

Project Data Summary Sheet¹

Project Number	SEA1180 Phase 1
Project Name	OFFSHORE PATROL VESSEL
First Year Reported in the MPR	2018-19
Capability Type	Replacement
Capability Manager	Chief of Navy
Government 1st Pass Approval	Apr 16
Government 2nd Pass Approval	Nov 17
Budget at 2nd Pass Approval	\$3,639.1m
Total Approved Budget (Current)	\$3,664.1m
2022–23 Budget	\$344.1m
Complexity	ACAT II



Section 1 – Project Summary

1.1 Project Description

Project SEA1180 Phase 1 Offshore Patrol Vessel (OPV) will acquire 12 new vessels based on an existing design, to replace and improve upon the capability delivered by the 13 Armidale Class Patrol Boats (ACPB). The primary role of the SEA1180 Phase 1 OPV will be maritime patrol and response operations in support of the National Civil Surveillance Program in order to contribute to protecting Australia's territory, territorial seas, and Economic Exclusion Zone (Constabulary Tasks). In addition to the 12 OPV, the project will acquire sea boats for the vessels, through a separate contract. These consist of two Rigid Hull Inflatable Boats and one Rapid Intercept Craft for each OPV to facilitate boarding operations.

1.2 Current Status

Cost Performance

In-year

The project achieved \$291.7m spend out of \$344.1m budget. The End of Financial Year (EOFY) variance is mainly due to sparing and support system activities now being funded by the Offshore Patrol Vessel Systems Program Office (SPO) (\$28.0m), lower than anticipated spend for Boomeranger Boats Oy (\$8.0m) and slower than anticipated increase in the project office contracts (\$7.0m).

Project Financial Assurance Statement

As at 30 June 2023, project SEA1180 Phase 1 has undertaken a review of the approved scope and budget for those elements required to be delivered by Defence. As at the reporting date, and with regards to the current financial and 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 with contingency remaining for the project to complete against the agreed scope.

Contingency Statement

The project has not applied contingency in the Financial Year (FY) 2022-23.

Schedule Performance

The project achieved Second Pass Government approval on 24 November 2017 and contract signature with Luerksen Australia Pty Ltd was signed on schedule on 31 January 2018. An intensive design review program has been conducted and the project commenced construction of the first OPV in South Australia in November 2018, on schedule. A Whole of Ship Design Review was added to the program and conducted in late October 2019. The Support System Detailed Design Review was delayed to September 2021 to allow a Logistic Support Analysis program to be established effectively in November 2020.

The construction of the first OPV commenced on schedule in November 2018 in South Australia at which time the ships were announced as the Arafura Class. The contracted keel laying milestone for OPV 1 (Arafura) was achieved in February 2019 with the keel laying ceremony occurring on 10 May 2019. Production of the second OPV (Eyre) commenced in June 2019, two months ahead of schedule. The keel laying for OPV 2 (Eyre) occurred on 9 April 2020. OPV 3 (Pilbara) commenced construction in Western Australia, ahead of schedule on 27 March 2020. OPV 4 (Gippsland) also commenced construction on schedule on 4 January 2021, with the keel laying ceremony held on 30 July 2021. OPV 5 (Illawarra) commenced construction on schedule on 1 November 2021 and OPV 6 (Carpentaria) commenced construction on 1 August 2022. Nuship Arafura was launched on 16 December 2021. The keel laying milestone for OPV 5 (Illawarra) was achieved on 22 March 2022.

Delivery of NUSHIP Arafura by Luerksen Australia Pty Ltd will be further delayed from the last Major Projects Report (MPR) forecast date of June 2022. Luerksen Australia Pty Ltd has not been able to resolve the causes of schedule delays. In 2022, Defence identified that changes were required to improve the structural fire protection of the ship and other safety design changes, prior to conducting sea acceptance trials. The project and Luerksen Australia Pty Ltd are working together to identify opportunities to still deliver the entire 12 OPV and achieve Final Operational Capability (FOC) on schedule. The project is also working collaboratively with Navy to reduce the impact of delayed ship delivery to Initial Operational Capability (IOC). The project is on

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.

track to achieve the Final Materiel Release (FMR) milestone.
Materiel Capability/Scope Delivery Performance In June 2021, due to delays in delivery as a result of COVID-19 and technical certification concerns by Navy, Luerssen Australia Pty Ltd was directed to terminate the main gun contract with Leonardo Australia Pty Ltd and investigate an interim gun solution. The interim main gun for the Arafura OPV will be the existing Navy 25mm Typhoon Mod 0 from ACPB until a replacement gun is identified, which will account for a revised threat assessment and a requirement for commonality.
Note Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.

1.3 Project Context

Background The SEA1180 Phase 1 OPV Project will acquire 12 OPV to replace the existing ACPB. In August 2015, the Government announced that SEA1180 Phase 1 would become part of the continuous naval shipbuilding program and brought forward the construction of the OPV by two years to enable the start of the naval shipbuilding program by 2018. In September 2015, the Government approved funding for the commencement of the Competitive Evaluation Process (CEP) for SEA1180 Phase 1. Interim Pass Project Approval was provided by Government in November 2015 and First Pass Approval was provided in April 2016. The Government also announced at First Pass that OPV designs from B.V. Scheepswerf Damen Gorinchem (Netherlands), Fr. Fassmer GmbH & Co. KG (Germany) and Luerssen Australia Pty Ltd (Germany) had been shortlisted for the Risk Reduction Design Study. A Request for Tender was released in November 2016. Government announced Luerssen Australia Pty Ltd as the preferred tenderer on 24 November 2017. The Government also announced that the capabilities of Austal Ships Pty Ltd and Cimvec Construction and Engineering Pty Ltd would be used to build 10 OPV subject to the conclusion of commercial negotiations between Luerssen Australia Pty Ltd and Austal Ships Pty Ltd. The contract for the construction of 12 OPV was signed with Luerssen Australia Pty Ltd on 31 January 2018. Luerssen Australia Pty Ltd nominated Cimvec Construction and Engineering Pty Ltd to construct the remaining 10 OPV and contracted Cimvec Construction and Engineering Pty Ltd initially to acquire and prepare the steel and pipe for all 12 OPV from Australian sources (where available). Luerssen Australia Pty Ltd also established contracts with L3 Communications Australia Pty Ltd as a systems integrator and Saab Australia Pty Ltd for a Situational Awareness System. The Commonwealth elected to purchase the Rigid Hull Inflatable Boats and Rapid Intercept Crafts based on Luerssen Australia Pty Ltd's OPV design from Boomeranger Boats Oy. The project did not undergo a Smart Buyer activity due to it already having had a similar risk review as part of an Independent Assurance Review.
Uniqueness The Arafura OPV design is based on an existing design in service with the Royal Brunei Navy (Darussalam Class). Originally, only minimal changes were necessary to meet Australian Legislative and Regulatory requirements and specific Australian Defence Force communications and situational awareness needs, the inclusion of a bow thruster and an additional reverse osmosis plant.
Major Risks and Issues The project is currently managing the following major risks: - The delivery of OPV 1 (Arafura) and OPV 2 (Eyre) and OPV 3 (Pilbara) be impacted by the delay in the schedule, production and access to building facilities. - The schedule, capability, Initial Materiel Release (IMR) and Initial Operating Release (IOR) be impacted by the delivery of the priority support products and safety case. The project is currently managing the following emergent risks: - OPV 1 (Arafura) sea trials and IOR be impacted by Structural Fire Integrity design safety. - Ship acceptance of OPV 1 be impacted by the availability of the configuration baseline in Navy Logistics Information System. - Production of the OPV 3 to OPV 12 be impacted by inadequate access to ship building facilities. - Production of OPV 2 be impacted by schedule delays and cost. - OPV 1 (Arafura) delivery be impacted by lack of approved test plans, test procedures and test reports.
Other Current Related Projects/Phases Related projects include: SEA5000 – Future Frigate (Hunter Class Frigates). Nine Hunter Class frigates will be based on BAE Systems' Type 26 Global Combat Ship design, modified to meet Australian requirements, and will be built in Osborne, South Australia as part of the Continuous Naval Shipbuilding Program. N2263 – Infrastructure Project for Arafura Class OPV. The project will provide berthing, training, maintenance, logistics, and support facilities at His Majesty's Australian Ship (HMAS) <i>Stirling</i>, HMAS <i>Coonawarra</i>, and HMAS <i>Cairns</i> to support the introduction into service of 12 new OPV being delivered by Luerssen Australia Pty Ltd.
Note Major risks and issues are excluded from the scope of the Auditor-General's Independent Assurance Report.

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

Section 2 – Financial Performance²

2.1 Project Budget (out-turned) and Expenditure History

Date	Description	\$m	Notes
	Project Budget		
Sep 15	Original Approved	10.0	1
Nov 15	Interim Pass Approval	1.5	2
Apr 16	Government First Pass Approval	45.9	3
Nov 17	Government Second Pass Approval	3,581.7	4
	Total at Second Pass Approval	3,639.1	
	Exchange Variation	25.0	
	Total Budget	3,664.1	
	Project Expenditure		
Prior to Jul 22	Contract Expenditure – Luerssen Australia Pty Ltd	(838.1)	5
	Contract Expenditure – Nova Systems Australia Pty Ltd	(47.7)	
	Contract Expenditure – Boomeranger Boats Oy	(9.7)	
	Other Contract Payments / Internal Expenses	(149.4)	6
		(1,044.9)	
FY to Jun 23	Contract Expenditure – Luerssen Australia Pty Ltd	(226.5)	
	Contract Expenditure – Nova Systems Australia Pty Ltd	(9.6)	
	Contract Expenditure – Boomeranger Boats Oy	(5.5)	
	Other Contract Payments / Internal Expenses	(50.0)	7
		(291.7)	
Jun 23	Total Expenditure	(1,336.5)	
Jun 23	Remaining Budget	2,327.6	
Notes			
1	Funding in support of bringing the SEA1180 Phase 1 project forward by two years and establishing a continuous onshore build.		
2	Funding for the conduct of the initial phase of the CEP.		
3	Continuation/Completion of CEP which included Project Support, a Risk Reduction Design Study and Schedule Protection Activities.		
4	This approval included \$103.7 million to support the transition from ACPB to the new SEA1180 Arafura Class Offshore Patrol Vessels, including support for the life of type extension and lease extension of two Cape Class Patrol Boats.		
5	Prime Contract with Luerssen Australia Pty Ltd. The scope of this contract is explained further in Section 2.3 – Details of Project Major Contracts.		
6	Other expenditure prior to July 2022 comprises \$44.8m for Project Office, \$35.5m for Gate 1 activities, \$29.7m of Government Furnished Equipment, \$25.6m for OPV Transition and \$13.8m for other contract payments/internal expenses.		
7	Other Contract Payments/Internal expenditure in FY 2022-23 comprises \$23.4m for OPV Transition, \$12.7m of Government Furnished Equipment, \$11.9m for Project Office and \$2.1m other contract payments/internal expenses.		

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
364.4	514.6	344.1	<u>Portfolio Budget Statement (PBS) to Portfolio Additional Estimates Statement (PAES)</u> : Increase was to account for expected delivery of Support System and OPV 1 and Launch of OPV 2. Followed by a re-phasing at PBS December 2022 moving Support System Delivery from April 2023 to October 2023. <u>PAES to Final Plan</u> : Variance is due to ships construction delay relating to OPV 1 and OPV 2 acceptance and delay in delivery of Support System.
Variance \$m	150.3	(170.6)	Total Variance (\$m): (20.3)
Variance %	41.2	(33.1)	Total Variance (%): (5.6)

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.

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(11.2)	Australian Industry	The EOFY variance of \$52.4m is mainly due to sparing and support system activities now being funded by the Offshore Patrol Vessel SPO (\$28.0m), lower than anticipated spend for Boomeranger Boats Oy (\$8.0m) and slower than anticipated increase in the project office contracts (\$7.0m).
		-	Foreign Industry	
		-	Early Processes	
		(40.0)	Defence Processes	
		(0.2)	Foreign Government Negotiations/Payments	
		(0.9)	Cost Saving	
		-	Effort in Support of Operations	
		-	Additional Government Approvals	
344.1	291.7	(52.4)	Total Variance	
		(15.2)	% Variance	

2.3A Details of Project Major Contracts – Price

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 23 \$m			
Nova Systems Australia Pty Ltd	Jun 16	12.6	62.0	Firm or Fixed	Standard Defence Contract	1, 4
Luerssen Australia Pty Ltd	Jan 18	1,988.0	2,642.0	Fixed with forecast Escalation	Standard Defence Contract (Complex)	1, 2, 3
Boomeranger Boats Oy	Oct 19	42.2	54.8	Fixed with forecast Escalation	Modified Standard Defence Contract	1, 2
Notes						
1	Contract value as at 30 June 2023 is based on actual expenditure to 30 June 2023 and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable). Amounts expensed convert using the spot rate of the day therefore due to calculation method 30 June 2023 value will reflect a variance to prior reporting period.					
2	The price is the value in out-turned dollars (as at 30 June 2023) using Commonwealth cumulative escalation indices. While price escalation models are built into the contract, the price at signature does not include an estimate across the forward commitment (expected expenditure). The price at 30 June 2023 includes this estimate, which is the reason for the large difference between the two figures.					
3	The increase in price from the prior year was due to changes to commercial arrangements and additional requirements for Navy.					
4	The increase in value of the Nova Systems Australia Pty Ltd contract was attributed to the additional resources required. These included: Integrated Logistics Support Management; Data and configuration Management; System and Software Engineering-Safety Management; Specialist Engineering-Maritime Systems.					

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

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 23		
Nova Systems Australia Pty Ltd	N/A	N/A	Support to the Offshore Patrol Vessels Project	-
Luerssen Australia Pty Ltd	12	12	12 Offshore Patrol Vessels	-
Boomeranger Boats Oy	41	41	27 Rigid Hull Inflatable Boats and 14 Rapid Intercept Craft	-
Major equipment accepted and quantities to 30 Jun 23				
Ship Set 1 Seaboats three delivered on 26 August 2021 from Boomeranger Boats Oy.				

2.4 Australian Industry Capability

Summary
The project has contracted Australian Industry Capability (AIC) targets based on opportunities to maximise internationally competitive Australian industry involvement that is captured in Luerssen Australia Pty Ltd's AIC Plan in support of Shipbuilding and Integrated Logistic Support activities.
The project has no contracted AIC target or AIC Plan for Boomeranger Boats Oy as boats are procured direct from an overseas manufacturer.
The project has no contracted AIC target or AIC Plan for Nova Systems Australia Pty Ltd as the value at the time of signing was below the \$20.0m threshold for an AIC Plan and was for the provision of 'above the line' Australian workforce resources.
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.

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects 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	Platform System – Stream A	Jun 18	N/A	Jun 18	0	-
Preliminary Design		Aug 18	N/A	Aug 18	0	-
Detailed Design		Oct 18	Nov 18	Nov 18	1	1
System Requirements	Platform System – Stream B	Jun 18	N/A	Jun 18	0	-
Preliminary Design		Nov 18	Dec 18	Dec 18	1	1
Detailed Design		Feb 19	N/A	May 19	3	1
System Requirements	Command and Control System	Jun 18	N/A	Jun 18	0	-
Preliminary Design		Dec 18	Nov 18	Nov 18	(1)	-
Detailed Design		Mar 19	N/A	Mar 19	0	-
System Requirements	Communication and Navigation System	Jun 18	N/A	Jun 18	0	-
Preliminary Design		Jan 19	N/A	Nov 18	(2)	1
Detailed Design		Apr 19	N/A	May 19	1	-
Preliminary Design	Support System	Nov 18	N/A	Jun 19	7	1, 2
Detailed Design		Jun 19	Mar 20	Sep 21	27	1, 2, 3
Detailed Design Review	Whole of Ship	Oct 19	N/A	Oct 19	0	2
Notes						
1	Variance was agreed by the parties at Contract Change Proposal (CCP) 001 and incorporated under Contract Amendment 3.					
2	CCP007 proposed to delay the Support System Detailed Design by 12 months and reduce the Support System Detailed Design milestone review value commensurate with the other detailed design milestone values in order to create new milestones for a whole of ship Detailed Design, Integrated Baseline Review (IBR) with ASC Shipbuilding Australia Pty Ltd, and an IBR with Luerssen Australia Pty Ltd. The whole of ship Detailed Design will be a complete assessment of the detailed design including antenna arrays. The IBR milestones are proposed to finalise Luerssen Australia Pty Ltd's establishment of the Earned Value Management System (EVMS).					
3	The Support System Design Review was delayed to allow a Logistic Support Analysis program to be established effectively and occurred in November 2020. Outstanding actions were identified and was exited in September 2021.					

