

Project Data Summary Sheet¹

Project Number	SEA1442 Phase 4
Project Name	MARITIME COMMUNICATIONS MODERNISATION
First Year Reported in the MPR	2014-15
Capability Type	Upgrade
Capability Manager	Chief of Navy
Government 1st Pass Approval	Dec 10
Government 2nd Pass Approval	Jul 13
Budget at 2nd Pass Approval	\$385.6m
Total Approved Budget (Current)	\$436.4m
2022–23 Budget	\$28.9m
Complexity	ACAT II



Section 1 – Project Summary

1.1 Project Description

SEA1442 Phase 4 will upgrade the communications capability in the eight Anzac Class Frigates and address communications system obsolescence in the class, by modernising it with improved communications management, secure voice and tactical intercom, red/black switching, tactical radios and a High Data Rate line-of-sight capability. The project will also deliver Support Systems, a secondary Maritime Tactical Wide Area Network (MTWAN) Shore Gateway and upgrade the Anzac Combat System Trainer Communications Terminals.

1.2 Current Status

Cost Performance

In-year

As at 30 June 2023, Financial Year (FY) 2022-23 expenditure is \$24.3m against a budget of \$28.9m. The budget variance of \$4.6m underspend due to Leonardo UK Ltd (Prime Contractor) contractual payments slipping to next FY, including milestone payments and a lower than anticipated spend for spares.

Project Financial Assurance Statement

As at 30 June 2023, project SEA1442 Phase 4 has reviewed the project's approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial contractual obligations of Defence for this 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

The project has not applied contingency in the FY.

Schedule Performance

Detailed Design Review (DDR) was delayed by four months due to delay in completion of design activities by the contractor which resulted in liquidated damages being invoked during the FY 2016-17 and accepted by the Commonwealth in the form of additional goods and services provided by the contractor.

Training System (TS) and Shore Integration Test Facility (SITF) acceptance occurred in November 2019, with five ship mission systems accepted to date; in April, July and September 2021; July 2022 and March 2023.

The SEA1442 Phase 4 delivery and installation schedule has been aligned to the Anzac Midlife Capability Assurance Program (AMCAP) scheduling and the availability dates for the remaining ships are subject to change. This alignment of programs has resulted in SEA1442 Phase 4 Initial Materiel Release (IMR) moving from June 2018 to being declared in September 2021. IMR was achieved with exceptions. Final Operational Capability (FOC) is delayed following the most recent change to the AMCAP schedule.

Materiel Capability/Scope Delivery Performance

The MTWAN Secondary Shore Gateway has been delivered and is operational, including the TS and the SITF which were both accepted in November 2019. The first three Anzac ship systems (His Majesty's Australian Ship (HMAS) *Anzac*, HMAS *Arunta* & HMAS *Warramunga*) with associated Support Systems were delivered by the contractor to Capability Acquisition and Sustainment Group (CASG) in 2021. Two more ships were delivered in July 2022 and March 2023 respectively. IMR was declared in September 2021 with minor exceptions, which are to be completed prior to Initial Operational Capability (IOC).

Note

Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.

Notice to reader

1. Forecast dates and Sections: 1.2 (Materiel Capability/Scope Delivery Performance), 1.3 (Major Risks and Issues), 4.1 (Measures of Materiel Capability/Scope 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.

1.3 Project Context

Background

SEA1442 Phase 4 is a multi-phased program that will modernise the Royal Australian Navy's (RAN) communications infrastructure. The New Generation Maritime Communications System (NewGen MCS) will deliver an integrated and automated system that provides a more agile and faster communication solution requiring reduced operator intervention.

The majority of equipment and sub-systems are either existing Military or Commercial grade items that require some functionality enhancements and Australianisation. The main systems challenge is bringing the sub-systems together as part of a highly integrated and automated system into the ship platform, cognisant of existing weapons, sensors, emitters, and specific platform requirements.

