

## Project Data Summary Sheet<sup>165</sup>

Project Number	SEA1442 Phase 4
Project Name	<b>MARITIME COMMUNICATIONS MODERNISATION</b>
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 2 <sup>nd</sup> Pass Approval	\$385.6m
Total Approved Budget (Current)	<b>\$434.1m</b>
2020-21 Budget	<b>\$34.4m</b>
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

This year the project has spent **\$34.9m** to 30 June 2021 of a budget of **\$34.4m**. **The budget variance of \$0.5m is due to accelerated procurement of spares.**

###### Project Financial Assurance Statement

As at 30 June 2021, 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 financial year.

##### Schedule Performance

Detailed Design Review (DDR) was delayed by 4 months due to delay in completion of design activities by the contractor which resulted in liquidated damages being invoked during the 2016/2017 Financial Year and accepted by the Commonwealth in the form of additional goods and services provided by the contractor.

Training System and Shore Integration Test Facility Acceptance occurred in November 2019, **with one ship mission system accepted in April 2021.**

The SEA1442 Phase 4 delivery and installation schedule has been aligned to the Anzac Midlife Capability Assurance Program (AMCAP) scheduling and this alignment of programs has resulted in the SEA1442 Phase 4 Initial Materiel Release (IMR) moving from June 2018 to **July 2021**. Final Operating Capability (FOC) **remains at April 25.**

##### Materiel Capability Delivery Performance

The MTWAN Secondary Shore Gateway has been delivered and is operational, including the Training System and the Shore Integration Test Facility which were both accepted in November 2019. The first Anzac ship capability (**HMAS Anzac**) with associated support systems **was delivered by the contractor to CASG** in April 2021.

##### Note

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

165 Notice to reader

Forecast dates and Sections: 1.2 (Materiel Capability Delivery Performance), 1.3 (Major Risks and Issues), 4.1 (Measures of Materiel 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 Review Report by the Auditor-General* in **Part 3** of this report.

### 1.3 Project Context

<p><b>Background</b></p> <p>SEA1442 (Maritime Communications Modernisation) is a multi-phased program that will modernise the Royal Australian Navy's (RAN) communications infrastructure. The preceding phase (Phase 3) delivered an initial MTWAN and Message Handling System to the RAN's Major Fleet Units.</p> <p>SEA1442 Phase 4 will address critical obsolescence problems affecting the communication systems in the RAN Anzac Class frigates. The modernised communications system (NewGen MCS) will be highly integrated and automated to deliver more agile and faster communication and reduce operator intervention. The project scope includes upgrade of various communications systems in the eight Anzac frigates, establishment of a training system at HMAS <i>Stirling</i> and a shore integration and test capability at the prime contractor's facility for in-service support, delivery of a secondary MTWAN shore gateway, and upgrade of the Anzac Combat System Trainer Communications Terminals.</p> <p>The majority of individual equipment and sub-systems are either <b>existing</b> Military or Commercial <b>grade items</b>. Some development is required and involves functionality enhancements and Australianisation of the Military or Commercial <b>grade items</b>. The main complexity is in bringing the sub-systems together as a highly integrated and automated system and installation in the ships, cognisant of existing weapons, sensors, emitters, and specific platform requirements.</p> <p>Government Second Pass approval was achieved in July 2013. Prime acquisition and 5-year support services contracts were awarded to Selex ES Ltd in November 2013 following an open tender process. Selex ES Ltd changed its name to Leonardo MW Ltd in September 2016 <b>and to Leonardo UK Ltd in March 2021</b>.</p> <p>Under the acquisition contract, Leonardo <b>UK</b> will: design, develop and install the NewGen MCS into the eight Anzac Class frigates; design, develop and install the support systems (including a training system and an integration and test capability); and develop and deliver integrated logistic support products. The support services contract <b>became operative in November 2020</b>.</p> <p>The project is also managing the acquisition of ARC-210 Gen 5 V/UHF multi-band multi-mode software defined radios through FMS with the US Government. The radios form part of the NewGen MCS.</p>
<p><b>Uniqueness</b></p> <p>An advanced feature of the system 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.</p> <p>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.</p>
<p><b>Major Risks and Issues</b></p> <p><b>The project is currently managing major issues relating to the COVID-19 outbreak disruption and deficiencies in the Prime Contractor's engineering management and resource management. A number of project risks were downgraded to Medium during 2020-21.</b></p>
<p><b>Other Current Related Projects/Phases</b></p> <p>N/A</p>
<p><b>Note</b></p> <p>Major risks and issues are excluded from the scope of the Auditor-General's Independent Assurance Report.</p>