3.2 Contractor Test and Evaluation Progress

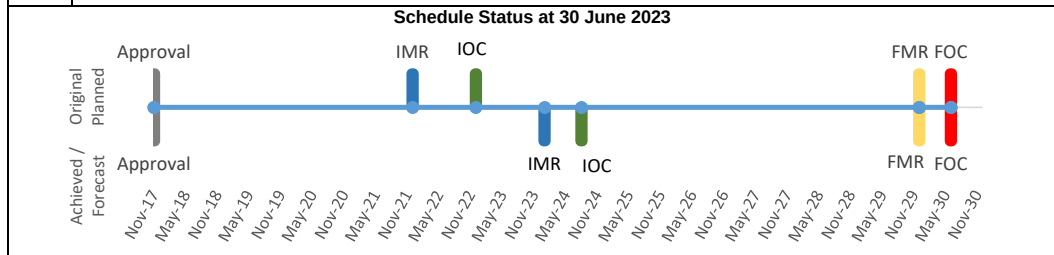
Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/ Forecast	Variance (Months)	Notes
Acceptance	OPV 1 (Arafura)	Dec 21	Jun 22	Nov 23	23	1, 4
Acceptance	OPV 2 (Eyre)	Sep 22	Mar 23	Jul 24	22	1, 4
Acceptance	OPV 3 (Pillbara)	May 23	Jun 24	Jul 24	14	2, 3, 4
Acceptance	OPV 4 (Gippsland)	Feb 24	Nov 24	Jan 25	11	2, 3, 4
Acceptance	OPV 5 (Illawarra)	Nov 24	N/A	Nov 24	0	3
Acceptance	OPV 6 (Carpentaria)	Jul 25	N/A	Aug 25	1	3
Acceptance	OPV 7	Apr 26	N/A	Apr 26	0	3
Acceptance	OPV 8	Jan 27	N/A	Jan 27	0	3
Acceptance	OPV 9	Oct 27	N/A	Oct 27	0	3
Acceptance	OPV 10	Jun 28	N/A	Jun 28	0	3
Acceptance	OPV 11	Mar 29	N/A	Mar 29	0	3
Acceptance	OPV 12	Dec 29	N/A	Dec 29	0	3

Notes	
1	The COVID-19 pandemic has impacted multiple aspects relating to construction and in particular, activities at Osborne Shipyard in South Australia from March to October 2020. COVID-19 has continued to have an adverse and significant effect on production and ship building operations supply chain disruptions, resource limitations and hard boarder closures between Western Australia and South Australia.
2	Commercial issues between Luerssen Australia Pty Ltd and Cimec Construction and Engineering Pty Ltd also resulted in additional schedule delays to delivery of the OPV 3 and OPV 4 being constructed in Henderson, Western Australia. These issues stemmed from the competition for skilled workers between the mining and manufacturing industries within Western Australia and COVID-19 border closures impacting the fly-in/fly-out workforce. This generated increasing competition for skilled workers significantly affecting local shipbuilders and introducing production delays to OPV 3 and OPV 4.
3	An IBR was unable to be held in November 2022 due to the restructure of contracting arrangements between Luerssen Australia Pty Ltd and Cimec Construction and Engineering Pty Ltd in Henderson. This resulted in Luerssen Australia Pty Ltd needing to adapt their German based production system for Henderson which is a major component of the EVMS.
4	Changes to OPV 1 and OPV 2 delivery dates were made via CCP in August 2021, changes to OPV 3 and OPV 4 were made via CCP in September 2022. The IBR for OPV 3 to OPV 12 is currently forecast to be conducted in April 2024. OPV 6 Schedule health check caused a minor delay in delivery date.

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Dec 21	Jan 24	25	1, 2
Initial Operational Capability (IOC)	Dec 22	Aug 24	20	2, 3
Final Materiel Release (FMR)	Dec 29	Dec 29	0	-
Final Operational Capability (FOC)	Jun 30	Jun 30	0	-

Notes	
1	The COVID-19 pandemic has impacted multiple aspects relating to construction and in particular, activities at Osborne Shipyard in South Australia from March to October 2020. Additional delays have been created by Structural Fire Protection changes to the ship.
2	COVID-19 had an enduring adverse effect on production and ship building operations, supply chain disruptions, resource limitations and hard border closures between Western Australia and South Australia.
3	IOC activities are controlled by Navy and directly linked to the delivery of OPV 1 (Arafura). It's anticipated that IOC will occur approximately 37 weeks after acceptance.
4	Further clarification of milestones will be reflected in Section 4.2.



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 is on track to deliver 12 OPV. Whilst COVID-19 has impacted production of the OPV the full impacts will not be known until completion of the IBR of OPV 3 to OPV 12.	
Amber: The OPV weapon systems include the main gun and two 0.5 inch calibre machine guns with the seaboats used for Constabulary Operations. The interim main gun for the Arafura OPV will be the existing Navy 25mm Typhoon Mod 0 from ACPB until a replacement gun is identified.	

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

	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)	OPV 1 was delivered ready for Operational Test and Evaluation (OT&E). Those Capability Acquisition and Sustainment Group (CASG) Fundamental Inputs to Capability (FIC) elements including transition into sustainment as defined by the OPV Support System sufficient to support OT&E. IMR is planned for January 2024.	Not yet Achieved
Initial Operational Capability (IOC)	IOC is achieved when Navy can be assured that the first OPV can demonstrate that it can be operated and maintained to conduct effective and sustained operations. IOC is planned for August 2024.	Not yet Achieved
Final Materiel Release (FMR)	OPV 1 to OPV 12 delivered in accordance with Government Approved scope. OPV 12 delivered ready for OT&E. Those CASG FIC elements including transition into sustainment as defined by the OPV Support System sufficient to support OT&E for each OPV. FMR is expected to be achieved December 2029.	Not yet Achieved
Final Operational Capability (FOC)	OPV 1 to OPV 12 complete in accordance with Functional Performance Specification and Operating and Support Intent. OPV 12 delivered and OT&E completed. All Facilities accepted. All support organisations functioning. FOC is expected June 2030.	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 to schedule that OPV 1 (Arafura), OPV 2 (Eyre) and OPV 3 (Pilbara) will not be delivered on contracted dates, due to combination of production delays, unavailability of workforce, insufficient access to ship building facilities and delays to completion of test and evaluation activities.	Progress against the build schedule is closely monitored by the project office and Luerssen Australia Pty Ltd, to ensure Luerssen Australia Pty Ltd achieve delivery of OPV 1 (Arafura) in order to allow Navy to meet IOC and to allow Navy to meet Materiel Release for OPV 3 (Pilbara). Luerssen Australia Pty Ltd continues its efforts in recruiting workforce to achieve production demand and anticipates to improve the project's access to the workforce in Western Australia.
2	There is a risk to achieving capability and schedule considering that priority support products may be partially delivered at IMR and Safety Case is not accepted by Navy at IOR.	Progress against Safety Case development and support product delivery for OPV 1 (Arafura) is closely monitored by the project office with Integrated Logistics Support function actively seeking opportunities to support Luerssen Australia Pty Ltd in meeting deliverables. The project office is seeking additional fidelity in progress reports and forecasts for delivery of the Safety Case to reduce uncertainty in meeting this delivery timeline.
Emergent Risks (risk not previously identified but has emerged during 2022–23)		
Ref#	Description	Remedial Action
1	There is a risk that Arafura Class OPV seaworthiness outcomes are not met and is unable to progress to Sea Trials and subsequently IOR due to Structural Fire Integrity and Design Safety issues detailed by the OPV Rapid Review Team.	The technical solution for the Structural Fire Protection Engineering Change Proposal's (ECPs) are currently being agreed, with the aim to reach design solutions that reduce the risk So Far As Reasonably Practicable of not meeting structural fire integrity and design safety obligations. A joint working group between Luerssen Australia Pty Ltd, Project, Sponsor and Navy Engineering's Subject Matter Expert has been stood up to co-develop and accelerate approval of ECPs addressing identified Structural Fire Protection challenges.

2	The delivery of the integrated logistics system configuration data packs will not be delivered by the commencement of Ship Acceptance resulting in a delayed establishment of the Configuration Baseline in Navy Logistics Information Systems.	The cyber attack on the Luerssen Australia Pty Ltd Document Management System has exacerbated the corrective actions being managed. Luerssen Australia Pty Ltd and the project team are working together on the configuration management plan and to ensure the baseline documentation and management systems are delivered.
3	There is a risk that inadequate access to ship building facilities in Henderson, Western Australia inhibits OPV 3 to OPV 12 production progress. Luerssen Australia Pty Ltd is responsible for finding appropriate facilities in Western Australia but the Commonwealth is still directly impacted.	There are discussions between Cvmec Construction and Engineering Pty Ltd and Luerssen Australia Pty Ltd to facilitate access for Luerssen Australia Pty Ltd to the northern bay of the main production shed and also access to the paint shed. Luerssen Australia Pty Ltd is in discussion with the Western Australia government to make more bays available for OPV use.
4	There is a risk that OPV 2 delivery will be impacted by production delays leading to an impact on schedule Materiel Release 2, cost and capability.	Project team and Luerssen Australia Pty Ltd to focus on maintaining production quality and improving schedules and scheduling. Luerssen Australia Pty Ltd working with partners.
5	There is a risk that the OPV Arafura's IMR will be delayed due to a lack of approved Test Plans, Test Procedures and completed Test Reports leading to an impact on the schedule.	Project streamlined the process for reviewing test procedures submitted by Luerssen Australia Pty Ltd by use of workshops, to reduce the timeframe to approval. At present all essential test procedures have been reviewed and approved, to allow testing to commence and complete.

5.2 Major Project Issues

Ref#	Description	Remedial Action
1	Nil	N/A

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 Lesson 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 15 lessons related to Engineering & Technical, Program-Project & Product Management, Material Logistics, Corporate Performance and Commercial Management. Three project lessons are provided below (note this does not include all project lessons):	The project has not categorized any of its lessons information as a whole-of-Defence Lesson Learned.
Lesson Type – Lessons identified. The shortcomings in Common Systems / Government Furnished Materiel (GFM) Sub-System System Item Owner Schedules directly affected project engagement and support during acquisition. This issue has since provided as feedback to the Head of Governance within the GFM Sub-Systems area.	Governance
Lesson Type – Lessons identified. There are several different risk management systems used to capture risks, issues and opportunities related to the project. The project is assessing different ways of displaying the risks to engage with senior executives and improving communication on risk between project and stakeholders.	Governance
Lesson Type – Lessons identified. Some systems can only be GFM (radar, weapons, crypto) etc., but many systems can and should be sourced commercially by the prime contractor.	Contract Management

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2023

Unit	Name
Division	Patrol Boats and Specialist Ships
Branch	Offshore Patrol Vessels Branch

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

Project Data Summary Sheet¹

Project Number	SEA1439 Phase 5B2
Project Name	COLLINS CLASS COMMUNICATIONS AND ELECTRONIC WARFARE IMPROVEMENT PROGRAM
First Year Reported in the MPR	2018-19
Capability Type	Upgrade
Capability Manager	Chief of Navy
Government 1st Pass Approval	Oct 06
Government 2nd Pass Approval	Stage 1 – Jun 15 Stage 2 – Mar 17
Budget at 2nd Pass Approval	\$599.2m
Total Approved Budget (Current)	\$614.2m
2022–23 Budget	\$32.0m
Complexity	ACAT II



Section 1 – Project Summary

1.1 Project Description

SEA1439 Phase 5B2 is a multiple Second Pass project that is delivering a Modernised Submarine Communications System (MSMCS) and upgraded Electronic Support measures on the Collins Class Submarines (CCSM). These enhancements will be broadly delivered in two stages;

MSMCS Stage 1 replaces obsolete Communications Centre (COMCEN) equipment on-board six CCSM. MSMCS Stage 1 upgrade is providing the submarines with improved performance, reliability and interoperability with other components of the Australian Defence Force and allied nations.

MSMCS Stage 2 is delivering urgent communications systems upgrades including satellite communications that will deliver a submarine internet protocol capability with supporting applications that will significantly reduce operator workloads and improve system management.

Funded under Stage 1, but as a standalone capability, Microwave Electronic Support (MWES) system will enable submarines to improve their ability to detect, identify, and localise intercepted signals. This is being installed independently and in parallel with Stage 1 and Stage 2.

1.2 Current Status

Cost Performance

In-year

As at 30 June 2023, Financial Year (FY) 2022-23 expenditure is \$21.5m against FY 2022-23 budget of \$32.0m. The variance is predominantly due to delays experienced at Sea Acceptance Trials that have affected supplier milestone claims and lower than forecast payments for Foreign Military Sales (FMS) case.

Project Financial Assurance Statement

As at 30 June 2023, project SEA1439 Phase 5B2 has reviewed the projects 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 2022-23.

Schedule Performance

SEA1439 Phase 5B2 Stage 1 achieved Initial Materiel Release (IMR) on one platform on 26 November 2019.

SEA1439 Phase 5B2 MWES system experienced significant schedule delays from Government Second Pass Approval due to difficulties engaging with subcontractors in the early phases of the project. Contractors have now been engaged and progressing to project implementation on platforms in accordance with the schedule re-baselined at Government Second Pass Approval for MSMCS Stage 2.

Restricted movements of contractor staff across state borders due to COVID-19 delayed IMR of MSMCS Stage 2 and MWES. MSMCS Stage 2 IMR was achieved 20 October 2021. MWES IMR was further delayed as a result of COVID-19 travel restrictions affecting staff contractor movements and the completion of installation and set-to-work. Other areas of priority work conducted on the platform impacted by delays; completing equipment installation for the support facility in the Submarine Training and Systems

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.

Centre (STSC) and follow on delays in obtaining objective quality evidence. MWES IMR was achieved 2 November 2022. Initial Operational Capability (IOC) for MSMCS Stage 1 & Stage 2 and MWES has been further impacted by delays associated with cyber security accreditation and end-to-end sustainment requirements.
Material Capability/Scope Delivery Performance The project has completed implementation of: • MSMCS Stage 1 on six platforms which are now in service. • MSMCS Stage 1 and 2 training system at the Integrated Test and Training Site (ITTS) and are in use for training. • MSMCS Stage 2 on three platforms, which are now in service. • MWES on five platforms which are now in service. • MWES training system at the STSC. • MSMCS Stage 2 and MWES are currently being installed on one platform and Stage 2 is being installed on one platform.
Note Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.

1.3 Project Context

Background In December 2004, Defence initiated investigations into CCSM potential capability enhancements and obsolescence issues regarding equipment with the Collins Class COMCEN. Government in November 2013 agreed to the SEA1439 Phase 5B scope that would address the identified enhancement and obsolescence issues under two stages; Stage 1 relates to the MSMCS that updated the obsolete COMCEN equipment on-board the Collins Class with a military off-the-shelf solution. Stage 1 received Second Pass Approval in June 2015 and is being implemented across all six platforms and at the ITTS. Stage 2 relates to the delivery of MSMCS capability enhancements including the introduction of satellite communications that provides improved data transmission/receive rates in a tactical environment and enhances networks and associated Information and Communication Technologies infrastructure. Stage 2 received Government Gate Two Approval (previously 'Second Pass') in March 2017. Stage 2 includes the following capability enhancements across all six platforms and at the ITTS: • Wideband Satellite Communications (WBS) System; • Classified Local Area Networks (LANs) to distribute information outside the COMCEN, referred to as the Submarine Local Area Network Environment (SUBLANE); • Network infrastructure to allow multiple classified LANs to access the same internet protocol-enabled radio frequency bearer system; and, • Tools and applications that effectively and efficiently manage the information flows between the shore communication centre's and the submarines, referred to as; Submarine Communication Information Exchange Management. The MWES system will detect, identify, and localise intercepted signals. The MWES capability enhancement will maximise commonality between the CCSM and the wider Royal Australian Navy fleet. Funded under Stage 1, but as a standalone capability, MWES is being installed independently, in parallel with Stage 1 and 2, in a flexible manner, achieving installation on the best-suited boat at the time of materiel availability.
Uniqueness SEA1439 Phase 5B2 Stage 1 addresses the obsolescence issues of the legacy maritime communications capability of the CCSM, and enhances the electronic support based on modernised architectures and standardised systems. The new and upgraded capability will enable new levels of operability and interoperability never before seen on CCSM. For implementation of Stage 2, the majority of supplies being Government Furnished Materiel (GFM). The project has engaged Raytheon Australia as Prime System Integrator (PSI) to implement MSMCS Stage 2. The Submarine LAN and the Submarine Communication Information Exchange Management elements of Stage 2 are being supplied by the Defence Chief Information Officer Group with the funding for the development and delivery of these systems handed directly to Defence upon Government Second Pass Approval for Stage 2. The other major component of Stage 2 is the WBS component which is supplied under a United States (US) Government FMS case.
Major Risks and Issues The project is currently managing a number of risks including: • Considering establishing long-term sustainment contract will take longer than anticipated, this may impact system accreditation of Information Screening and Delivery System (ISDS) at Submarine COMCEN – East. Delayed security accreditation may also impact IOC award. • There is a risk the project team will not be able to complete and deliver essential project tasks on time because of high staff vacancy rate and recruitment timeline is impacting engaging suitably qualified persons. • Implementation of ISDS at Submarine COMCEN is delayed because of stakeholder's decision to build a new system associated with ISDS rather than using existing version. • There is a risk of delay with delivery of FMS equipment from the US. The project is currently managing a number of issues including: • ISDS at Submarine COMCEN is delayed because of stakeholder's decision to build a new system associated with ISDS rather than using existing version. • Operators experiencing issues with WBS system.

