successful c movement in the docking mainte	ompletion of the H enance schedule. Th	AT, where any varia	nce will be caus on the IMS.	sed through					
4	IOC is linked to completion o schedule since original MAA.	f the FOC SAT. V	ariance due to chang	ges in docking r	naintenance					
5	Fast Track initially installed on two submarines and managed under SEA 1446 Phase 1. SEA 1439 Phase 3 is responsible to roll out to remaining four submarines. IOC was the responsibility of SEA 1446 Phase 1.									
6	6 FMR dates have now been aligned to IMS V5.3 and reflected in the MAA.									
7	7 The MAA delivery date was for HMAS Collins only. HMAS Dechaineux implementation through MAA amendment created variance. The delay was further influenced by contractor workforce constraints and the phased delivery of capability enhancements to the Special Forces systems.									
8	Delay in achieving IOR for the the required Operational Test and	Torpedo Decoy has nd Evaluation Perioc	caused a delay to OR I.	to allow for Nav	y to conduct					
9	Variance due to changes in doc	king maintenance so	chedule since original I	MAA.						
10	Fast Track initially installed on installed the Fast Track upgrad docking maintenance schedule	two submarines and les across the rema since original MAA.	d managed under SEA ining four submarines.	A 1446 Phase 1. Variance due to	This project changes in					

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Collins R&S



Section 4 – Materiel Capability Delivery Performance

4.1 Measures of Materiel Capability Delivery Performance



This Pie Chart does not necessarily represent capability achieved. The capability assessments and forecasts by the project are not subject to the ANAO's assurance review.

4.2	Constitution	of	Initial	Materiel	Release	and	Final	Materiel	Release
<u>-</u>	Constitution	01	minuai	materier	1 Cloube	unu	i inai	materier	1 Cloube

Item	Exp	lanation					Achievement
Initial Materiel Release (IMR)	Cor all s	Completion of the following platform upgrades on all submarines unless otherwise specified:					Achieved
	•	Special	Forces	Upgrade:	Multi	swimmer	

	release and Float On/Float Off;				
	Torpedo Countermeasures;				
	• Fire Fighting Upgrade: HMA Ships Waller, Dechaineux and Sheean;				
	 Sewage System Upgrade: HMA Ships Waller and Dechaineux; 				
	• Fast-Track modifications: HMA Ships Collins Farncomb, Waller and Rankin; and				
	 Other remaining subordinate projects relating to platform build deficiencies in a holistic get- well program. 				
Final Materiel Release (FMR)	Completion of dockings up to and including HMA Ships <i>Waller</i> and <i>Dechaineux</i> FCD consisting of:	Not achieved			
	 Special Forces Upgrade – Outboard Stowage: HMA Ships Collins and Dechaineux; 				
	 Special Forces Upgrade – Explosive Ordnance: HMA Ships Collins and Dechaineux; and 				
	Diesel Engine Upgrades: All Submarines				
	(expected end HMAS <i>Waller</i> FCD (May 2020)).				

Section 5 – Major Risks and Issues

5.1 Major Project Risks

Identified Risks (risk identified by standard project risk management processes)				
Description	Remedial Action			
There is a chance that schedule slip to the boat FCD schedule will impact the installation of engineering enhancements and new capability, leading to cost and schedule increases to the project.	 This risk is being treated by: Obtaining endorsement of the IMS at the senior management level; Improving management of maintenance schedules; and Ensuring configuration changes are captured in the targeted maintenance availabilities Total Work Package. 			
There is a chance that competing workload demands will reduce the skilled resources available at the contractor facility and impact the installation and testing of engineering enhancements on boats, leading to cost and schedule increases.	 This risk is being treated by: Undertaking engineering enhancement in accordance with the IMS; Resolving design issues with engineering enhancements early to improve design maturity; and Coordinating the engineering enhancement workload on the ASC capped workforce. 			
There is a chance the Outboard Stowage of Special Forces Equipment cannot be achieved due to design and manufacturing deficiencies leading to schedule delays.	This risk has been closed and superseded by the emergent risk outlined below.			
Emergent Risks (risk not previously identified but has emerged during 2014-15)				
Description	Remedial Action			
There is a chance that the current design of the Outboard Stowages and installation options will	This risk is being treated by: • Project Office to seek clarification of Special			

be deficient in a number of areas (snag hazards, weight and pressure).	Forces and platform requirements /constraints to re-confirm feasibility of design options.				
	 Reviewing options to determine feasibility and be presented by ASC to project. 				

5.2 Major Project Issues	
Description	Remedial Action
N/A	N/A

Section 6 – Project Maturity

6.1 Project Maturity Score and Benchmark

					Attributes	;			
Maturity	Score	Schedule	Cost	Requirement	Technical Understanding	Technical Difficulty	Commercial	Operations and Support	Total
Project Stage	Benchmark	8	7	8	8	8	8	8	55
Integration and	Project Status	8	8	8	8	8	8	9	57
Test	Explanation	 Co Sy Op of imp 	est: Proje yearly pest st and es perations sub-proj plementat	ct scope erforman stimate to and Sup ect enha	e contrac ce perio comple comple pport: Pro ancement e.	ted throu ds thus te. bject has ts and	ugh the I providin achieved is now	SSC with g a more IMR for a primarily	ASC in robust
$ \begin{array}{c} 70 \\ 60 \\ 50 \\ 40 \\ 30 \\ 20 \\ 10 \\ 13 \\ 16 \\ 16 \\ 16 \\ 16 \\ 16 \\ 16 \\ 16 \\ 16$	-21- ^{30-33'}	42	45 50	55	-5760	63	_656	6-67-	
Decide Viable Capability Options Enter DCP	2nd Pass Approval Industry Proposals / Offers 1st Pass Approval	- Contract Signature	Detailed Design Review(s) - Preliminary Design Review(s)	- Complete Sys. Integ. & Test	- Complete Acceptance Testing	Final Materiel Release (FMR)	Final Contract Acceptance	Acceptance Into Service	Project Completion
2013	-14 MPR Status -				201	4-15 MP	R Status		

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Section 7 – Lessons Learned

7.1 Key Lessons Learned

Project Lesson	Categories of Systemic Lessons
Ensure that all capability requirements are clearly defined, approved and appropriately funded before detailed acquisition planning commences.	Requirements Management
Ensure that maintenance period schedule dependencies are identified and appropriate risk management strategies developed.	Schedule Management
Consider the impact associated with long term sole source cost plus contracts.	Contract Management

Section 8 – Project Line Management

8.1 Project Line Management in 2014-15

Position	Name
General Manager	Mr David Gould
Division Head	Vacant
Branch Head	Mr David Cochrane
Project Director	Mr Brad Hajek (Acting)
Project Manager	Mr Brad Hajek