## Section 2 – Financial Performance

### 2.1 Project Budget (out-turned) and Expenditure History

Date	Description	\$m	Notes
	<b>Project Budget</b>		
Dec 10	Original Approved (First Pass Approval)	11.4	
Jul 13	<b>Government Second Pass Approval</b>	374.2	
	Total at Second Pass approval	385.6	
Jun 21	Exchange Variation	48.4	
Jun 21	<b>Total Budget</b>	434.1	
	<b>Project Expenditure</b>		
Prior to Jul 20	Contract Expenditure – Leonardo <b>UK</b>	(166.6)	1
	Contract Expenditure – US Government	(15.1)	1
	Other Contract Payments / Internal Expenses	(34.8)	2
		(216.5)	
FY to 30 Jun 21	Contract Expenditure – Leonardo <b>UK</b>	(24.0)	1
	<b>Contract Expenditure – US Government</b>	(0.2)	1
	Other Contract Payments / Internal Expenses	(10.8)	3
		(34.9)	
Jun 21	<b>Total Expenditure</b>	(251.5)	
Jun 21	<b>Remaining Budget</b>	182.6	
	<b>Notes</b>		
1	The scope of this contract is explained further in Section 2.3 – Details of Project Major Contracts.		

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2	Other expenditure comprises <b>\$7.0m</b> for other minor contract expenditure, project management costs and travel, \$5.9m for Pre-contract work with Leonardo UK, <b>\$4.6m</b> for Multi-couplers, <b>\$4.4m</b> for Contractor Support, <b>\$3.4m</b> for MK3 Operations Room upgrade, <b>\$2.5m</b> for technical and engineering support, \$2.1m for other pre Second Pass studies and work, \$1.5m for Viasat modems, <b>1.2m for Interim Support</b> , <b>\$0.7m</b> Power Distribution Panel replacement, \$0.5m for Shore Gateway West, \$0.3m for legal services, \$0.3m for AVA-20 Antennas, <b>\$0.3m</b> for the Shore Integration Facility, \$0.2m for WAMA support and \$0.1m for the High Data Rate Line of Sight (HDRLOS) integration Study.
3	Other expenditure comprises <b>\$4.1m</b> for contractor support, <b>\$1.8m</b> for other minor contract expenditure, project management costs and travel, <b>\$1.7m</b> for remaining Multi-couplers, <b>\$1.6m</b> for MK3 Operations Room upgrade and <b>\$1.5m</b> for Interim Support.

## 2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
39.8	35.3	34.4	PBS to PAES – The variation is primarily due to a re-programming of some spares receipts to FY21-22 and Acceptance of FFH#1 now to be achieved in July 2021. Some replacement equipment and system upgrades funds were brought forward to FY20-21 from FY21-22 to better align with upgrade program. PAES to Final Plan – The variation is due to exchange rate gains and losses.
Variance \$m	(4.5)	(0.9)	Total Variance (\$m): (5.4)
Variance %	(11.2)	(2.5)	Total Variance (%): (13.5)

## 2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
			Australian Industry	Variance of \$0.5m due to accelerated procurement of spares.
			Foreign Industry	
		0.5	Early Processes	
			Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
34.4	34.9	0.5	<b>Total Variance</b>	
		1.4	<b>% Variance</b>	

## 2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 21 \$m			
Leonardo UK	Nov 2013	187.7	239.8	Variable	Standard Defence Contract	1, 2, 3
US Government (AT-P-BSH)	Dec 2014	17.0	15.4	Firm	FMS	1, 3, 4
<b>Notes</b>						
1	Contract value at 30 June 2021 is based on actual expenditure to 30 June 2021 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 Navy's ship upgrade program.					
3	The scope of this contract is explained further below.					
4	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.					
Contractor	Contracted Quantities as at		Scope	Notes		
	Signature	30 Jun 21				
Leonardo UK	See scope	See scope	8 ship mission systems 1 training system 1 Shore Integration and Test facility 3 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		
<b>Major equipment accepted and quantities to 30 Jun 21</b>						
MTWAN Secondary Gateway, Training Systems, Shore Integration and Test Facility (SITF) and one ship mission system has been accepted.						
<b>Notes</b>						
1	Additional radios ordered as spare parts.					

### 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
<b>Notes</b>						
1	Delayed from originally planned due to slow ramp up/contractor performance.					
2	Contract schedule re-baselined to reflect previous System Definition Review (SDR) milestone slippage and contractor's improved understanding of the work.					
3	MTWAN System Requirements and Preliminary Design addressed prior to 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 shore integration facility was requested prior to design acceptance. This required additional time to complete.					
4	The conduct of the Detailed Design Review (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).					