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

Other Current Related Projects/Phases

Navy Minor Project (NMP) 1941. NMP 1941 was initiated to deliver an ISDS and a military message system across a number of CCSM. The ISDS has now been integrated into the SEA1439 Phase 5B2 project and has been implemented on two platforms and a shore system. NMP 1941 has reached FOC and is now due for closure.

SEA1442 Phase 6 – Protected Satellite Communications. SEA1442 Phase 6 provides WBS Ground and Space segment, as well as planning and land based infrastructure required to operate the system. The submarine fitted segment of this capability is provided by SEA1439 Phase 5B2 Stage 2.

SEA1439 Phase 5B2 is also related but not dependent on other projects within the SEA1439 program.

SEA2273 – Fleet Information Environment Modernisation is responsible to modernise the extant fleet information environment.

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			
Oct 06	Original Approved (Government First Approval)	4.1	1
Apr 10	Real Variation – Scope	1.4	1
Sep 12	Real Variation – Scope	1.6	1
Feb 15	Government First Pass Approval – Stage 1	36.7	2
Jun 15	Government Second Pass Approval – Stage 1	203.9	3
Mar 17	Government Second Pass Approval – Stage 2	351.4	4
	Total at Second Pass Approval	599.2	
Jan 20	Real Variation – Budgetary Adjustment	2.5	5
Jul 10	Price Indexation	0.4	6
Jun 23	Exchange Variation	12.2	
	Total Budget	614.2	
Project Expenditure			
Prior to Jul 22	Contract Expenditure – Raytheon Australia	(177.5)	7
	Contract Expenditure – FMS Case (AT-P-LFQ)	(78.8)	
	Contract Expenditure – ASC Pty Ltd	(61.5)	
	Contract Expenditure – Jenkins Engineering Defence	(45.6)	
	Other Contract Payments / Internal Expenses	(19.2)	8
		(382.6)	
FY to Jun 23	Contract Expenditure – ASC Pty Ltd	(10.0)	
	Contract Expenditure – Raytheon Australia	(4.1)	
	Contract Expenditure – Jenkins Engineering Defence	(3.1)	
	Contract Expenditure – FMS Case (AT-P-LFQ)	(3.0)	9
	Other Contract Payments / Internal Expenses	(1.2)	8
		(21.5)	
Jun 23	Total Expenditure	(404.1)	
Jun 23	Remaining Budget	210.1	
Notes			
1	Original approved funding was for development of the Function and Performance Specifications (FPS) for the future implementation of SEA1439 Phase 5B2 to provide high data rate communications fit for CCSM.		
2	Government approved SEA1439 Phase 5B2 Stage 1 funding for risk reduction funding for the development of the design of 5B2.		
3	Government approved SEA1439 Phase 5B2 MSMCS Stage 1 to provide a solution to address COMCEN obsolescence issues.		
4	Government approved SEA1439 Phase 5B2-A MSMCS Stage 2 for WBS and SUBLANE implementation. There was no Government First Pass Approval for Stage 2 as this is a capability enhancement of Stage 1.		
5	In January 2020, a budget adjustment was applied (\$2.5m) as a correction to project financial reporting. The project's total approved budget has remained the same as approved by Government.		

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.

6	Up until July 2010, indexation was applied to project budgets on a periodic basis. The cumulative impact of this approach was \$0.4m.
7	The scope of this contract is explained further in Section 2.3 – Details of Project Major Contracts.
8	Other Contract Payments/Internal Expenses: Operating expenditure, minor contract expenditure and other capital expenditure not attributable to the listed contracts.
9	US Government supply (FMS Case) for WBS.

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
26.9	43.1	32.0	<u>Portfolio Budget Statement (PBS) to Portfolio Additional Estimate Statement (PAES)</u> : Due to increase in project management cost and capability assurance budget. <u>PAES to Final Plan</u> : Variance is predominantly due to the reprogramming of payment for long lead items.
Variance \$m	16.1	(11.1)	Total Variance (\$m): 5.0
Variance %	60.0	(25.8)	Total Variance (%): 18.7

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(9.3)	Australian Industry	The variance is predominantly due to delays experienced at Sea Acceptance Trials that have affected supplier milestone claims and lower than forecast payments for FMS case.
		-	Foreign Industry	
		-	Early Processes	
		-	Defence Processes	
		(1.2)	Foreign Government Negotiations/Payments	
		-	Cost Saving	
		-	Effort in Support of Operations	
		-	Additional Government Approvals	
32.0	21.5	(10.5)	Total Variance	
		(32.8)	% Variance	

2.3A Details of Project Major Contracts – Price

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 23 \$m			
ASC Pty Ltd	July 12	N/A	91.9	Variable	Standard Defence Contract	1, 6
Raytheon Australia	Feb 15	32.9	191.9	Firm or Fixed	Standard Defence Contract	2, 3, 6
Jenkin Engineering Defence	Jul 16	10.4	49.9	Firm or Fixed	Standard Defence Contract	4, 5, 6, 7
US Government – FMS Case (AT-P-LFQ)	Jun 17	98.0	112.3	Reimbursement (for FMS)	FMS	6
Notes						
1	ASC Pty Ltd engagement related to SEA1439 Phase 5B2 is not a single contract. ASC Pty Ltd is engaged under a number of separate Survey and Quote (S&Q) tasks under the provisions of the In-Service Support Contract (ISSC) CSP/2012/1. At contract signature, no S&Q tasks had been raised for SEA1439 Phase 5B2.					
2	Raytheon Australia received \$32.9m in interim funding by the Commonwealth of Australia (CoA) to achieve Detail Design Review (DDR) prior to full contract award in March 2016 when the CoA issued a Notice to Proceed post Government Second Pass Approval for Stage 1.					
3	The Raytheon Australia PSI contract has been amended on multiple occasions. The major contract changes are Contract Change Proposal (CCP) 006 for early implementation of Stage 1 on one platform, and CCP008 for the introduction of Stage 2 work scope.					
4	CCP001 was negotiated with a revised scope for the MWES element of the project.					
5	CCP002 was approved for remediation works at the ITTS and option to procure two additional systems.					
6	Contract value as at 30 June 2023 is based on actual expenditure to 30 June 2023 and remaining commitment at current exchange rates.					
7	CCP003 was approved to re-baseline milestones affected because of COVID-19 consequences. There is no change to the contract price.					

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

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 23		
Raytheon Australia	7	7	Deliveries consist of six Stage 1 & 2 platform fits, and one Stage 1 & 2 Training System fitted at the ITTS.	-

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

ASC Pty Ltd	6	6	Deliveries consist of platform integration on six CCSM of Stage 1 & 2 and MWES.	-
Jenkins Engineering Defence Pty Ltd	5	7	Deliveries consist of six MWES platform fits, and one MWES fitted at the ITTS.	-
US Government – Foreign Military Sales (AT-P-LFQ)	7	7	Deliveries consist of six WBS platform fits, and one WBS training system fitted at the ITTS.	-
Major equipment accepted and quantities to 30 Jun 23				
Stage 1 systems have been implemented on six platforms which are now in operational service. Stage 1 & 2 training system have been implemented at the ITTS and are in use for training. Stage 2 has been implemented on three platforms that are now in service. MWES has been implemented on five platforms and are now in service. MWES training system has been implemented at the STSC.				
Notes				
N/A				

2.4 Australian Industry Capability

Summary	
The project has contracted Australian Industry Capability (AIC) targets based opportunities where appropriate, to identify Local Industry Capability which is captured in Raytheon Australia Pty Ltd and Jenkins Engineering Defence Pty Ltd's AIC Plans in support of their design, manufacturing, delivery and installation activities for various systems on six CCSM.	
The project has no contracted AIC targets for ASC Pty Ltd. The project's contract with ASC Pty Ltd is under a number of separate S&Q tasks under the provisions of an ISSC. AIC targets are not applicable to the project's S&Q tasks.	
The project has no contracted AIC targets for US Government, because the FMS is a government-to-government agreement and therefore contains different obligations on partner nations in terms of developing industry capability and compliance with domestic policy. As such compliance with the domestic Industry Policy and the AIC Program is not mandated.	
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	Stage 1	Jul 15	N/A	Jul 15	0	-
	MWES	Nov 16	Sep 18	Oct 18	23	1
	Stage 2	Sep 17	Oct 17	Oct 17	1	2
Preliminary Design	Stage 1	Nov 15	N/A	Nov 15	0	-
	MWES	Jan 17	Jan 19	Feb 19	25	1
	Stage 2	Jan 18	Feb 18	Jul 18	6	2
Critical Design	Stage 1	Mar 16	Apr 16	Apr 16	1	2
	MWES	Apr 17	Mar 19	Sep 19	29	1
	Stage 2	May 18	Jun 18	May 18	0	-
Notes						
1	MWES FPS had taken longer than expected to finalise. DDR completed 8 May 2019. DDR acceptance signed on 19 September 2019.					
2	Variance is due to delays in processing and acceptance of documentation delivered by the contractor.					

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	MSMCS Stage 1	May 17	Jun 17	Jul 17	2	1, 4
	MWES	May 18	Nov 19	Mar 20	22	2
	MSMCS Stage 2	Jun 19	Jul 19	Jul 19	1	1, 6, 8
Acceptance	MSMCS Stage 1	Jun 24	Apr 18	Jan 18	(77)	7
	MWES	Jul 19	N/A	Aug 21	25	2, 5
	MSMCS Stage 2	Jun 20	N/A	Jun 20	0	3, 6, 8
Notes						
1	MSMCS Stage 1 & Stage 2 System Integration is based on completion of CAT 3 Testing by the PSI in accordance with completion milestones within the PSI contract and the Test and Evaluation Master Plan (TEMP).					
2	MWES System Integration is based on First-of-Type (FOT) Set-to-Work. System acceptance is based on completion of successful FOT Harbour Acceptance Trial completion. Original system integration date based on planned FOT installation that was subsequently transferred to a different platform in a later maintenance period.					

3	MSMCS Stage 1 & Stage 2 acceptance is based on the Commonwealth's acceptance of the completion of CAT 4 testing in accordance with completion milestones within the PSI contract and the TEMP.
4	Variance is due to extended duration for processing and acceptance of documentation delivered by the contractor.
5	MWES implementation delayed due to immature procurement strategy and FPS. This has now been resolved with implementation completed in FOT platform. Commonwealth's acceptance is at completion of CAT 4 testing. Completion of CAT4 testing and Harbour Acceptance Trial on FOT platform delayed due to COVID-19 related travel and working condition restrictions. Additional delay to CAT 4 testing due to COVID-19 travel restrictions between states and unavailability of platform resulting in deferral of CAT 4 testing.
6	Implementation schedule understanding has matured since the Materiel Acquisition Agreement (MAA) was originally developed.
7	System acceptance achieved six months early due to the acceleration of the MSMCS Stage 1 installation with platform 2 installation brought forward 77 months from a Full Cycle Docking to an earlier Mid Cycle Docking.
8	Systems Operation and Verification Testing (SOVT) of WBS system under Stage 2 completion is acceptance of supplies from the US Government under the FMS case. SOVT transitions supplies from US Government to the Capability, Acquisition and Sustainment Group (CASG). CASG transition the WBS to the submarine sustainment organisation. SOVT of WBS system is not a precondition to Stage 2 acceptance.

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item		Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR) Stage 1		Jul 18	Nov 19	16	1, 2
IMR MWES		Feb 18	Oct 22	56	1, 3, 6, 8
IMR Stage 2		Dec 20	Oct 21	10	1, 4, 5, 8
Initial Operational Capability (IOC) Stage 1, 2 & MWES		Jun 21	Delayed from Dec 22	Not for Publication (NFP)	1, 4, 7, 10
Final Materiel Release (FMR) Stage 1		Jul 22	Delayed from Oct 22	NFP	1, 4, 8, 11
FMR MWES		Jun 19	Sep 26	87	1, 3, 8, 9
FMR Stage 2		Jul 22	Sep 26	50	1, 4, 8
Final Operational Capability (FOC) Stage 1, 2 & MWES		Dec 24	Jun 27	30	1, 4
Notes					
1	Original Planned dates for Stage 1 and MWES are in accordance with revision 2 of the MAA. Original planned dates for Stage 2 are in accordance with revision 4 of the MAA.				
2	Stage 1 IMR claim agreed 26 November 2019. Variance due to delay in obtaining all objective quality evidence to support IMR claim.				
3	MSMCS MWES implementation delayed due to immature procurement strategy and FPS. This has now been resolved with implementation completed in FOT platform, but has had consequential impact to the MWES implementation plan, IMR and FMR.				
4	Original IOC, FMR and FOC was for MSMCS Stage 1 and MWES. MAA Version 4.0 updated IOC to also include MSMCS Stage 2.				
5	IMR Stage 2 variance is due to delay of sea acceptance trial schedule as a result of COVID-19 related travel restrictions and delay in obtaining objective quality evidence to support trials assessment.				
6	IMR MWES variance due to installation and set-to-work delay resulting from COVID-19 travel restrictions, installation schedule conflict resulting in contractor resources being allocated to one platform and delay in completing of Support System equipment in the STSC.				
7	IOC date amended to reflect delay in achieving MSMCS Stage 2 (see Note 5) and MWES IMR (see Note 6).				
8	MAA Version 5.0 updated IMR MWES and IMR Stage 1 and 2.				
9	FMR MWES is now aligned with FMR Stage 2.				
10	Project has achieved all necessary prerequisites identified in MAA Version 5.0 milestone completion measures of effectiveness criteria. IOC date was revised to address cyber security accreditation and end-to-end sustainment requirements.				
11	FMR Stage 1 variance due to delay in maintenance period.				

Schedule Status at 30 June 2023

The Gantt chart displays a timeline from February 2017 to August 2027. Key milestones are marked with vertical bars: Approval (Feb-17), IMR (Aug-18), IOC (Aug-21), FMR (Aug-22), and FOC (Aug-27). For each milestone, a blue bar represents the 'Original Planned' date and a red bar represents the 'Achieved / Forecast' date. The chart shows significant delays for IMR, IOC, FMR, and FOC, with the FOC bar extending beyond the end of the timeline shown.

Milestone	Original Planned	Achieved / Forecast
Approval	Feb-17	Aug-17
IMR	Aug-18	Feb-22
IOC	Aug-21	Aug-21
FMR	Aug-22	Aug-22
FOC	Aug-27	Aug-27

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 is currently achieving the Materiel Capability Requirements as expressed in the MAA.
	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)	Modification of one platform and the ITTS with Stage 1 including: • Verification & validation and certification completed in accordance with approved plans; • Training system delivered along with initial crew and trainer training; and, • Spares and support arrangements in place. IMR report endorsed and released for approval by the regulatory authority.	Achieved
Initial Operational Capability (IOC)	Operationally employ MSMCS Stage 1 and Stage 2 and MWES on one platform and associated Fundamental Inputs to Capability such as crew training and Integrated Logistics Support.	Not yet Achieved
Final Materiel Release (FMR)	MSMCS Stage 1, 2 and the MWES elements installed on six platforms and one ITTS. Support arrangements including Materiel Transition Plans, spares, training and other Integrated Logistics Support requirements required to transition the materiel system into operational services and sustainment.	Not yet Achieved
Final Operational Capability (FOC)	Operationally employ MSMCS Stage 1, 2 and MWES in six platforms, the ITTS and associated Fundamental Inputs to Capability such as crew training & Integrated Logistics Support.	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 of delay to introduce capability because of emergent work impacting delivery of GFM to prime systems integrator leading to delay to contracted milestones.	Use contract instrument to vary contracted milestones to align with revised schedule. This risk has been downgraded and will be retired.
Emergent Risks (risk not previously identified but has emerged during 2022–23)		
Ref#	Description	Remedial Action
1	Considering establishing long-term sustainment contract will take longer than anticipated, this may impact system accreditation of ISDS at Submarine COMCEN – East. Delayed security accreditation may also impact IOC award.	Sustainment business unit is implementing an interim sustainment contract while progressing work to establish long-term sustainment contract.
2	There is a risk the project team will not be able to complete and deliver essential project tasks on time because of high staff vacancy rate and recruitment timeline is impacting engaging suitably qualified persons.	Supplement skill shortfalls by employing specialist external service providers and prioritise and complete essential tasks first.