Government Second Pass approval occurred in July 2013 with the acquisition and five year support services contracts awarded to Selex ES Ltd in November 2013. Selex ES Ltd changed its name to Leonardo MW Ltd in September 2016 and to Leonardo UK Ltd in March 2021.

The project is also managing the acquisition of ARC-210 Gen 5 V/UHF multi-band multi-mode software defined radios through Foreign Military Sales (FMS) with the United States (US) Government. The radios form part of the NewGen MCS.

Uniqueness

An advanced feature of the NewGen MCS includes a unique radio frequency distribution system that will allow automated and efficient switching of the multitude of radios and antennae on each ship in order to establish the most effective communications path.

The High Data Rate line-of-sight system is a new capability and will be a step towards enabling the RAN to operate in a satellite denied environment and enable more efficient ship-to-ship communication.

Major Risks and Issues

The risk that RAN may take an upgraded vessel prior to the completion of testing and acceptance of the communications system was identified during 2022; however, likelihood has reduced in 2023. The project continues to manage issues relating to deficiencies in the Prime Contractor's engineering management and resource management. The project is managing the issue of its installation activities within the AMCAP being delayed due to problems with concurrent work being carried out by other projects/maintenance activities. RANs support for the declaration of IMR was provided with an understanding that several issues identified had not been completed and this work is being managed by the project.

Other Current Related Projects/Phases

Nil.

Note

Major risks and issues are excluded from the scope of the Auditor-General's Independent Assurance Report.

Section 2 – Financial Performance²

2.1 Project Budget (out-turned) and Expenditure History

Date	Description	\$m	Notes
	Project Budget		
Dec 10	Original Approved (Government First Pass Approval)	11.4	
Jul 13	Government Second Pass Approval	374.3	
	Total at Second Pass Approval	385.6	
	Exchange Variation	50.8	
	Total Budget	436.4	
	Project Expenditure		
Prior to Jul 22	Contract Expenditure – Leonardo UK Ltd	(230.2)	
	Contract Expenditure – US Government	(15.3)	
	Contract Expenditure – Warship Asset Management Agreement (WAMA)	(10.6)	3
	Contract Expenditure – Nova Systems Australia Pty Ltd	(7.7)	
	Other Contract Payments / Internal Expenses	(12.0)	1
		(275.8)	
FY to Jun 23	Contract Expenditure – Leonardo UK Ltd	(17.5)	
	Contract Expenditure – WAMA	(2.2)	
	Contract Expenditure – Nova Systems Australia Pty Ltd	(4.2)	
	Other Contract Payments / Internal Expenses	(0.4)	2
		(24.3)	
Jun 23	Total Expenditure	(300.2)	

Notice to reader

² As per the JCPAA 2022-23 MPR Guidelines, financial figures in the PDSS have been rounded to one decimal point. Section 2 financial tables may include totals and percentages that are impacted due to the rounding of the original financial data.

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Jun 23	Remaining Budget	136.3
Notes		
1	Other Contracts Payments/Internal Expenses comprises: (\$3.0m) for Technical Services, (\$2.9m) for travel and purchasing card payments, (\$1.9m) for the purchase of Specialised Military Equipment, (\$1.0m) for Scheduler Support, (\$0.8m) for System Engineering Services, (\$0.7m) for the development of Capability Definition Documents, (\$0.3m) for Legal Services and other extant expenditure of (\$1.3m).	
2	Other expenditure of note include (\$0.4m) for the development of Capability Definition Documents.	
3	The WAMA consists of Commonwealth of Australia (CoA), BAE Systems Maritime Australia Pty Ltd, Saab Australia Pty Ltd and Naval Ship Management Pty Ltd.	