#### 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
	Shore Integration and Test Facility (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	Oct 21	23	4
	Ship #4	Jun 20	Jul 22	Jul 22	25	4
	Ship #5	Feb 21	Jan 23	Jan 23	23	4
	Ship #6	Sep 21	Sep 23	Sep 23	24	4
Ship #7	Apr 22	Feb 24	Feb 24	22	4	
Ship #8	Sep 22	Sep 24	Sep 24	24	4	
<b>Notes</b>						
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 UK based personnel being unable to travel to undertake set-to-work and acceptance testing in WA, and the project being unable to travel to carry out onsite test and trials activities with the contractor.					
2	Contract Change Proposal (CCP-011) of 25 June 2018 included an adjustment of the schedule for this Milestone. This Milestone was achieved in November 19, being twelve 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 Jun 2021. Leonardo UK to be advised 90 days prior to commencement of each ship installation period.					

#### 3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Jun 18	Jul 21	36	1,2
Initial Operational Capability (IOC)	Dec 18	Dec 21	23	1,2
Materiel Release 2 – Ship # 2	Apr 19	Apr 21	24	1,2
Materiel Release 3 – Ship # 3	Dec 19	Oct 21	23	1,2
Materiel Release 4 – Ship # 4	Aug 20	Jul 22	23	1,2
Materiel Release 5 – Ship # 5	Apr 21	Jan 23	21	1,2
Materiel Release 6 – Ship # 6	Dec 21	Sep 23	21	1,2
Materiel Release 7 – Ship # 7	Aug 22	Feb 24	18	1,2
Final Materiel Release (FMR)	May 23	Sep 24	16	1,2

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Final Operational Capability (FOC)	Dec 23	Apr 25	16	1,2
<b>Schedule Status at 30 June 2020</b>				
Original Planned				
Achieved / Forecast				
<b>Notes</b>				
1	Ship availability and schedule is driven by AMCAP. <b>The delays were mainly due to the AMCAP program/schedule which had a follow on effect on Material Release including IMR and IOC.</b> Whilst the availability dates for Ships #1- #6 have been agreed, the availability dates for the remaining ships are subject to change. Forecast dates have been aligned with the AMCAP dates as at <b>June 2021</b> . Leonardo <b>UK</b> to be advised 90 days prior to commencement of each ship installation period.			
2	See Section 4.1 of this PDSS for a definition of these milestones.			
<b>Note</b>				
Forecast dates in Section 3 are excluded from the scope of the Auditor-General's Independent Assurance Report.				

**Section 4 – Materiel Capability Delivery Performance**

4.1 Measures of Materiel Capability Delivery Performance

<b>Pie Chart: Percentage Breakdown of Materiel Capability Delivery Performance</b>	
	<p><b>Green:</b> The Project expects to meet capability materiel requirements as per the Joint Project Directive, Materiel Acquisition Agreement and relevant Technical Regulatory Authority.</p> <p><b>Amber:</b> N/A</p> <p><b>Red:</b> N/A</p>
<b>Note</b>	
This Pie Chart 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, shore integration and test facility, ship 1 crew training, and support arrangements in place. IMR is expected to occur in <b>July 2021</b> .	Not yet achieved.
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. IOC expected to be achieved in <b>December 2021</b> .	Not yet achieved
Final Materiel Release (FMR)	All 8 ships accepted and all support arrangements in place. FMR is expected to be achieved in <b>September 2024</b> .	Not yet achieved.
Final Operational Capability (FOC)	Operational Release and FMR have been met and endorsed by CN. FOC will occur when all 8 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

	FOC is expected to be achieved in April 2025.	
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## Section 5 – Major Risks and Issues