3	There is a risk of delay with delivery of FMS equipment from the US.	Keep stakeholders informed of possible delay and also investigate option of having additional spare items in-country to mitigate future delivery. This risk is now downgraded after delivery of FMS equipment.
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5.2 Major Project Issues

Ref#	Description	Remedial Action
1	ISDS at Submarine COMCEN is delayed because of stakeholder's decision to build a new system associated with ISDS rather than using existing version.	Project stakeholders conducted workshop to revise and agree with schedule and scope to consider new build.
2	Operators experiencing issues with WBS system.	Project and sustainment organisation have engaged subject matter experts to identify root cause of defect and remediate as required.

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 eight lessons related to Contract Management, FOT Equipment, Schedule Management, Governance, and Requirements Management. Three project lessons are provided below (note this does not include all project lessons):	The project has not categorized any of its lessons information as a whole-of-Defence Lessons Learned.
Lesson Type – Observation. Regular detailed and customised reporting addressed directly to stakeholders ensures that information is received in high visibility projects or fast tracked schedules where there is no float. Stakeholder engagement through regular detailed and customised reporting will ensure stakeholders are engaged supportive and operating in a coordinated manner.	Schedule Management
Lesson Type – Observation. SEA1439 Phase 5B2 Engineering staff have gained considerable knowledge of communication systems on CCSM and believe this is opportune time to share this knowledge with Future Submarine Program. SEA1439 Phase 5B2 has recently shared design/installation knowledge and Foreign Military Sales knowledge with Future Submarine Program.	Requirements Management First of Type Equipment Contract Management
Lesson Type – Observation. Regular and close stakeholder engagement is essential where SEA1439 Phase 5B2 manages budget and reporting requirement to reduce risks of delivering scope under the MAA, but is not the Commonwealth representative of a contract.	Governance

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2023

Unit	Name
Division	Submarines
Branch	Collins Submarine Program

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

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.

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

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).					

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

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																												
<table border="1"><caption>Milestone Schedule Data</caption><thead><tr><th>Milestone</th><th>Original Planned</th><th>Achieved/Forecast</th><th>Status</th></tr></thead><tbody><tr><td>Approval</td><td>Jul-13</td><td>Jul-13</td><td>Achieved</td></tr><tr><td>IMR</td><td>Jun-18</td><td>Sep-21</td><td>Achieved</td></tr><tr><td>IOC</td><td>Dec-18</td><td>Oct-22</td><td>Forecasted</td></tr><tr><td>FMR</td><td>May-23</td><td>Dec-24</td><td>Forecasted</td></tr><tr><td>FOC</td><td>Dec-23</td><td>Apr-25</td><td>Forecasted</td></tr></tbody></table>					Milestone	Original Planned	Achieved/Forecast	Status	Approval	Jul-13	Jul-13	Achieved	IMR	Jun-18	Sep-21	Achieved	IOC	Dec-18	Oct-22	Forecasted	FMR	May-23	Dec-24	Forecasted	FOC	Dec-23	Apr-25	Forecasted
Milestone	Original Planned	Achieved/Forecast	Status																									
Approval	Jul-13	Jul-13	Achieved																									
IMR	Jun-18	Sep-21	Achieved																									
IOC	Dec-18	Oct-22	Forecasted																									
FMR	May-23	Dec-24	Forecasted																									
FOC	Dec-23	Apr-25	Forecasted																									

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: Reduced ability of the Australia Capital Territory based project team and Defence Subject Matter Experts to

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

		travel to WA to support the installation and carry out testing and witnessing activities; • Limitations on the Prime Contractor's team to travel to Australia to support installation. The end to travel restrictions in early 2022 has resulted in the closure of this issue.
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

Project Data Summary Sheet¹

Project Number	SEA1448 Phase 4B
Project Name	ANZAC AIR SEARCH RADAR REPLACEMENT
First Year Reported in the MPR	2018-19
Capability Type	Replacement
Capability Manager	Chief of Navy
Government 1st Pass Approval	Mar 15
Government 2nd Pass Approval	Jun 17
Budget at 2nd Pass Approval	\$427.8m
Total Approved Budget (Current)	\$429.5m
2022–23 Budget	\$25.6m
Complexity	ACAT I



Section 1 – Project Summary

1.1 Project Description

SEA1448 Phase 4B is replacing the eight SPS-49(V) Air Search Radar on the eight Anzac Class Frigates with a modern digital Long Range Air Search Radar. The project will also replace the existing Identification Friend or Foe (IFF) system with a new system. By replacing the existing air search radar and IFF system, the project will deliver an integrated and supportable modern Long Range Air Search Capability (LRASC) into the Anzac Class Frigates.

1.2 Current Status

Cost Performance

In-year

As at 30 June 2023, the project had underspent by \$10.0m (39%). The underspend was predominately due to Anzac Midlife Capability Assurance Program (AMCAP) schedule installation delays in His Majesty's Australian Ships (HMAS) *Stuart* resulting in some tasks being rescheduled to future years. The project achieved the milestones aligned with AMCAP.

Project Financial Assurance Statement

As at 30 June 2023, SEA1448 Phase 4B has reviewed the approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial and 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 (FY) 2022-23.

Schedule Performance

The project has progressed through the Design phases and is now within the Delivery phase. The first mast was installed on HMAS *Arunta* in December 2018 and Sea Acceptance Trials were completed in February 2020, with all reports delivered in Quarter 2, 2020. In March 2020, Government was advised of a schedule review with industry that determined an additional 26 weeks was critical to the AMCAP realisation across the class. The schedule for ship availability to replace the Long Range Air Search Radar (LRASR) and integrated IFF system was amended as a consequence but did not affect the SEA1448 Phase 4B Final Operating Capability (FOC) date.

Initial Operating Capability (IOC) was delayed from the original planned date due to the complexities in achieving United States IFF certification requirements. Additionally, COVID-19 international travel restrictions prevented United States IFF certification authorities from participating in certification activities as originally planned. Rescheduled certification activities concluded in October 2020. Notification of IFF certification was achieved in April 2021. IOC was achieved in July 2021.

Materiel Release 2 (MR2) for the third ship installation in HMAS *Warramunga* was achieved in November 2021. Materiel Release 3 (MR3) for the fourth ship, HMAS *Perth*, commenced Sea Acceptance Trials in February 2022 and MR3 was achieved in November 2022. MR3 was accepted with three extant issues, one of which has been resolved and two are outstanding. Note: Materiel Release refers to individual ship installations, commencing with MR1 for second ship installation.

Final Materiel Release (FMR) and FOC will be delayed owing to delays in the AMCAP refit schedule.

Materiel Capability/Scope Delivery Performance

The project expects to deliver eight modern digital air search radars with integrated IFF system in the Anzac Class Frigates. The first mission system ship set capability with associated support systems was scheduled for acceptance in Quarter 1, 2021 dependent on IFF certification.

Initial Materiel Release (IMR) was split into two IMRs. The first release enabled the project to support acceptance of the radar to

Notice to reader

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enable the Royal Australian Navy (RAN) to utilise the capability on HMAS <i>Arunta</i> , realign the CEA Technologies Pty Ltd payment schedule and commence the warranty period. The second release was aligned with IFF certification being sufficiently completed. IMR1 was declared December 2020 and IMR2 was declared in April 2021.
IOC was declared in July 2021. MR2 was the first release after declaration of IOC, and was declared in November 2021. MR2 for the third ship installation in HMAS <i>Warramunga</i> was achieved in November 2021.
The fourth ship, HMAS <i>Perth</i> , commenced Sea Acceptance Trials in February 2022 and MR3 was achieved in November 2022. Additionally, there has been a minor increase in scope relating to the CEA Phased Array Radars (PAR) simulator for Onboard Ship Training Systems (OBTS) and for the Combat System Tactical Trainer at HMAS <i>Watson</i> .
Note
Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.

1.3 Project Context

Background Government at Gate 1 (March 2015) was presented multiple options including Developmental and Militarily-Off-The-Shelf (MOTS) options, with the MOTS approach based on an upgraded variant of AN/SPS-49(V) not progressing further as it did not resolve the obsolescence issues. Government did approve Defence's proposal to select CEA Technologies Pty Ltd as the sole Australian supplier of PAR to replace long-range air search radar using the developmental technology successfully installed under SEA1448 Phase 2A and 2B Anti-Ship Missile Defence (ASMD) programs. This solution provided a three-dimensional PAR with six fixed faces and an integrated IFF capability. Industry participants of the Anzac Warship Asset Management Agreement (WAMA) (previously Anzac Ship Integration Materiel Support Program Alliance) are undertaking the Mission System Integrator role. The project adopted the Smart Buyer Framework proceeding to Gate 2 approval throughout the 2016-17 period. In November 2016, Government approved early access to Acquisition Phase funding which enabled the project to progress a number of time-critical activities prior to Second Pass Approval. This allowed the project to maintain schedule and effectively mitigate 2016-17 schedule risks (subsequently retired) identified during Smart Buyer process. These activities included advanced material purchases for CEA Technologies Pty Ltd and BAE Systems Australia Ltd to commence mass production. At Gate 2 (June 2017), Government approved Defence's proposal to be the prime integrator for LRASC, and for the project to have overall responsibility for procuring and managing final Mission System key components. The integration of the LRASR and IFF system into the Anzac platform and Combat Management System (CMS) are delivered under the Anzac WAMA. Acquisition of supporting equipment and services are being delivered under Foreign Military Sales (FMS). Production timings and integration of the mission system(s) into the Anzac Class is driven by the AMCAP schedule, managed by the Anzac System Program Office.
Uniqueness The CEA Technologies Pty Ltd PAR technology on which SEA1448 Phase 4B is based is considered to be a Strategic Industry Capability. The acquisition of which will ensure the RAN has regionally superior technology into the future. The IFF system will be integrated into the PAR faces. This is a world leading technological step to have the IFF interrogator integrated into the PAR faces without a secondary system requirement.
Major Risks and Issues The risks the project faces are: • The project delivery schedule will be affected by a delay in the acceptance of capability by Navy. • The Air Traffic Control Beacon System Identification Friend or Foe Military Secure (AIMS) Box and Platform level certified software will be impacted by the rectification of deficiencies identified by AIMS. This risk has been retired as IFF certification has been achieved. • CEA Technologies Pty Ltd data being passed from Commonwealth to Commonwealth interrelated projects may lead this information being disclosed to a non-authorised recipient. The issues the project faces are: • Materiel Releases IMR1, IMR2, MR2 and MR3 were achieved with exceptions relating to outstanding electromagnetic testing and delivery of the Integrated Logistics Support (ILS) matrix. • There is a likelihood that the project schedule will be affected by an insufficient Commonwealth workforce leading to an impact on program performance. • There are no risks categorised above Medium / Low for the project currently.
Other Current Related Projects/Phases The deliverables provided by SEA1448 Phase 4B have been incorporated into the overall AMCAP schedule. The AMCAP involves a suite of upgrades to the Anzac platform being delivered by multiple projects, of which SEA1448 Phase 4B is one. Delays or issues with other AMCAP projects can delay the schedule of SEA1448 Phase 4B. The AMCAP projects consist of: • SEA1448 Phase 4A – Anzac Electronic Support System Improvements. This Phase delivered a contemporary Electronic Support Measures system as part of the ASMD upgrade program and is being re-installed under the SEA1448 Phase 4B program. • SEA1442 Phase 4 – Maritime Communications Modernisation. This Phase will upgrade the communication capability in the eight Anzac Class Frigates and address communications system obsolescence in the Anzac Class. • Anzac Platform System Remediation (PSR) Program. The PSR will see the upgrade of on-board systems that includes ventilation, the propulsion control system to improve power and efficiency, waste management and water production systems.
Note Major risks and issues are excluded from the scope of the Auditor-General's Independent Assurance Report.

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

Section 2 – Financial Performance²

2.1 Project Budget (out-turned) and Expenditure History

Date	Description	\$m	Notes
	Project Budget		
Oct 13	Original Approved	3.0	1
Jun 14	Real Variation – Scope	5.9	2
Mar 15	Government First Pass Approval	45.2	3
Jan 17	Real Variation – Scope	20.4	4
Aug 17	Government Second Pass Approval	353.3	
	Total at Second Pass Approval	427.8	
Jun 23	Exchange Variation	1.7	
Jun 23	Total Budget	429.5	
	Project Expenditure		
Prior to Jul 22	Contract Expenditure – CEA Technologies Pty Ltd	(161.7)	5
	Contract Expenditure – WAMA	(140.5)	
	Other Contract Payments / Internal Expenses	(29.1)	
		(331.4)	
FY to Jun 23	Contract Expenditure – CEA Technologies Pty Ltd	(8.3)	5
	Contract Expenditure – WAMA	(6.7)	
	Other Contract Payments / Internal Expenses	(0.6)	
		(15.6)	
Jun 23	Total Expenditure	(346.9)	
Jun 23	Remaining Budget	82.5	
Notes			
1	The project's original approved budget was the amount received for project initiation prior to Government Second Pass Approval.		
2	To advance the L-PAR Risk Reduction Program.		
3	Government First Pass approval to advance the progress of the risk reduction program to Gate 2.		
4	Early release of funding to commence activities in advance of Gate 2 Approval.		
5	Other Contract Payments/Internal Expenses comprise of FMS payments, operating 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
23.1	26.7	25.6	<u>Portfolio Budget Statement (PBS) to Portfolio Additional Estimates Statement (PAES)</u> : The variation is mainly due to reprogramming of \$2.8m underspend in 2021-22 (\$2.0m in CEA Technologies Pty Ltd milestones and \$0.8m in FMS cases) to FY 2022-23 and \$0.5m increase in CEA Technologies Pty Ltd contract via a Contract Change Proposal (CCP). <u>PAES to Final Plan</u> : The variation is mainly due to the budget reprogramming to FY 2024-25 and 2025-26.
Variance \$m	3.6	(1.2)	Total Variance (\$m): 2.4
Variance %	15.6	(4.3)	Total Variance (%): 10.6

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(9.7)	Australian Industry	SEA1448 Phase 4B Anzac Air Search Radar Replacement underspend was predominately due to AMCAP schedule installation delays in HMAS <i>Stuart</i> resulting in some tasks being rescheduled to future years.
		(0.3)	Foreign Industry	
		-	Early Processes	
		-	Defence Processes	
		-	Foreign Government Negotiations/Payments	

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.

		-	Cost Saving	
		-	Effort in Support of Operations	
		-	Additional Government Approvals	
25.6	15.6	(10.0)	Total Variance	
		(39.0)	% Variance	

2.3A Details of Project Major Contracts – Price

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 23 \$m			
WAMA	Aug 17	136.1	152.9	Variable with Pain/Gain Share	Alliance	1, 2
CEA Technologies Pty Ltd	Sep 17	166.6	165.5	Fixed with indices escalation	Standard Defence Contract	2, 3
Notes						
1	WAMA consists of Commonwealth of Australia, BAE Systems Australia Ltd, Saab Australia Pty Ltd and Naval Ship Management (Australia) Pty Ltd. The primary industry partners for SEA1448 Phase 4B tasking is BAE Systems Australia Ltd and Saab Australia Pty Ltd.					
2	Contract value as at 30 June 2023 is based on actual expenditure to 30 June 2023 and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable).					
3	SEA1448 Phase 4B contract execution date is official order under the Head Contract DMO/ESD/00297/2013 Standing Offer for PAR Development Services, executed 30 October 2013. The CCP reduced the contract price by removing the performance security as the technology had been demonstrated.					

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

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 23		
WAMA	8	8	Mast, Ship Systems and integration	-
	8	8	CMS upgrades and integration	-
CEA Technologies Pty Ltd	1	1	Qualification and Verification System	-
	8	8	Mission System Ship Sets	-
	2	2	Depot Spare Systems	-
	4	8	Training Simulators	1
Major equipment accepted and quantities to 30 Jun 23				
As at 30 June 2023, the fourth ship installation HMAS <i>Perth</i> (MR3) has been fully accepted (which includes aft mast installation, integration, Harbour Acceptance Trials and Sea Acceptance Trials). Ships accepted are HMAS <i>Arunta</i> , HMAS <i>Anzac</i> , HMAS <i>Warramunga</i> and HMAS <i>Perth</i> .				
Notes				
1	CEA Technologies Pty Ltd CCP was accepted to modify the number of training simulators from four to eight to support the training requirements solution put forward by the WAMA.			