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
32.6	25.3	28.9	Portfolio Budget Statement (PBS) to Portfolio Additional Estimates Statement (PAES): Forecast underspend is due to delays with the Schedule Maintenance Availability Master Plan (SMAMP) version 22.2. In addition, processing of Variation on Price (VoP) and Ship #7 Pack I Milestone slipping. Less than anticipated spares forecast and moving the remaining into the FY 2023-24.
Variance \$m	(7.4)	3.6	Total Variance (\$m): (3.7)
Variance %	(22.6)	14.4	Total Variance (%): (11.4)

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(4.6)	Australian Industry	Forecast underspend is due to delays with the SMAMP version 22.2. In addition, processing of VoP on platforms shifting right to June 2023 from February 2023, hence VoP pushing into following FY. A likely movement of \$1.7m of spares into the FY 2023-24.
		-	Foreign Industry	
		-	Early Processes	
		-	Defence Processes	
		-	Foreign Government Negotiations/Payments	
		-	Cost Saving	
		-	Effort in Support of Operations	
		-	Additional Government Approvals	
28.9	24.3	(4.6)	Total Variance	
		(15.9)	% Variance	

2.3A Details of Project Major Contracts – Price

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Note
		Signature \$m	30 Jun 23 \$m			
Leonardo UK Ltd	Nov 13	187.7	293.0	Variable	Standard Defence Contract	1, 2
US Government (AT-P-BSH)	Dec 14	17.0	15.3	Firm or Fixed	FMS	1, 3
WAMA	Dec 17	7.5	15.4	Variable with Pain/Gain Share	Alliance	4
Nova Systems Australia Pty Ltd	Mar 19	0.2	12.3	Variable	Integrated Work Package	5
Notes						
1	Contract value at 30 June 2023 is based on actual expenditure to 30 June 2023 and remaining commitment at current budget exchange rates, and includes adjustments for indexation (where applicable).					
2	The contract price has increased to include the recommended spare parts list and to extend the contracted period in line with RAN's ship upgrade program.					
3	Change in FMS value is due to acceptance of Amendment Number 1 to FMS case AT-P-BSH. Decrease in FMS value is due to lower unit prices and associated costs for technical assistance and administration fees.					
4	WAMA consists of CoA, BAE Systems Maritime Australia Pty Ltd, Saab Australia Pty Ltd and Naval Ship Management Pty Ltd. The primary Industry Partner for SEA1442 Phase 4 tasking is BAE Systems Maritime Australia Pty Ltd.					
5	Provision of multi-discipline workforce to deliver the Joint Command, Control, Communications and Computer Systems (JC4S) Branch Integrated Work Package via the CASG Major Service Provider Arrangement. Operational changes have led to an increase in the contracted workforce.					

2.3B Details of Project Major Contracts – Contracted Quantities and Scope

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 23		
Leonardo UK Ltd	See scope	See scope	Eight ship mission systems; One training system; One SITF; and Three deployable High Data Rate line-of-sight systems.	-
US Government (AT-P-BSH)	131	140	ARC-210 Gen 5 radios, technical data, and technical support.	1
WAMA	N/A	N/A	Provision of all site project management and support services for SEA1442 Phase 4 for the entirety of the AMCAP as well as other tasks to incorporate the NewGen MCS into the Anzac environment.	-
Nova Systems Australia Pty Ltd	N/A	N/A	Provision of multi-discipline workforce to deliver the JC4S Branch Integrated Work Package.	-
Major equipment accepted and quantities to 30 Jun 23				
MTWAN Secondary Gateway, TS, SITF and five ship mission systems have been accepted.				
Notes				
1	Additional radios ordered as spare parts.			

2.4 Australian Industry Capability

Summary
The project has contracted Australian Industry Capability (AIC) targets based, where appropriate, to identify Local Industry Capability which is captured in Leonardo UK Ltd. AIC Plan in the support of its project management, engineering, integrated logistic support and training activities.
WAMA is an Alliance Contract between the CoA and Alliance Industry Participants BAE Systems Maritime Australia Pty Ltd, Naval Ship Management Pty Ltd and Saab Australia Pty Ltd which maintains an AIC Plan in its contract.
There project has no contracted AIC target or AIC Plan for Nova Systems Australia Pty Ltd as they are one of several contractors under the CASG wide Major Service Provider contract that provides above the line work force to projects.
The project has no contracted AIC targets or an AIC Plan for its US Government FMS acquisition as the US Foreign Government arrangement does not include the contractual provision or obligations for Australian Industry Content.
Note
AIC Plans for contracts worth more than \$20 million are published on Defence’s website. Australian Industry Capability is excluded from the scope of the Auditor-General’s Independent Assurance Report.