### 5.1 Major Project Risks

Identified Risks (risk identified by standard project risk management processes)	
Description	Remedial Action
<b>Platform Integration</b> – There is a chance that installation will be affected by unknown or late changes to ship configuration.	<ul style="list-style-type: none"> <li>Continue to work collaboratively with the ANZAC SPO through established working groups and regular meetings to monitor changes to ship configuration.</li> <li>In consultation and collaboration with AMCAP, ensure site surveys are conducted as late as possible prior to installation to verify ship configuration and modify installation design if necessary.</li> <li><b>Downgraded to a Medium Risk due to increased installation experience and the benefit of lessons learned minimising the likely severity.</b></li> </ul>
<b>Platform Integration</b> – There is a chance that installation completion will be affected by other AMCAP activities which are being conducted on the ship concurrently with each SEA1442 installation.	<ul style="list-style-type: none"> <li>Work collaboratively on the Integrated Master Schedule (IMS) with the Contractor, ANZAC System Program Office (SPO) and the AMCAP.</li> <li>Continue to liaise closely with ANZAC SPO and the AMCAP through established working groups and regular meetings to monitor the progress of the installation.</li> <li><b>Downgraded to a Medium Risk as a result of Project confidence in the integrated installation environment.</b></li> </ul>
<b>Platform Integration</b> – There is a chance that installation will be affected by delays to acceptance testing due to rework required by poor workmanship.	<ul style="list-style-type: none"> <li>Continue to liaise closely with the Contractor, ANZAC SPO and the AMCAP through established working groups and regular meetings to monitor the progress of the installation.</li> <li><b>Downgraded to a Medium Risk due to improvement in installation teams' output.</b></li> </ul>
<b>Engineering Management Performance</b> – There is a chance that deficiencies in the Contractor's Engineering Management performance may adversely affect the achievement of future Milestones, leading to an impact on schedule.	<ul style="list-style-type: none"> <li>Continue to liaise closely with the Contractor, through regular meetings and interaction with respect to its preparedness for future Milestones.</li> <li>Utilisation of Contractual mechanisms.</li> <li><b>Risk realised and is disclosed in Section 5.2 – Major Project Issues.</b></li> </ul>
<b>Estimation of Required Resources</b> – There is a chance that the Contractor may fail to adequately estimate the time and resources required to complete all required work to meet a Milestone, leading to an impact on schedule.	<ul style="list-style-type: none"> <li>Continue to liaise closely with the Contractor, through regular meetings and interaction with respect to its preparedness for future Milestones.</li> <li>Utilisation of Contractual mechanisms.</li> <li><b>Risk realised and is disclosed in Section 5.2 – Major Project Issues.</b></li> </ul>
Emergent Risks (risk not previously identified but has emerged during 2020-21)	
Description	Remedial Action
N/A	N/A

### 5.2 Major Project Issues

Description	Remedial Action
COVID-19 Outbreak Disruption – The outbreak has had a number of effects on the Project.	<ul style="list-style-type: none"> <li>The effects of COVID 19 have created a number of issues for the Project including:</li> <li>Inability of the ACT-based Project team and Defence SME's to travel to WA to support the installation &amp; carry out testing and witnessing activities;</li> <li>Limitations on the UK contractor's team to travel to Australia to support installation.</li> </ul>
<b>Deficiencies in Prime Contractors Engineering Management and Resource Management effecting the likelihood of Milestone achievement.</b>	<ul style="list-style-type: none"> <li><b>Work with the Contractor to assist estimation of the time required to produce Deliverables and other artefacts required for Milestones and to assist it employing and retaining sufficient technical &amp; installation staff.</b></li> <li><b>Being actively managed by Team leadership with Leonardo Leadership</b></li> <li><b>Made more difficult due to COVID-related travel restrictions and platform availability issues.</b></li> </ul>
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

Project Lesson	Categories of Systemic Lessons
Ensure requirements are clear, unambiguous, and that a common understanding is established between all parties as early as possible, including the Capability Acquisition and Sustainment Group, Capability Manager, end-user community and the	Requirements Management

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contractor.	
Interfaces, and in particular legacy interfaces, need to be well defined, consistent, documented, and well understood by all parties. The risk profile and associated contingency needs to include interface management.	Requirements Management
More attention needs to be given to the possible impacts when tailoring the Standard Defence Contract suite of contracting templates to suit individual project context and strategy in order to avoid unnecessary detail, resource burden, cost and schedule.	Contract Management
Additional effort is required by the project team during contract negotiations to assess and better understand scope, schedule, risk, cost and resource commitments made under the contract, including an assessment that the schedule is realistic.	Contract Management
Pay close attention to schedule and ensure all work is captured, logical and can form a basis for sound management post contract award. 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
Access to appropriately skilled and experienced resources is critical to achieving project planning and management objectives.	Resourcing Schedule Management
Project Team coordination of the training program and data codification involves significant effort and preferably dedicated experienced Integrated Logistics Support (ILS) resources should be allocated early in the Project.	Resourcing
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
<b>Importance of a localised workforce. In response to COVID-19 related travel issues affecting the ability to travel and issues relating to the CASG team being based away from installation activities in West Australia, the Project has prioritised locating key workforce in WA and encouraged the Contractor to empower its local WA based subsidiary to take on more responsibilities.</b>	<b>Resourcing</b>

## Section 7 – Project Line Management

### 7.1 Project Line Management as at 30 June 2021

Position	Name
Division Head	<b>Mr Gavin Rawlins</b>
Branch Head	<b>Mr Tom Brennan</b>