2.4 Australian Industry Capability

Summary
The project has contracted Australian Industry Capability (AIC) targets based on Local Industry Capability which is captured in CEA Technologies Pty Ltd and Saab Australia Pty Ltd's AIC Plans across the areas of manufacturing, project management, engineering, ILS and training material.
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	CEA Technologies Pty Ltd Radar System Performance Specification	N/A	N/A	Aug 17	N/A	-
Preliminary Design	Mast	N/A	N/A	Apr 17	N/A	1
	Platform	N/A	N/A	Sep 17	N/A	1
	Whole of Ship	N/A	N/A	Nov 17	N/A	1
Critical Design	Mast	N/A	N/A	Sep 17	N/A	1
	Platform	N/A	N/A	Jun 18	N/A	1
	Whole of Ship	N/A	N/A	Jun 18	N/A	1

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

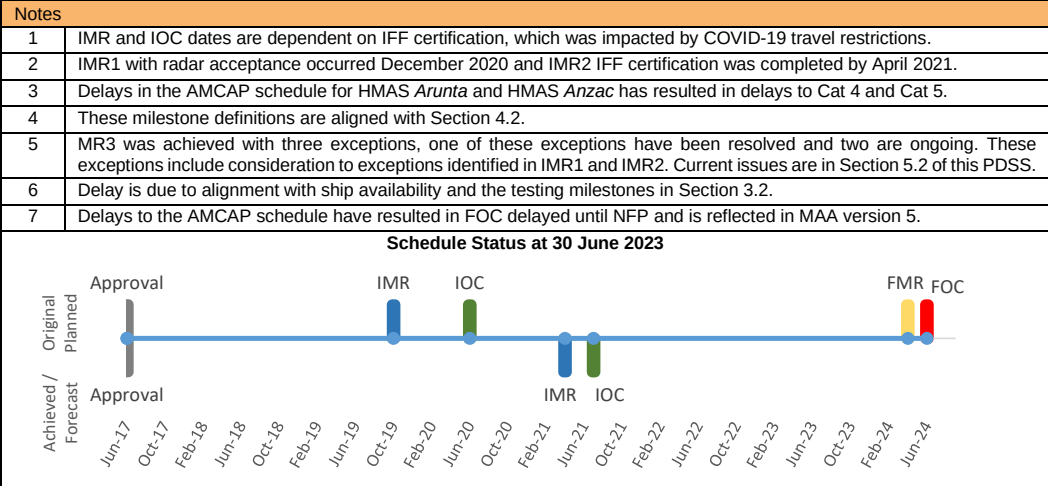
Notes	
1	Original Planned dates for completion of Preliminary and Critical Design activities not disclosed within the Integrated Master Schedule as these dates were determined prior to Second Pass Approval.

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	HMAS Arunta – Category (Cat) 1 (Factory Acceptance Testing)	Nov 18	N/A	Apr 19	5	1
	HMAS Arunta – Cat 2 (Environmental Qualifications) and Cat 3 (Integration)	Jan 19	May 20	Jul 20	18	2, 3
	HMAS Arunta – Cat 4 (Harbour Acceptance Trials)	Feb 19	N/A	Oct 19	8	4
	HMAS Anzac – Cat 4 (Harbour Acceptance Trials)	Aug 19	N/A	May 20	9	4, 5
	HMAS Warramunga – Cat 4 (Harbour Acceptance Trials)	Jul 20	Mar 21	Jun 21	11	-
	HMAS Perth – Cat 4 (Harbour Acceptance Trials)	Dec 20	Dec 21	Feb 22	14	4
	HMAS Toowoomba – Cat 4 (Harbour Acceptance Trials)	Nov 21	Delayed from Jul 22	Delayed from Oct 22	Not for Publication (NFP)	4
	HMAS Stuart – Cat 4 (Harbour Acceptance Trials)	May 22	Delayed from Feb 23	Delayed from Mar 23	NFP	4
	HMAS Ballarat – Cat 4 (Harbour Acceptance Trials)	Feb 23	Delayed from Aug 23	Delayed from Jun 23	NFP	4
	HMAS Parramatta – Cat 4 (Harbour Acceptance Trials)	Aug 23	Delayed from Mar 24	Delayed from Apr 24	NFP	4
Acceptance	HMAS Arunta – Cat 5 (Sea Acceptance Trials)	Sep 19	N/A	Mar 20	6	4
	HMAS Anzac – Cat 5 (Sea Acceptance Trials)	May 20	N/A	Oct 20	5	4, 5
	HMAS Warramunga – Cat 5 (Sea Acceptance Trials)	Feb 21	May 21	Jul 21	5	4
	HMAS Perth – Cat 5 (Sea Acceptance Trials)	Sep 21	Mar 22	Apr 22	7	4
	HMAS Toowoomba – Cat 5 (Sea Acceptance Trials)	Jun 22	Delayed from Sep 22	Delayed from Nov 22	NFP	4
	HMAS Stuart – Cat 5 (Sea Acceptance Trials)	Dec 22	Delayed from May 23	Delayed from May 23	NFP	4
	HMAS Ballarat – Cat 5 (Sea Acceptance Trials)	Oct 23	Delayed from Sep 23	Delayed from Aug 23	NFP	4
	HMAS Parramatta – Cat 5 (Sea Acceptance Trials)	Apr 24	Delayed from Apr 24	Delayed from Apr 24	NFP	4
Notes						
1	A manufacturing delay with CEA Technologies Pty Ltd resulted in the Factory Acceptance Testing from November to December 2018. Test Reports were accepted in April 2019.					
2	CEA Technologies Pty Ltd CCP approved the delay in which CEA Technologies Pty Ltd are to obtain Environmental Qualification for the LRASR.					
3	Cat 3 integration activities completed in May 2019. Acceptance of Cat 3 reports occurred in September 2019. The Cat 2 test results received in July 2020. This delay was caused by the limited number of appropriately certified third party test facilities and longer than anticipated test durations.					
4	Delays in the AMCAP schedule have delayed acceptance trials and are reflected in Materiel Acquisition Agreement (MAA) version 5.					
5	HMAS Anzac Cat 4 testing undertaken in April 2020, with acceptance of the test reports in May 2020.					

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release 1 (IMR1)	Oct 19	Dec 20	14	1, 2, 3, 4, 5
Initial Materiel Release 2 (IMR2)	Mar 21	Apr 21	1	2, 3, 4, 5
Initial Operational Capability (IOC)	Jun 20	Jul 21	13	1, 4
Final Materiel Release (FMR)	Apr 24	Delayed from Apr 24	0	4, 6
Final Operational Capability (FOC)	Jun 24	Delayed from May 24	(1)	7



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 is currently meeting capability requirements as expressed in the Joint Project Directive and MAA.
	Amber: N/A
	Red: N/A
	Blue: CCP resulted in a minor increase in scope relating to the CEA PAR simulator for OBTS and additionally for the HMAS <i>Watson</i> training simulator. This increase accounts for 0.4% of the total budget.
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 (IMR1)	Integration of one Air Search Radar and partial IFF system into the first ship, including installation of a new aft-mast and reinstallation of all extant systems. Delivery of on-board spares and training packages. Establishment of Initial Support Contracts for both Radar and Integration.	Achieved with exceptions
Initial Materiel Release (IMR2)	Integration of one Air Search Radar and full IFF system into the second Anzac Class Frigate, including installation of a new aft-mast and reinstallation of all extant systems. Delivery of on-board spares.	Achieved with exceptions
Initial Operational Capability (IOC)	Installation of equipment onto ships completed to date, development of operator and maintainer training package and initial package completed, tactical doctrine updated, completion of acceptance trials on the first ship completed, and the logistics support arrangements in place.	Achieved
Final Materiel Release (FMR)	Integration of one Air Search Radar and IFF system into the final ship. Delivery of all outstanding logistic documentation. Delivery of a support system. Final delivery of on-board spares and depot spares.	Not yet Achieved
Final Operational Capability (FOC)	Installation of equipment onto all ships is complete, training facilities have been set to work, operator and maintainer trainer is in a steady state, tactical doctrine is mature, full logistics support arrangements are in place, establishment and other Fundamental Inputs to Capability arrangements are complete.	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 likelihood that the project delivery schedule will be affected by a delay in the acceptance of capability by Navy leading to an impact on both schedule and reputation.	To advise all key stakeholders of delays and request assistance as required. This risk was downgraded from initial High to Low, which is the current assessed level, as the previous delays to the AMCAP schedule and subsequent delay to all remaining major milestones, including FMR and FOC are all now reflected in MAA version 5.
2	There is a likelihood that the recipients of CEA Technologies Pty Ltd data being passed from Commonwealth to Commonwealth interrelated projects may lead this information being disclosed to a non-authorised recipient, who may inadvertently expose the data therefore impacting sovereign capability leading to an impact on cost, schedule and reputation.	Limit access to data through the application of the Defence records management policy. This risk was downgraded from initial High to Low as the project is mature with robust security measures established.
3	There is a likelihood that the AIMS Box and Platform level certified software will be impacted by the rectification of deficiencies identified by AIMS leading to an impact on engineering approvals, cost and schedule of follow-on ships using the updated certified software.	The United States Air Traffic Control Radar Beacon System Identification Friend or Foe Mark XIIA Electronic Identification System Program Office is the IFF certification authority. Maintain software at baseline approved by AIMS until software rectification has been made, tested and evidence provided to AIMS, and is certified by AIMS for installation. This risk has now been retired with AIMS certification having been achieved.
Emergent Risks (risk not previously identified but has emerged during 2022–23)		
Ref#	Description	Remedial Action
	N/A	

5.2 Major Project Issues

Ref#	Description	Remedial Action
1	IMR2 was achieved with four exceptions. Two of the three exceptions address Electromagnetic Interference (EMI) testing and delivery of the final ILS matrix.	The ILS matrix has been delivered and accepted – the EMI /Electromagnetic Compatibility (EMC) testing is now progressing and scheduled to complete by July 2023.
2	MR2 was achieved with two exceptions. These exceptions, relating to EMI testing and the final ILS matrix.	The ILS matrix has been delivered and accepted – the EMI /EMC testing is now progressing and scheduled to complete by July 2023.

3	There is a likelihood that the project schedule will be affected by an insufficient Commonwealth workforce leading to an impact on program performance.	The most likely cause of this risk is slow recruitment and/or poor retention, to which the team is governed by standard processes and no additional mitigation strategies can be applied (other than the creation of a positive working environment). This issue was downgraded to Low in early 2023 as extension of the AMCAP refit schedule under MAA version 5 has significantly reduced the potential impact.
4	MR3 was achieved with two exceptions. These exceptions, relating to EMI testing and the final ILS matrix.	The ILS matrix has been delivered and accepted – the EMI/EMC testing is now progressing and scheduled to complete by July 2023.

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 Capability Acquisition and Sustainment Group 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 five lessons related to Requirements Management, First of Type Equipment, Schedule Management, and Governance. 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. Understanding of certification authority test requirements to ensure sufficient resources, facilities and personnel can be scheduled to minimise the chance of delays.	Schedule Management
Lesson Type – Observation. Understanding of Operational Security requirements prior to the development of the acceptance program to minimise the chance of delays.	Requirements Management
Lesson Type – Observation. Improved project assurance and governance oversight requirements, due to the uniqueness of the CEA Technologies Pty Ltd technology, has necessitated a non-traditional approach to requirements specification and acceptance.	Governance

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2023

Unit	Name
Division	Maritime Sustainment Division
Branch	Director General Major Surface Ships

Project Data Summary Sheet¹

Project Number	SEA3036 Phase 1
Project Name	PACIFIC PATROL BOAT REPLACEMENT
First Year Reported in the MPR	2017-18
Capability Type	Replacement
Capability Manager	Chief of Navy
Government 1st Pass Approval	Apr 16
Government 2nd Pass Approval	Apr 16
Budget at 2nd Pass Approval	\$503.3m
Total Approved Budget (Current)	\$502.9m
2022–23 Budget	\$64.5
Complexity	ACAT II



Section 1 – Project Summary

1.1 Project Description

SEA3036 Phase 1 – Pacific Patrol Boat Replacement (PPB-R) is acquiring 22 vessels to replace the existing 22 Pacific Patrol Boats (PPBs) gifted to 12 Pacific Island Countries between 1987 and 1997 and to provide two boats for Timor-Leste as part of Australia's Pacific Maritime Security Program (PMSP). The project also includes disposal of the current PPB fleet and upgrades to Pacific Island infrastructure to enable safe berthing of the new Guardian Class Patrol Boats (GCPBs).

1.2 Current Status

Cost Performance

In-year

As at 30 June 2023, the project had spent \$49.5m against an in-year budget of \$64.5m. The variance of \$15.0m is mainly due to the prime contractor (Austal Ships Pty Ltd) delay in issuing the escalation invoices whilst commercial negotiations are underway and delays in execution of the infrastructure program. This is expected to be recovered in the Financial Year (FY) 2023-24.

Project Financial Assurance Statement

As at 30 June 2023, the project 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 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 applied for contingency in the FY 2022-23 primarily for engineering modifications to reduce and treat risks to health and safety.

Schedule Performance

The project is currently within the delivery phase. To date, 15 GCPBs have been delivered to their respective recipient nations as follows:

- Vessel 1 to Papua New Guinea (PNG) in November 2018.
- Vessel 2 to Tuvalu in April 2019.
- Vessel 3 to Tonga in June 2019.
- Vessel 4 to Samoa in August 2019.
- Vessel 5 to Solomon Islands in November 2019.
- Vessel 6 to Fiji in March 2020.
- Vessel 7 to Palau in September 2020.
- Vessel 8 to Kiribati in June 2021.
- Vessel 9 to Tonga in October 2020.
- Vessel 10 to PNG in March 2021.
- Vessel 11 to Solomon Islands in May 2021.
- Vessel 12 to Vanuatu in July 2021.
- Vessel 13 to PNG in October 2021.
- Vessel 14 to Federated States of Micronesia (FSM) in March 2022.
- Vessel 15 to Cook Islands in May 2022.

In addition, from 1 July 2022 the project has achieved the following Key Milestones on time:

- Vessel 18 (Samoa) launch milestone achieved 21 November 2022.

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.

• Vessel 20 (Timor-Leste) keel laying achieved 14 July 2022. • Vessel 21 (Timor-Leste) keel laying achieved 12 October 2022. • Vessel 22 (Republic of Marshall Islands (RMI)) keel laying achieved 19 April 2023. Vessels 16 and 17 were launched prior to 1 July 2022, with Vessel 16 originally scheduled to be delivered in July 2022. During March and May 2023, Vessels 16 and 17 were removed from water for hull preservation and engineering changes to treat safety issues and latent defects. Vessel 16 has been relaunched and is undergoing recommissioning with Vessel 17 to follow. The launch of Vessel 19 has been delayed in line with project requirements. Subsequent vessels are to be delivered and gifted at a rate of one every two to three months through to the last vessel delivery (Vessel 22, added to the contract in November 2022) scheduled for September 2024. To date the prime contractor key milestones have been met in alignment with the contract schedule, with the exceptions to this being: • Delivery of the first vessel was approximately five weeks later than contracted as a result of delays in establishing a steel production facility, vessel production activities and the resolution of first of class issues. This delay incurred a corresponding delay to achievement of Initial Materiel Release (IMR) / Initial Operational Capability (IOC) which was achieved on 30 November 2018. • Delivery of Vessel 7 was approximately four months later than contracted because crew were unable to travel to Australia to accept the vessel due to international COVID-19 travel restrictions. • Delivery of Vessel 8 was approximately 10 months later than contracted because crew were unable to travel to Australia to accept the vessel due to international COVID-19 travel restrictions. • Delivery of Vessels 10 and 14 were delayed by two weeks due to the crew undertaking COVID-19 quarantine to enter Australia. In both cases the crew was unable to alter their departure date so the arrival in Australia was on schedule and other activities including acceptance of the vessel were adjusted by two weeks. • Delivery of Vessel 15 was delayed by four weeks due to a number of the crew testing positive for COVID-19 during training in Australia and therefore being unable to accept the vessel. • Delivery of Vessel 16 has been significantly delayed due to two issues: ◦ Hydrogen sulphide gas, emanating from the black water system, was recorded in the accommodation spaces of several in-service GCPBs, presenting a serious risk and safety hazard to the Pacific Island crews. To mitigate this risk, a contract change proposal was executed by the Commonwealth of Australia (CoA) and Austal Ships Pty Ltd to install and commission a fixed gas detection system to Vessels 16 through 22 to provide added safety assurances of awareness of potentially harmful gases. The time required to make these changes is approximately 13 months however, the delay will be absorbed to the end of the project with no impact to the delivery of the final GBP (Vessel 22); and ◦ The rectification of a latent defect in the engine exhaust silencers that presented a safety hazard to crew, that will be rectified during the lay-up period whilst the fixed gas detection system is being installed and commissioned on the vessels. Aspects of the project involving Pacific Island Country Infrastructure upgrades have been completed with the Defence Cooperation Program Infrastructure Project completing an enhanced scope of major upgrades to ensure the vessels are able to be supported after delivery. Disposal of the existing PPBs is progressing in alignment with project needs.
Materiel Capability/Scope Delivery Performance The first 15 GCPBs have been delivered to their recipient nations. COVID-19 caused delay to delivery of vessels to Cook Islands, FSM, Kiribati, Palau, and PNG. However, these delays have been absorbed within the overall project delivery schedule with the project managing the continued risks to the schedule posed by COVID-19 and global freight delays. The emergence of a latent defect and directive to deliver more robust safety systems have delayed the delivery of Vessel 16 with flow on delays gradually absorbed through to Vessel 22.
Note Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.