Section 3 – Schedule Performance

3.1 Design Review Progress

Review	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/ Forecast	Variance (Months)	Notes
System Requirements	NewGen MCS and Support System	Sep 14	N/A	Dec 14	3	1
Preliminary Design	NewGen MCS and Support System	May 15	Sep 15	Sep 15	4	2
Detailed Design	MTWAN Secondary Gateway	Sep 14	N/A	Jan 15	4	3
	NewGen MCS	Oct 16	N/A	Feb 17	4	4
	Support System	Apr 17	Jun 17	Sep 17	5	5
	First of Class Integration Detailed Design Review (IDDR)	May 17	N/A	Oct 17	5	6
Notes						
1	Delayed from originally planned due to slow ramp up/contractor performance.					
2	Contract schedule re-baselined to reflect previous System Definition Review milestone slippage and contractor’s improved understanding of the work.					
3	MTWAN System Requirements and Preliminary Design addressed prior to Government Second Pass Approval. In order to minimise risk to the operational network upon connection of the MTWAN Secondary Gateway, a demonstration of the design in the MTWAN SITF was requested prior to design acceptance. This required additional time to complete.					
4	The conduct of the DDR and its associated system demonstration occurred four months later than the contracted date which triggered liquidated damages.					
5	The contractor achieved the Support System DDR in September 2017 (five months later than the contract date due to delays resulting from the later than planned achievement of DDR).					
6	The contractor achieved the First of Class IDDR in October 2017 (five months later than the contract date due to delays resulting from the later than planned achievement of DDR).					

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3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
System Integration	NewGen MCS	Jun 18	Jul 20	Apr 21	34	1
Acceptance	MTWAN Secondary Gateway	Apr 15	N/A	Mar 15	(1)	-
	Training System	Jun 17	Nov 18	Nov 19	29	2
	SITF	Dec 16	Mar 19	Nov 19	35	3
	Ship #1	Jun 18	Jul 21	Jul 21	37	1, 4
	Ship #2	Apr 19	Apr 21	Apr 21	24	1, 4
	Ship #3	Nov 19	Sep 21	Sep 21	23	4
	Ship #4	Jun 20	Jul 22	Jul 22	25	4
	Ship #5	Feb 21	Mar 23	Mar 23	25	4
	Ship #6	Sep 21	Delayed from Sep 23	Delayed from Sep 23	Not For Publication (NFP)	4
Ship #7	Apr 22	Delayed from Feb 24	Delayed from Feb 24	NFP	4	
Ship #8	Sep 22	Delayed from Sep 24	Delayed from Sep 24	NFP	4	
Notes						
1	Delays attributed to alignment with planned ship availability per the AMCAP, and the effects of the COVID-19 pandemic, specifically travel restrictions which resulted in the contractor's United Kingdom based personnel being unable to travel to undertake set-to-work and acceptance testing in Western Australia (WA), and the project being unable to travel to carry out onsite test and trials activities with the contractor.					
2	Contract Change Proposal (CCP011) of 25 June 2018 included an adjustment of the schedule for this milestone. This milestone was achieved in November 2019, being 12 months later than the updated contract date.					
3	SITF acceptance date initially incorrectly positioned in the contract. The delay is due to the need to use the SITF during Ship #1 test and acceptance period which was extended when SEA1442 Phase 4 was aligned to AMCAP. This milestone was achieved in November 2019, being eight months later than the updated contract date.					
4	Ship availability and schedule is driven by AMCAP. Forecast and current contract dates have been aligned with the AMCAP dates updated in 30 June 2022. Contract Change Proposal (CCP019 – Current Contract) of 14 September 2022 included an adjustment of the schedule for Ship Acceptance milestones for Ships #6, #7 & #8.					

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Jun 18	Sep 21	39	1, 2, 3
Initial Operational Capability (IOC)	Dec 18	Delayed from Oct 22	NFP	1, 2
Materiel Release 2 – Ship #2	Apr 19	Apr 21	24	1, 2
Materiel Release 3 – Ship #3	Dec 19	Sep 21	21	1, 2
Materiel Release 4 – Ship #4	Aug 20	Sep 22	25	1, 2
Materiel Release 5 – Ship #5	Apr 21	Mar 23	23	1, 2
Materiel Release 6 – Ship #6	Dec 21	Delayed from Dec 23	NFP	1, 2
Materiel Release 7 – Ship #7	Aug 22	Delayed from May 24	NFP	1, 2
Final Materiel Release (FMR)	May 23	Delayed from Dec 24	NFP	1, 2
Final Operational Capability (FOC)	Dec 23	Delayed from Apr 25	NFP	1, 2
Notes				
1	Ship availability and schedule is driven by AMCAP. The delays were mainly due to the AMCAP schedule which had a follow on effect on Materiel Release including IMR, IOC and FOC. The availability dates for the remaining ships are subject to change. Leonardo UK Ltd to be advised 90 days prior to commencement of each ship installation period.			
2	See Section 4.2 of this PDSS for a definition of these milestones.			
3	IMR achieved with minor exceptions; to be completed prior to IOC.			
Schedule Status at 30 June 2023				
<p>The chart displays a timeline from July 2013 to January 2024. A horizontal line represents the schedule. Above the line, 'Original Planned' dates are marked with vertical bars. Below the line, 'Achieved/Forecast' dates are marked with vertical bars. Milestones are labeled: Approval (Jul-13), IMR (Jul-18), IOC (Jan-19), FMR (Jul-23), and FOC (Jan-24). IMR is shown as a completed bar. IOC, FMR, and FOC are shown as forecast bars.</p>				

Note
Forecast dates in Section 3 are excluded from the scope of the Auditor-General's Independent Assurance Report.

Section 4 – Materiel Capability/Scope Delivery Performance

4.1 Measures of Materiel Capability/Scope Delivery Performance

Traffic Light Diagram: Percentage Breakdown of Materiel Capability/Scope Delivery Performance	
	Green: The project expects to meet capability materiel requirements as per the Joint Project Directive, Materiel Acquisition Agreement and relevant Technical Regulatory Authority.
	Amber: N/A
	Red: N/A
Note	
This Traffic Light Diagram represents Defence's expected capability delivery. Capability assessments and forecast dates are excluded from the scope of the Auditor-General's Independent Assurance Report.	

4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	Ship 1 acceptance, training system, SITF, Ship 1 crew training, and support arrangements in place.	Achieved in September 2021 with minor exceptions; to be completed prior to Initial Operational Release.
Initial Operational Capability (IOC)	Anzac Class ship fitted with the new equipment and proven through testing to communicate with other platforms using voice, High Frequency Internet Protocol and High Data Rate line-of-sight.	Not yet Achieved
Final Materiel Release (FMR)	All eight ships accepted and all support arrangements in place.	Not yet Achieved
Final Operational Capability (FOC)	Operational Release and FMR have been met and endorsed by Chief of Navy. FOC will occur when all eight ships have been accepted and all crew training has been successfully completed, and the Support System elements are in place and running in accordance with respective contract requirements.	Not yet Achieved

Section 5 – Major Risks and Issues

5.1 Major Project Risks

Identified Risks (risk identified by standard project risk management processes)		
Ref#	Description	Remedial Action
1	There is a risk that if the RAN takes an upgraded ship prior to testing & acceptance, a loss of warranty coverage could result, leading to an increase in costs.	Continue to liaise closely with Leonardo UK Ltd, RAN, Anzac System Program Office and the WAMA through established working groups to ensure stakeholders are aware of the status of ships' communications readiness and to assist with expediting readiness if required to support RAN. Downgraded to a Medium risk due to a reduction in likelihood of occurrence compared with last year.
Emergent Risks (risk not previously identified but has emerged during 2022–23)		
Ref#	Description	Remedial Action
1	N/A	N/A