1.3 Project Context

Background SEA3036 Phase 1, PPB-R Project was initiated in 2014 under the auspices of PMSP to replace the 22 PPBs that were gifted to 12 Pacific Island Countries between 1987 and 1997 with GCPBs. The 12 PPB nations are Cook Islands, FSM, Fiji, Kiribati, Palau, PNG, RMI, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu. Timor-Leste have also been offered and accepted the offer to receive two GCPBs although were not originally part of the PPB program. A Request for Tender was released in March 2015 for up to 21 vessels no longer than 40 metres, built to a commercial standard with a steel hull. The tender also included a support contract for an initial period of seven years. The tender closed in June 2015, evaluations were completed in September 2015 with an Offer Definition and Improvement Activity concluded in January 2016. Austal Ships Pty Ltd was the preferred tenderer. Combined Pass Project Approval was achieved in April 2016. Both the acquisition and support contracts were signed with Austal Ships Pty Ltd in May 2016. The initial acquisition contract was for 19 vessels with a costed option for an additional two vessels. In December 2017, Timor-Leste joined the PMSP and the project exercised the costed option for two additional vessels through a contract change in April 2018. Construction of the first vessel commenced in April 2017 with acceptance by the CoA (combined IMR and IOC) in November 2018. The last vessel is currently anticipated to be accepted by the CoA in September 2024. Due to a delay in the acceptance and handover of the first boat of approximately five weeks, caused by the establishment of a dedicated steel production facility and resolution of first-of-class issues, Liquidated Damages have been accrued. Agreement has

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

also been reached on provision of goods and services in kind to the CoA in alignment with the value of Liquidated Damages accrued. In August 2021, the vessel that was gifted to Samoa in August 2019 ran aground on a reef and its replacement, Boat 22, was added to the Acquisition Contract via a contract change in November 2022. The project is scoped and funded to complete minor infrastructure upgrades to existing infrastructure to enable safe and secure berthing of the new, slightly larger, vessels. Responsibility for execution of the infrastructure upgrades was officially transferred from the project to Defence's International Policy Division in September 2019. The infrastructure upgrades within the original scope of SEA3036 Phase 1 have been completed.
Uniqueness The GCPB is a vessel being built to commercial standards that will be gifted to 13 nations. The vessels are being built to International Maritime Organization requirements, under the Australian Maritime Safety Authority flag. Lloyds Register is the classification society and the vessels will meet class requirements. However, ultimately the GCPB will not be put into class. The project's Capability Manager is Chief of Navy with International Policy as the Sponsor of the PMSP. Once gifted, each vessel will become a sovereign asset of the recipient nations and Australia will assist and support their operation and sustainment.
Major Risks and Issues Since July 2022, the project has retired one High risk relating to the COVID-19 pandemic impact on project deliverables. Two High risks have been retained which relate to the delay of project milestones. One focuses on project and stakeholder personnel and the other on supplier personnel and supply chain issues. One very High risk has emerged which relates to relatively inexperienced crews having enough practical experience to be ready to commence familiarisation training on the new GCPBs. Two very High issues have emerged since July 2022. One is a health and safety risk and has resulted in the second issue with the acceptance of boats being delayed due to the extended time required to install additional safety equipment. The schedule related issue has been retired following its resolution via a contract change.
Other Current Related Projects/Phases N/A
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		
Aug 14	Original Approved (Initial Pass Approval)	5.7	1
May 16	Government Combined Pass Approval	497.6	
	Total at Second Pass Approval	503.3	
Jan 15	Real Variation – Transfer	1.2	2
	Exchange Variation	(1.6)	
	Total Budget	502.9	
	Project Expenditure		
Prior to Jul 22	Contract Expenditure – Contractor - Austal Ships Pty Ltd	(281.5)	
	Other Contract Payments / Internal Expenses	(29.9)	3
		(311.4)	
FY to Jun 23	Contract Expenditure – Austal Ships Pty Ltd	(35.5)	
	Other Contract Payments / Internal Expenses	(14.0)	4
		(49.5)	
Jun 23	Total Expenditure	(361.7)	
	Remaining Budget	141.3	
Notes			
1	This amount was for Initial Pass Project Approval.		
2	Transfer of funding to Defence Materiel Organisation, now known as Capability Acquisition and Sustainment Group (CASG), to support Offer Definition Improvement Activity and Anthropometric Study.		
3	Other contract payments and expenditure includes, other project support contracted staff costs (\$16.9m), infrastructure costs (\$8.1m), Pre-Combined Pass expenditure (\$3.6m) and other direct project costs (\$1.3m).		

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.

4	Other contract payments and expenditure includes, project support contracted staff costs of (\$8.8m) and other direct project costs of (\$5.2m).
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2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
53.7	51.0	64.5	<u>Portfolio Budget Statement (PBS) to Portfolio Additional Estimates Statement (PAES):</u> Variation (\$2.7m) due to reprogramming of the prime contract during Additional Estimates Budget Update. <u>PAES to Final Plan:</u> Variation (\$13.5m) due to budget transfer of contingency, Budget Estimates Budget Update and foreign exchange fluctuations.
Variance \$m	(2.7)	13.5	Total Variance (\$m): 10.8
Variance %	(5.1)	26.5	Total Variance (%) 20.0

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(15.0)	Australian Industry	The variance of \$15.0m is mainly due to the prime contractor (Austal Ships Pty Ltd) delay in issuing the escalation invoices whilst commercial negotiations are underway and delays in execution of the infrastructure program. This is expected to be recovered in the FY 2023-24.
		-	Foreign Industry	
		-	Early Processes	
		-	Defence Processes	
		-	Foreign Government Negotiations/Payments	
		-	Cost Saving	
		-	Effort in Support of Operations	
		-	Additional Government Approvals	
64.5	49.5	(15.0)	Total Variance	
		(23.3)	% Variance	

2.3A Details of Project Major Contracts – Price

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 23 \$m			
Austal Ships Pty Ltd	May 16	321.1	374.1	Firm or Fixed	Standard Defence Contract	1, 2
Notes						
1	Contract Value as at 30 June 2023 is based on actual expenditure to 30 June 2023 and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable).					
2	The price at 30 June 2023 includes the addition of Boat 22, which was added into the Austal Ships Pty Ltd contract 1 November 2022.					

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

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 23		
Austal Ships Pty Ltd	19	22	PPB-R vessels, conversion training and associated support system products.	1
Major equipment accepted and quantities to 30 Jun 23				
- Three GCPBs gifted to PNG. - One GCPB gifted to Tuvalu. - Two GCPBs gifted to Tonga. - One GCPB gifted to Samoa. - Two GCPBs gifted to Solomon Islands. - One GCPB gifted to Fiji. - One GCPB gifted to Palau. - One GCPB gifted to Kiribati. - One GCPB gifted to Vanuatu. - One GCPB gifted to FSM. - One GCPB gifted to Cook Islands.				
Notes				
1	Two additional vessels were included into the scope of supply in April 2018 following acceptance in December 2017 by the Timor-Leste Government of the offer from the Australian Government to receive two boats. The vessel that was gifted to Samoa in August 2019 ran aground on a reef in August 2021 and its replacement was added to the project by contract change in November 2022.			

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

2.4 Australian Industry Capability

Summary
The project has contracted Australian Industry Capability (AIC) targets based on opportunities to maximise competitive Australian industry involvement, where appropriate. Austal Ships Pty Ltd's AIC Plan identifies Local Industry Activities which are captured in support of their design, manufacturing, project management, engineering, integrated logistic support and training activities.
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

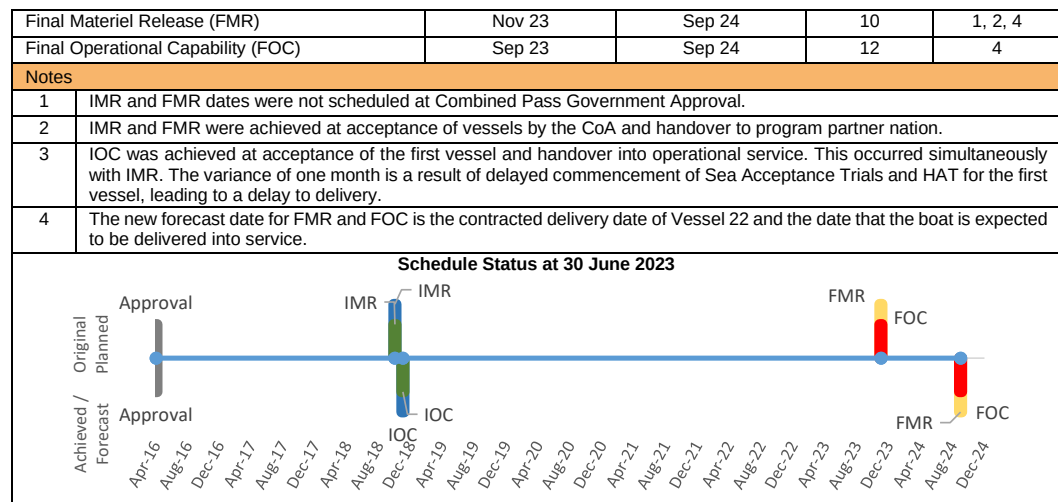
Review	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
System Requirement Conduct	Mission System	Aug 16	N/A	Aug 16	0	-
	Support System	N/A	Nov 16	Nov 16	0	1
Preliminary Designs Conduct	Mission System	Oct 16	N/A	Oct 16	0	-
	Support System	N/A	May 17	May 17	0	1
Detailed Design Conduct	Mission System	Feb 17	N/A	Feb 17	0	-
	Support System	N/A	Nov 17	Nov 17	0	1
Notes						
1	A contract change was executed in November 2016 to introduce the conduct of Support System Requirement Review, Support System Preliminary Design Review and Support System Detailed Design Review.					

3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
Harbour Acceptance Trials (HAT) Complete	PPB-R Boat 1	Jul 18	N/A	Oct 18	3	1
	PPB-R Boat 2-5	Aug 19	N/A	Sep 19	1	-
	PPB-R Boat 6-9	Aug 20	N/A	Aug 20	0	-
	PPB-R Boat 10-13	Aug 21	N/A	Aug 21	0	-
	PPB-R Boat 14-18	Oct 22	N/A	Nov 23	13	7
	PPB-R Boat 19-21	Jul 23	N/A	Apr 24	9	7
	PPB-R Boat 22	Jul 24	N/A	Jul 24	0	-
Acceptance	PPB-R Boat 1	Oct 18	N/A	Nov 18	1	1, 2, 3
	PPB-R Boat 2-5	Nov 19	N/A	Nov 19	0	3
	PPB-R Boat 6-9	Nov 20	N/A	Jun 21	7	4
	PPB-R Boat 10-13	Oct 21	N/A	Oct 21	0	3
	PPB-R Boat 14-18	Dec 22	Nov 23	Nov 23	11	5
	PPB-R Boat 19-21	Oct 23	Jul 24	Jul 24	9	5
	PPB-R Boat 22	Sep 24	N/A	Sep 24	0	6
Notes						
1	The variance of three months is primarily due to equipment supply chain delays and first-of-class issues with set-to-work activities.					
2	Testing of Vessel 1 includes operation-like test activities in advance of acceptance of Vessel 1.					
3	Acceptance marks the successful completion of all tests and crew conversion training. The CoA accepts the vessel from the contractor and then gifts the vessel to the receiving nation.					
4	The variance of seven months is due to COVID-19 pandemic travel restrictions restricting the crew for Vessel 8 travelling to Australia to undertake conversion training and receive their vessel.					
5	The variance of Vessels 16 to 21 is due to a latent defect on the engine exhaust silencer for which a replacement design silencer has now been accepted, and due to the addition of safety equipment with a long lead time of approximately seven months to delivery.					
6	The delivery date of Vessel 22 was constrained by the lead time for critical equipment delivery and was not impacted by the issues that caused the delays to Vessels 16 to 21.					
7	HAT are not a contracted milestone however the variation in contract milestones outlined in Note 5 has had an indirect impact on verification activities.					

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Oct 18	Nov 18	1	1, 2
Initial Operational Capability (IOC)	Oct 18	Nov 18	1	3



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 the current capability requirements as expressed in the Materiel Acquisition Agreement. Temporary repairs have resulted in the lifting of operational limitations that were reported in the previous year. A permanent solution will be incorporated on all remaining vessels prior to delivery. Additional modifications will be retrofitted to vessels currently in service prior to the closure of the project, ensuring all vessels in the fleet will achieve a permanent solution to the issue.
	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)	First vessel and associated support system technical documentation, initial spares and logistics documentation delivered and accepted by the CoA. IMR was achieved on 30 November 2018.	Achieved
Initial Operational Capability (IOC)	First vessel accepted into the Pacific Island Country operational service. IOC was achieved on 30 November 2018.	Achieved
Final Materiel Release (FMR)	Last vessel delivered, completed delivery of all remaining Acquisition Project Support deliverables and accepted by the CoA including completion of transition tasks in accordance with the PPB-R Transition Plan. FMR is expected to be achieved in September 2024.	Not yet Achieved
Final Operational Capability (FOC)	All vessels accepted into their Program Partner Country operational service. FOC is expected to be achieved in September 2024.	Not yet Achieved

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

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 project deliverables will be affected by the COVID-19 pandemic leading to an impact on project scope, schedule and cost.	This risk was retired as any residual impact of COVID-19 has been absorbed within general threats to deliverables as outlined below in Identified Risk Ref #2.
2	There is a risk that Ship acceptance will be affected by Austal Ships Pty Ltd unable to meet production schedule milestones leading to an impact on cost, schedule, and reputation.	Oversight and updates in relation to workforce availability, progress and supply chain issues. Contract is based on Australian Standard for Defence Contract template and includes suitable mechanisms to drive contract schedule.
3	There is a risk that key project milestones delivery will be affected by a lack of availability of suitably qualified, experienced and authorised project and stakeholder personnel, leading to an impact on cost, schedule and technical performance.	The project is continuing to monitor resource levels and sourcing additional resources by accessing merit pools and bulk rounds with contracted support used if suitable Australian Public Service resources cannot be found to fill the required roles.
Emergent Risks (risk not previously identified but has emerged during 2022–23)		
Ref#	Description	Remedial Action
1	There is a risk that acceptance of the vessels for less experienced crews may be affected with a delay to commencement or of the inability to complete familiarisation training, leading to an impact on capability outcomes, cost, schedule, reputation and health & safety.	The PMSP contracted training organisation is delivering mariner skills targeted at specific training needs. PMSP understands the crew mariner skill prerequisites and is working with impacted nations on solutions to create opportunities for crews to gain practical experience via sea time in their nominated roles.

5.2 Major Project Issues

Emergent Issues (has emerged during 2022–23)		
Ref#	Description	Remedial Action
1	Detection of low level hazardous gas on board vessels indicates the controls for preventing the escape of gases from the black and grey water tanks may not be fully effective.	Engineering enhancements have been developed and rolled out across vessels in service and after their successful testing will now be applied to vessels now under construction. The issue will remain open until further evidence demonstrates whether the engineering changes are successful.
2	Delivery and acceptance of vessels has been affected by delays in the delivery and safety equipment leading to an impact to schedule, reputation, capability, cost and scope.	SEA3036 Phase 1 has worked closely with the contractor to support the development of the engineering solution and minimize delays. This issue is now being retired and residual risk will be managed by Identified Risk Ref #2.

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
The project is in the process of implementing a lessons approach that achieves compliance with Defence instruction and CASG Lessons policy. The project has captured four lessons related to Schedule Management, Contracts Management and Requirements Management. 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 – Lessons identified. Allocate schedule allowance to enable ramp-up and learning of Defence requirements for Contractors inexperienced with Defence contracting templates.	Schedule Management
Lesson Type – Insights. Use of review teams for assurance on Contract Development when tailoring Defence contracting templates.	Requirements Management
Lesson Type – Lessons identified. Work with Contractor to ensure the broader implications of key milestone delay and quality issues are understood and encourage early advice on delay.	Schedule Management

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2023

Unit	Name
Division	Patrol Boats & Specialist Ships Division
Branch	Specialist Ships Acquisition Branch

Project Data Summary Sheet¹

Project Number	SEA5000 Phase 1
Project Name	HUNTER CLASS FRIGATE DESIGN AND CONSTRUCTION
First Year Reported in the MPR	2019-20
Capability Type	Replacement
Capability Manager	Chief of Navy
Government 1st Pass Approval	Apr 16
Government 2nd Pass Approval	Jun 18
Budget at 2nd Pass Approval	\$6,184.0m
Total Approved Budget (Current)	\$6,148.2m
2022–23 Budget	\$725.1m
Complexity	ACAT I



Section 1 – Project Summary

1.1 Project Description

As a foundation project in the Government's Continuous Naval Shipbuilding Program, SEA5000 Phase 1 – Hunter Class Frigate (HCF) Design and Construction (the project) will deliver nine HCF optimised for anti-submarine warfare to maintain the Royal Australian Navy's (RAN) Surface Combatant capability and replace the current Anzac Class Frigates.

This new generation of major surface combatants will provide the RAN with the critical capability required to defend Australia well into the future. The HCF will contribute to air and surface warfare defence, as well as serving its primary mission of anti-submarine warfare.

The project is currently approved for the Design and Productionisation (D&P) stage, which includes:

- Progressing detailed design;
- Prototyping works; and,
- Procurement of Long Lead Time Items (LLTI) for Batch One Build.

The head contract is with BAE Systems Maritime Australia, a subsidiary of BAE Systems Australia (formerly ASC Shipbuilding Pty Ltd). The HCF will be constructed in Osborne, South Australia.

1.2 Current Status

Cost Performance

In-year

As at 30 June 2023, Financial Year (FY) 2022-23 expenditure is \$742.1m against FY 2022-23 budget of \$725.1m. The variation is mainly driven by higher than forecast Foreign Military Sales (FMS) disbursements for the combat management system; and, increase in supply chain costs and activity within the head contract.

Project Financial Assurance Statement

As at 30 June 2023, project SEA5000 Phase 1 has reviewed the projects 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 that as at the reporting date there is sufficient budget including contingency remaining for the project to complete against the agreed scope.

Contingency Statement

The project has not applied contingency in the FY 2022-23.

Schedule Performance

In June 2018, Government approval was granted for the D&P stage, inclusive of prototyping and procurement of LLTI for Batch One production. This has enabled the design of the mission and support systems to proceed, together with mobilisation of BAE Systems Maritime Australia to the Osborne South Naval Shipyard ahead of prototyping, which commenced on schedule in December 2020.

As reported in previous MPRs, the completion date (planned November 2020, achieved December 2022) for the Mission System System Definition Review (SDR) drove delays to subsequent design reviews. The project also experienced schedule variance due to delays in the design maturity of the United Kingdom's (UK) Type 26 Program, which is the Reference Ship Design for the HCF. These delays in the UK were exacerbated by the COVID-19 pandemic.

In June 2021, the Government agreed to the deferral of the Ship One Cut Steel Milestone by up to 18 months, to no later than June 2024. This has enabled the Commonwealth of Australia (Commonwealth) and BAE Systems Maritime Australia to address design maturity and develop a contractible offer for the Batch One Build Scope. This in turn will enable the commencement of the construction of Ship One no later than June 2024. The extended prototyping period now includes the construction of four HCF

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.

blocks, in addition to the five Type 26 blocks that were approved by Government in 2018. The project intends to use the four additional prototyping blocks in the construction of the Ship One. The project is expected to return to Government for consideration of the Batch One Build proposal and Second Pass funding approval in early 2024. While there are significant risks and challenges, as would be expected for a project of this complexity, the project is on track to commence Ship One construction in Quarter 2, 2024. The Commonwealth continues to work with BAE Systems Maritime Australia on mitigating risks, managing issues and any associated impacts to the project. In 2022-23 key activities achieved included the Support System - System Definition Review (SS-SDR), and the second Integrated Baseline Review (IBR2).
Materiel Capability/Scope Delivery Performance The current scope of the head contract addresses the D&P stage, inclusive of prototyping and procurement of LLTI for the Batch One Build stage. Under the existing head contract D&P scope and budget, BAE Systems Maritime Australia will also fabricate a 'proof of concept test rig' as a risk reduction measure for the fabrication of the Ship One mast.
Note Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.

1.3 Project Context

Background The project will form the foundation of the Government's Continuous Naval Shipbuilding Program, as announced in the 2017 National Naval Shipbuilding Plan. The project is in the D&P stage, and will progress through multiple Government decision-making points for subsequent project stages. The project was initiated in June 2014 with an Initial Pass approved by Government to commence capability development activities. Key activities and announcements over subsequent years included: • August 2015 Government announced bringing forward the Future Frigate program to replace the Anzac Class Frigates as part of a continuous onshore build program to commence in 2020. • September 2015 Interim Pass approved by Government for CEA Technologies Pty Ltd Radar Development activities. • November 2015 Interim Pass approved by Government to progress a Competitive Evaluation Process (CEP). • April 2016 First Pass approval for SEA5000 Phase 1 to complete the CEP based on tenders received from three ship designers. • October 2017 Government announced decision to select the Aegis Combat System (ACS) together with an Australian Interface developed by Saab Australia Pty Ltd as the Combat Management System solution for the Future Frigate. • June 2018 Government announced BAE Systems Maritime Australia's Global Combat Ship – Australia (GCS-A) as the capability best suited to Defence needs. The nine frigates were classed as the Hunter Class Fast Frigate Guided. In February 2022, the project sought Interim Pass approval from Government to contract BAE Systems Maritime Australia to construct four additional prototyping blocks in addition to the five it is contracted to build under the current D&P scope. The aim is to: • Provide the minimum necessary additional production scope to ensure no redundancies are required in the core production workforce and maintain reasonable continuity of production skill sets; and, • Reduce cost, risk, and uncertainty while improving design maturity and schedule durations to ensure the Commonwealth and BAE Systems Maritime Australia can execute an arrangement for the Batch One Build scope which is affordable and acceptable to the Commonwealth.
Uniqueness The project, delivering nine anti-submarine warfare frigates to the RAN, is one of the largest naval ship building projects ever undertaken in Australia. SEA5000 Phase 1 will be delivered in a number of stages to achieve the objectives of Continuous Naval Shipbuilding, with each stage requiring separate approvals by Government to ensure the project remains within cost constraints. While the principles of the One Defence Capability System will be applied to the project, due to the longevity, and staged nature of the project, a unique approach will be required to manage the nine ships through the life cycle. An example of this is the requirement to return to Government for approval to commence construction and sustainment for each of the three batches of ships and their support system.
Major Risks and Issues The project is currently managing risks at both a strategic and tactical level. Strategic risks identified within Section 5 broadly fall under a number of key areas being: • Ship design maturity; • Combat System Integration; • Operating capability delivered to Navy; and, • Navy workforce.
Other Current Related Projects/Phases • N/A.
Note Major risks and issues are excluded from the scope of the Auditor-General's Independent Assurance Report.

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

Section 2 – Financial Performance²

2.1 Project Budget (out-turned) and Expenditure History

Date	Description	\$m	Notes
	Project Budget		
Jun 14	Original Approved (Initial Pass Approval)	62.8	
Sep 15	Interim Pass Approval	52.6	1
Jan 16	Pre First Pass Approval	22.1	2
Apr 16	Government First Pass Approval	208.2	
Oct 17	Interim Pass Approval	55.5	3
Jun 18	Government Second Pass Approval	5,782.7	
	Total at Second Pass Approval	6,184.0	
Aug 19	Real Variation – Transfer	3.3	4
Sep 22	Real Variation – Transfer	(9.8)	5
Mar 23	Real Variation – Transfer to DST05000 Phase 1	(12.5)	6
Mar 23	Exchange Variation	(16.8)	
		(35.8)	
Jun 23	Total Budget	6,148.2	
	Project Expenditure		
Prior to Jul 22	Contract Expenditure – BAE Systems Maritime Australia	(1,006.7)	
	Contract Expenditure – FMS Case (AT-P-GSC)	(205.3)	
	Contract Expenditure – CEA Technologies Pty Ltd	(61.7)	
	Contract Expenditure – FMS Case (AT-P-LFZ)	(45.2)	
	Contract Expenditure – Saab Australia Pty Ltd	(35.1)	
	Contract Expenditure – Raytheon Australia Pty Ltd 1	(13.6)	
	Contract Expenditure – Raytheon Australia Pty Ltd 2	(17.3)	
	Other Contract Payments / Internal Expenses	(442.6)	7
		(1,827.6)	
FY to Jun 23	Contract Expenditure – BAE Systems Maritime Australia	(537.6)	
	Contract Expenditure – FMS Case (AT-P-LFZ)	(76.3)	
	Contract Expenditure – CEA Technologies Pty Ltd	(37.0)	
	Contract Expenditure – FMS Case (AT-P-GSC)	(7.4)	
	Contract Expenditure – Raytheon Australia Pty Ltd 2	(5.6)	
	Contract Expenditure – Saab Australia Pty Ltd	(3.1)	
	Other Contract Payments / Internal Expenses	(75.1)	8
		(742.1)	
Jun 23	Total Expenditure	(2,569.7)	
Jun 23	Remaining Budget	(3,578.5)	
Notes			
1	CEA Technologies Pty Ltd Radar Development Program.		
2	Initiating the CEP for Future Frigates.		
3	Conduct further combat system development activities and to secure critical support staff.		
4	Funding transfer between Capability Acquisition and Sustainment Group (CASG) and Security and Estate Group (formerly known as the Estate and Infrastructure Group) to address funding shortfall with the Naval Capability Infrastructure Subprogram.		
5	Funding transfer between CASG and Navy to address funding shortfall due to Interim Arrangement.		
6	Funding transfer between CASG and Defence Science and Technology (DST) Group.		
7	Other Contract Payments/Internal Expenses comprise of; Project and Commercial Support payment totals to (\$216.6m) (including Deloitte Touche Tohmatsu (\$35.9m)), CEP participants payment totals to (\$122.5m) and Technical Support payment totals to (\$117.2m) (including Raytheon Australia Pty Ltd \$3.6m).		
8	Other Contract Payments/Internal Expenses comprise of; Project and Commercial Support payment totals to (\$59.0m) (including Deloitte Touche Tohmatsu (\$4.9m) and BAE Systems Maritime Australia (\$1.0m), and Technical Support payment totals to (\$15.8m).		

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.

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
600.4	724.9	725.1	<u>Portfolio Budget Statement (PBS) to Portfolio Additional Estimate Statement (PAES)</u> : The budget has increased by \$140.6m in FY 2022-23 and by \$32.8m in FY 2023-24 compared to the latest endorsed plan, primarily due to future payments of UK license fee on achievement of design zone separation and the ramp up of activities within the BAE Systems Maritime Australia head contract. <u>PAES to Final Plan</u> : variance due to Real Variation - Transfer to DST05000 Phase 1 and exchange rate variations.
Variance \$m	124.5	0.3	Total Variance (\$m): 124.7
Variance %	20.7	0.0	Total Variance (%): 20.8

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		5.1	Australian Industry	The variation is mainly driven by higher than forecast FMS disbursements for the combat management system; and, increase in supply chain costs and activity within the head contract.
		(3.3)	Foreign Industry	
		-	Early Processes	
		0.8	Defence Processes	
		14.4	Foreign Government Negotiations/Payments	
		-	Cost Saving	
		-	Effort in Support of Operations	
		-	Additional Government Approvals	
725.1	742.1	17.0	Total Variance	
		2.3	% Variance	

2.3A Details of Project Major Contracts – Price

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 23 \$m			
CEA Technologies Pty Ltd 1	Nov 14	0.9	50.0	Variable	Standard Defence Contract	1, 5
Saab Australia Pty Ltd	Nov 14	2.4	46.7	Variable	Standard Defence Contract	7, 5
United States (US) Government (AT-P-GSC)	Jan 16	5.5	255.2	Reimbursement (for FMS)	FMS	3, 5
BAE Systems Maritime Australia	Dec 18	1,904.1	2,567.4	Variable	Standard Defence Contract	4, 5
Odense Maritime Technology	Mar 19	0.3	61.3	Variable	Standard Defence Contract	4, 5
Raytheon Australia Pty Ltd 1	Apr 19	6.8	13.6	Variable	Standard Defence Contract	2, 5
Raytheon Australia Pty Ltd 2	Oct 19	9.0	34.6	Variable	Standard Defence Contract	2, 5
IBM Australia Limited	Apr 20	3.5	12.0	Firm or Fixed	Standard Defence Contract	5, 8
US Government (AT-P-LFZ)	Sep 20	626.6	964.1	Reimbursement (for FMS)	FMS	5, 9
CEA Technologies Pty Ltd 2	Sep 21	27.8	136.1	Firm or Fixed	Standard Defence Contract	1, 5
Notes						
1	CEA Technologies Pty Ltd 1 refers to continuing risk reduction radar development activities including initial design work, initial platform integration and support for the Aegis/CEAFAR interface development. CEA Technologies Pty Ltd 2 refers development and testing of new interface between US Aegis and CEA Technologies Pty Ltd Phased Array Radar (CEAFAR2) Phased Array Radar Systems.					
2	Raytheon Australia Pty Ltd 1; Initial requirements verification and validation including development of a detailed design and progression towards Operation Readiness Review for the Maritime Information Environment (MIE). Subsequent extensions provide for hardware maintenance, software licenses and support costs. Raytheon Australia Pty Ltd 2; Initial provision of specialist combat system technical support services for specialist services in support of combat management system activities and subsequent take up of option to extend to support continuous combat system development, which also includes uptake of additional personnel.					
3	The US Government Initial Memorandum of Understanding was for SEA5000 Feasibility and Technical Integration Study. Contract value was increased for additional Feasibility and Technical Risk Reduction Studies including CEAFAR/Cooperative Engagement Capability and integration of CEAFAR into the ACS. Contract value also includes acquisition of LLTI for Development Sites.					

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

4	D&P for HCF Contract changes include inclusion of shipyard licence fees, facilities management services, Functional Baseline review, the Maritime Information Environment, and the Interim Arrangement, as well as the removal of some Australian Interface scope.
5	Contract values as at 30 June 2023 are based on actual expenditure to 30 June 2023 and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable).
6	Contract for Delivery of Shipbuilding Strategy Report, subsequent contracts for project management support.
7	Initial Contracts for combat system studies and subsequent contracts for technical support and de-risking activities for the combat management systems and radar platform integration.
8	Services relating to the MIE, the CASG Protected Maritime Information and Communications Technology network across Naval Shipyards and Defence establishments for the use of Commonwealth and Industry to support continuous Naval Shipbuilding and Sustainment.
9	Initial amount for the acquisition of Australian Surface Combatants ACS long lead items. Amendment includes additional major weapons system equipment.

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

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 23		
CEA Technologies Pty Ltd 1	N/A	N/A	Continuing risk reduction radar development activities including initial design work, initial platform integration and support for the Aegis/CEAFAR interface development.	-
CEA Technologies Pty Ltd 2	N/A	N/A	Development and testing of new interface between US Aegis and CEAFAR2 Phased Array Radar Systems.	-
Saab Australia Pty Ltd	N/A	N/A	Combat System Risk Reduction and Support.	-
US Government (AT-P-GSC)	N/A	N/A	Feasibility and Integration studies and acquisition of LLTI.	-
US Government (AT-P-LFZ)	3	3	Three shipsets of ACS long lead items.	1
BAE Systems Maritime Australia	N/A	N/A	D&P for HCF.	-
Raytheon Australia Pty Ltd	N/A	N/A	Supply of Combat Systems Technical Support Services.	-
Odense Maritime Technology	N/A	N/A	Identification of Support Requirements during D&P stage.	-
IBM Australia Ltd	N/A	N/A	MIE support services.	-
Major equipment accepted and quantities to 30 Jun 23				
N/A				
Notes				
1	The US Government (AT-P-LFZ) quantity is three to fulfil the requirement of first batch of three ships.			