5.2 Major Project Issues

Ref#	Description	Remedial Action
1	COVID-19 Outbreak Disruption – The outbreak has had a number of effects on the project.	The effects of COVID-19 created a number of issues for the project including: <ul style="list-style-type: none"> Reduced ability of the Australia Capital Territory based project team and Defence Subject Matter Experts to

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		<p>travel to WA to support the installation and carry out testing and witnessing activities;</p> <ul style="list-style-type: none"> • Limitations on the Prime Contractor's team to travel to Australia to support installation. <p>The end to travel restrictions in early 2022 has resulted in the closure of this issue.</p>
2	Deficiencies in Prime Contractors Engineering Management and Resource Management affecting the likelihood of milestone achievement.	Work with the contractor to assist estimation of the time required to produce milestone deliverables and other artefacts and to assist it employing and retaining sufficient technical and installation staff. Being actively managed by project team with contractor. The issue has been downgraded to Medium following continued improvements.
3	Ship installation in the AMCAP is delayed due to problems with concurrent work being carried out by other projects/maintenance activities such as unrelated but neighbouring installation activities.	This issue continues to occur. The team's ability to mitigate it is limited as communications testing is one of the last activities of an AMCAP installation so it is always subject to delay caused by other activities running late. The project and contractor continue to actively participate directly in AMCAP scheduling activities to develop and maintain the Integrated Master Schedule and participate in regular production meetings. Continuing to build the WA based team with members experienced in RAN and AMCAP ensures project concerns and priorities are well represented to AMCAP management.
4	Several milestones have been deemed complete with the undertaking that uncompleted items are to be completed as entry criteria to later milestones.	IMR was achieved with minor exceptions with the support of RAN; which are to be completed prior to declaration of the IOC RAN milestone. The project team is supporting its RAN sponsor towards its completion. Leonardo UK Ltd Contractual Milestones - Outstanding Minor actions are tracked in meeting minutes with agreed completion dates as entry to future milestones. The issue has been downgraded to Medium as processes are well developed to manage this issue.

Note

Major risks and issues in Section 5 are excluded from the scope of the Auditor-General's Independent Assurance Report.

Section 6 – Lessons Learned

6.1 Key Lessons Learned

Description	Categories of Systemic Lessons
In line with Defence instruction and CASG Lessons policy, the project conducts scheduled reviews of its captured lessons information (including any observations, insights and/or lessons identified) as well as lessons information contained within the Defence Lessons Repository. The project has captured 10 lessons related to Requirements Management, Contract Management, Schedule Management and Resourcing. Three project lessons are provided below (note this does not include all project lessons):	The project has not categorised any of its lessons information as a whole-of-Defence Lesson Learned.
Lesson Type – Observation. Alignment of multiple schedules in a complex multi contractor environment, such as between SEA1442 Phase 4 and AMCAP, can be a source of additional and unnecessary effort if not closely monitored and aligned.	Schedule Management
Lesson Type – Observation. Ship availability may be subject to change with minimal notice and may impact on the contractor's ability to deliver against key milestones. Ensuring effective communication between the project office, the Capability Manager and other relevant Defence stakeholders is essential. This will ensure all stakeholders are aware of what capability is being received if schedules change unexpectedly.	Platform Availability
Lesson Type – Insight. The effort involved in managing spare parts may be underestimated initially by a project. Whilst there is estimated spares usage data available for planning initial spares purchases; actual usage once the capability has been released must be closely monitored and reacted to promptly. Spares usage has varied significantly in some cases and some spare parts lead times are quite long.	Spare Parts Management

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2023

Unit	Name
Division	Joint Systems
Branch	Joint C4 Systems