2.4 Australian Industry Capability

Summary
The project has contracted Australian Industry Capability (AIC) targets based on opportunities to maximise internationally competitive Australian industry involvement which is captured in CEA Technologies Pty Ltd, BAE Systems Maritime Australia, Saab Australia Pty Ltd, AIC Plan in support of their program & project management, systems integration, data management, business intelligence support and assurance activities.
The project has no contracted AIC targets or 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.
There is no AIC targets or AIC Plan for Odense Maritime Technology and IBM Australia 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.
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	Mission System and Support System	Sep 19	N/A	Sep 19	0	1
System Definition Review	Mission System	Nov 20	Apr 22	May 22	18	1, 2
	Support System	Nov 20	Mar 23	Dec 22	25	1, 2, 3

Preliminary Design Review (PDR)	Mission System	N/A	Oct 23	Oct 23	N/A	1, 2, 4
Critical Design Review (CDR)	Mission System CDR	Nov 22	N/A	Sep 25	34	2, 5
	Mission System (Final Critical Design Review (FCDR))	Jun 24	N/A	Mar 27	33	2, 5
	Support System (Support System Critical Design Review (SSCDR))	Apr 25	N/A	To Be Announced (TBA)	N/A	2, 5
Notes						
1	The achieved/forecast dates for the System Requirements Review (SRR), SDR and PDR design reviews are based on the date that the associated head contract Key Milestone were achieved or is forecast to be achieved. Achievement of SRR and Mission System SDR (MSSDR) were September 2019 and May 2022 respectively. It is noted that head contract Key Milestones are generally achieved a number of months after the conduct of the design review exit event to enable the Key Milestone Criteria (e.g. closure or downgrading of action items) to be completed.					
2	The delayed achievement of the MSSDR, primarily as a result of design delays experienced in the UK Type 26 Program, has driven delays to subsequent design reviews. It is noted that the MSSDR included an element that was focused on the Land Based Test Site (Development and Sustainment) (LBTS (D&S)).					
3	In Quarter 3, 2021, the conduct of the SS-SDR exit event was deferred to October 2022, by mutual agreement between the Commonwealth and BAE Systems Maritime Australia, in order to enable the Integrated Logistics Support artefacts to be further matured thus significantly increasing the likelihood of achieving an optimal outcome from the design review process.					
4	The Commonwealth and BAE Systems Maritime Australia have agreed to the scope of the PDR. The PDR exit event will be conducted in July 2023 and will be focused on setting the Allocated Baseline (for the design of the Batch One ships and the LBTS (D&S) and examining options to control the accumulation of risk into the detailed design leading into the Batch One Build stage. As reported in the 2021-22 MPR, the forecast date is October 2023 to align with the head contract Key Milestone date for PDR that is based on the Commonwealth's acceptance of the Key Milestone Progress Certificate. It is noted that the acceptance of a Progress Certificate for a Design Review is a number of months after the Design Review exit event to enable the closure or downgrading of action items that arise during the activity.					
5	Forecast dates for events occurring more than 18 months from the current date are not robust and should be considered indicative dates only as the Commonwealth and BAE Systems Maritime Australia are in the process of re-baselining the schedule for the D&P scope beyond the PDR event. The D&P scope schedule re-baseline activity was completed in August 2022 in advance of the IBR2 conducted in November 2022. BAE Systems Maritime Australia formally proposed the dates listed in the table for SSCDR and FCDR in November 2022, with a date for SSCDR to be proposed once the Contract Change Proposal for support system functional baseline has been agreed.					

3.2 Contractor Test and Evaluation Progress

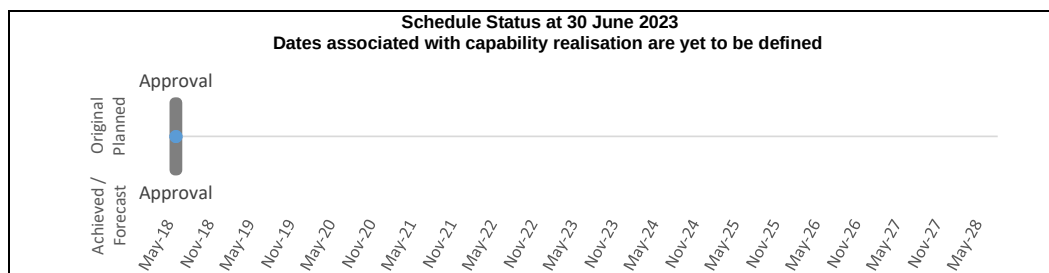
Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
System Integration	Prototyping commencement	Dec 20	Dec 20	Dec 20	0	-
	Ship One Build commencement	Dec 22	N/A	Jun 24	18	1, 2
Acceptance	Ship One	TBA	N/A	TBA	N/A	3
Notes						
1	In June 2021 the Government approved the deferral of the Ship One Build Commencement (Ship One Cut Steel) milestone date from December 2022 to no later than June 2024. The forecast date identified above refers to the milestone currently being worked to by the Commonwealth and BAE Systems Maritime Australia. It is noted, however, that the Batch One Build scope will be subject to Government Second Pass Approval in early 2024 to enable Commonwealth and BAE Systems Maritime Australia to include this scope within the head contract prior to June 2024.					
2	The risk to the achievement of the Ship One Cut Steel milestone remains, but the milestone is currently considered achievable. The 'production by design zone' methodology allows construction of low risk blocks to commence in June 2024 as forecast, which enables the design for higher risk and more complex blocks to mature.					
3	This milestone is expected to be defined by Government Second Pass Approval in early 2024.					

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	TBA	TBA	N/A	1, 2
Initial Operational Capability (IOC)	TBA	TBA	N/A	1, 2
Final Materiel Release (FMR)	TBA	TBA	N/A	1, 3
Final Operational Capability (FOC)	TBA	TBA	N/A	1, 3
Notes				
1	SEA5000 Phase 1 has approval to procure LLTI, perform prototyping and detail D&P of the HCF.			
2	These milestones are expected to be defined by Government in early 2024 when approval for Batch One Build is sought.			
3	These milestones are expected to be defined by Government in subsequent Second Pass Approvals.			

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

**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**

Not Applicable	Green: The project does not currently have any materiel capability delivery approved. The project is currently approved for the D&P stage, inclusive of prototyping and procurement of LLTI for the HCF. Capability requirements continue to be refined and assessed against the Second Pass approved scope, cost and schedule. The project is expected to return to Government in early 2024 to seek approval of the scope and funding required for the Batch One Build stage.
	Amber: As described in Section 5, the project is currently managing a variety of technical risks related to the achievement of Navy materiel capability requirements. These risks are primarily related to the integration of the combat system into the UK Type 26 reference ship design, and constraints arising from design margin and fundamental naval architecture limits being reached.
	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)	Note 1	Not yet Achieved
Initial Operational Capability (IOC)	Note 1	Not yet Achieved
Final Materiel Release (FMR)	Note 1	Not yet Achieved
Final Operational Capability (FOC)	Note 1	Not yet Achieved
Notes		
1	The project has approval to procure LLTI, perform prototyping and detailed D&P of the HCF. These milestones are expected to be defined by Government in subsequent Second Pass Approvals.	

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 HCF design may exceed the naval architecture limits on weight and stability at the completion of the D&P scope, which may limit or provide in-service growth margins that substantially limit future capabilities.	The project is tracking naval architecture limits and design margins closely through head contract deliverables such as the Margin Monitoring Program, the Quarterly Weight Report, and the Mandated System Review process. The next mandated review is the PDR planned for July 2023.
2	There is a risk that change decisions are made without understanding technical, cost and schedule implications during the D&P scope that leads to schedule slippage, cost growth, and an inability to achieve holistic technical performance objectives in future project scope.	The project has established and placed on contract the Mission System Functional Baseline and is now progressing towards the Allocated Baseline. Approved configuration change processes are in place. The rating of the risk has been reduced to Medium since the FY 2021-22 report due to the completion of SDR and the allocation of a Functional Baseline.

3	There is a risk that the HCF design is not sufficiently mature at the completion of the D&P scope to commence and maintain continuous, efficient production in Quarter 2, 2024 which will impact the ship delivery program.	Design maturity is being achieved via a staged release approach. The maturity of design zones is sequenced to ensure spatial design, planning, and procurement activities are completed to support the shipyard production schedule.
4	There is a risk that the combat system integration into the ship is not sufficiently mature at the completion of the D&P scope to support achievement of the zonal design process which will impact the expected capability requirements for future project scope.	The project, BAE Systems Maritime Australia, and other key combat system suppliers will refine their combat system integration and assurance roles through an update to the head contract Statement of Work and deliverables such as the Engineering Management Plan, System Integration Plan and Combat System Assurance Plan.
5	There is a risk that the Navy is unable to raise, train and sustain future Navy workforce prior to ship delivery which will impact the ability to support future Navy capabilities and provide seaworthiness assurance.	The project, with Navy and BAE Systems Maritime Australia, will identify training opportunities such as high fidelity simulators, and conduct workforce modelling/analysis to identify key skillsets required.
Emergent Risks (risk not previously identified but has emerged during 2022–23)		
Ref#	Description	Remedial Action
N/A	N/A	N/A

5.2 Major Project Issues

Ref#	Description	Remedial Action
N/A	N/A	N/A

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 five lessons related to Contract Management, First of Type Equipment, Schedule Management, Governance, and Requirements Management. Three project lessons are provided below (note this does not include all project lessons):	The project has not categorized any of its lessons information as a whole-of-Defence Lesson Learned.
Lesson Type – Observation. Government Furnished Material, data and information requirements need to be clearly defined, articulated and agreed between the platform designer, the various branches, divisions and System Program Office's responsible for delivery, and materiel suppliers. This is required in terms of both the level of data maturity required, and schedule required by dates to enable the platform designer to meet key project milestones.	Schedule Management
Lesson Type – Observation. A Lessons and Opportunities Framework finalised and agreed to ensure lessons learnt are more robustly captured, assessed and where relevant encapsulated within processes, plans and procedures.	Lessons Learnt Processes
Lesson Type – Observation. A Quality Management Plan compliant with CASG Quality Management System and in accordance with the guidance included in International Organisation for Standardization Standard 9004:2018 is required to ensure continuous and sustained success particularly within a project that is highly complex.	Quality Management

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2023

Unit	Name
Division	Major Surface Combatants and Combat Systems Division
Branch	Hunter Class Frigate

Project Data Summary Sheet¹

Project Number	LAND19 Phase 7B
Project Name	SHORT RANGE GROUND BASED AIR DEFENCE
First Year Reported in the MPR	2020-21
Capability Type	Replacement
Capability Manager	Chief of Army
Government 1st Pass Approval	Feb 17
Government 2nd Pass Approval	Feb 19
Budget at 2nd Pass Approval	\$1,274.3m
Total Approved Budget (Current)	\$1,232.8m
2022–23 Budget	\$182.3m
Complexity	ACAT II



Section 1 – Project Summary

1.1 Project Description

LAND19 Phase 7B Short Range Ground-Based Air Defence (SRGBAD) Project will introduce into service the Army-operated component of the Integrated Air and Missile Defence capability to achieve an enhanced Ground-Based Force Protection system.

The primary objectives of the project are to deliver a scalable SRGBAD capability that can sense, warn, manage and counter weapons and sensor effects of fixed and rotary wing platforms, Unmanned Aerial Systems, stand-off weapons, Rocket Artillery Mortar and missiles within the required environments.

The capability being acquired is an enhanced version of the jointly developed Raytheon-Kongsberg National Advanced Surface to Air Missile System (NASAMS), which is currently in-service with a number of nations. The capability is being acquired through a contract with Raytheon Australia Pty Ltd.

Two NASAMS Batteries are being acquired, each consisting of three Fire Units, with additional sub-systems for training purposes. A single Fire Unit consists of missile launchers, sensors, and a command & control centre, and is capable of protecting a specified area from a range of airborne threats. A single battery is capable of meeting the operational requirements, with the second battery being used for training purposes.

1.2 Current Status

Cost Performance

In-year

As at 30 June 2023, Financial Year (FY) 2022-23 expenditure is \$190.0m against FY 2022-23 budget of \$182.3m. The variance of \$7.7m is primarily due to Foreign Military Sales (FMS) disbursements related to Advanced Medium Range Air-to-Air Missile (AMRAAM) being more than originally anticipated, offset by, an underspend on CEA Technologies Pty Ltd payments.

Project Financial Assurance Statement

As at 30 June 2023, project LAND19 Phase 7B has reviewed the approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial and contractual obligations of Defence, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget including contingency remaining for the project to complete against the agreed scope.

Contingency Statement

The project has expended contingency in the FY 2022-23 for Raytheon Australia Pty Ltd contract milestones as a result of COVID-19 delays. The expenditure was for previously approved contingency. No additional contingency funding was sought or approved in FY 2022-23.

Schedule Performance

COVID-19 had a significant impact on the project. The international travel restrictions in place between industry partners in Australia, Norway and the United States (US) prevented effective collaboration, integration and test activities throughout 2020 and into 2021. When combined with Government Furnished Material (GFM) delays, this transferred technical risk to later parts of the project, compressing planned activities and increasing the likelihood of rework. Workforce quarantine measures led to delays in manufacturing, particularly for Canberra-based industry in late 2021. Defence agreed to revise some contract milestones to provide schedule relief to industry.

In October 2021, the project assessed the original Initial Materiel Release (IMR) date in light of the cumulative impact of above delays, and determined a revised date. The Initial Operational Capability (IOC) was subsequently revised. These changes were advised to Government in 2022 biannual update, and captured in a revised Materiel Acquisition Agreement.

The Final Operational Capability (FOC) remains on schedule, despite the delay to IOC.

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.

Integration and test activities were the primary focus for the project throughout FY 2022-23. Training development has been completed on schedule and training delivery to 16 Regiment has commenced. The project also completed a number of Factory Acceptance Tests (FAT) for various parts of the system, followed by successful completion of the Flight Trial in February 2023.
The project conducted Identify Friend or Foe (IFF) testing in April 2023. A number of issues were identified at this test event which required remediation causing delays. These delays are not expected to impact the revised IMR schedule but have created an increased schedule risk to IOC.
Materiel Capability/Scope Delivery Performance The project is on track to deliver against all agreed capability outcomes for FOC.
Note
Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.

1.3 Project Context

Background LAND19 Phase 7B was one of the first projects to be considered under the new Capability Life Cycle and under the developmental Smart Buyer framework. The project participated in a pilot Smart Buyer workshop with the financial, requirements, integration, and schedule risk elements were considered within the project's acquisition strategy and addressed as part of the Risk Mitigation Activity (RMA) conducted between Government First Pass and Government Second Pass Approval. Government First Pass Approval was provided in February 2017 that enabled the release of a Single Supplier Limited Tender to Raytheon Australia Pty Ltd as Prime Systems Integrator (PSI) for the acquisition and sustainment of the SRGBAD capability. First Pass Approval also endorsed the conduct of a RMA between First Pass and Second Pass to reduce technical risks associated with system integration and assess the environmental durability of key sub-systems. Additionally, First Pass Approval enabled a review of the Canberra-based company CEA Technologies Pty Ltd sensors for use in a ground-based air defence environment between First Pass and Second Pass Approval. Government in February 2019 provided second pass approval for the preferred capability option presented, which was based on the NASAMS baseline but provides an enhanced capability, addressed obsolescence risks and provided greater Australian industry content. The significant procurement activities to date include: - Contract signature was achieved with Raytheon Australia Pty Ltd as PSI in June 2019. - Contract signature was achieved with CEA Technologies Pty Ltd for the provision of operational and tactical radars in November 2019. - The FMS offer for the purchase of missiles was accepted by the Commonwealth in March 2020. - Contract signature was achieved with Raytheon Australia Pty Ltd as the Support Contractor in December 2020. - Contract signature was achieved with CEA Technologies Pty Ltd as the Support Contractor for the operational and tactical radars in May 2023.
Uniqueness NASAMS is an established and mature ground-based air defence capability, however under LAND19 Phase 7B, Defence is undertaking a number of enhancements making it unique. The most significant of these is replacing the standard NASAMS radar with radars from Australian company CEA Technologies Pty Ltd. Other modifications, which are not common across the international user base include integration with Army in-service vehicles and radios and interfacing with existing Land and Joint information networks.
Major Risks and Issues The project is currently managing the following major risks: - Delays to IFF Certification, causing delays to IOC. - Increased costs due to higher than expected contract escalation.
Other Current Related Projects/Phases LAND121 Phase 4 – Protected Mobility Vehicle – Light (Hawkei). This project will acquire and deliver, Protected Mobility Vehicles – Light and companion trailers for command, liaison, reconnaissance and utility roles; and the associated training and support systems. Elements of LAND19 Phase 7B tactical radar and high mobility launcher system will be integrated onto the Hawkei mission system.
Note
Major risks and issues are excluded from the scope of the Auditor-General's Independent Assurance Report.

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

Section 2 – Financial Performance²

2.1 Project Budget (out-turned) and Expenditure History

Date	Description	\$m	Notes
	Project Budget		
May 17	Original Approved: Government First Approval	25.9	
Jun 19	Government Second Pass Approval	1,248.4	
	Total at Second Pass Approval	1,274.3	
Jun 23	Exchange Variation	(41.5)	
Jun 23	Total Budget	1,232.8	
	Project Expenditure		
Prior to Jul 22	Contract Expenditure – Raytheon Australia Pty Ltd	(476.2)	
	Contract Expenditure – CEA Technologies Pty Ltd	(135.2)	
	Contract Expenditure – US Government (AT-D-YAI)	-	1, 2
	Other Contract Payments / Internal Expenses	(20.5)	2
		(631.9)	
FY to Jun 23	Contract Expenditure – Raytheon Australia Pty Ltd	(146.1)	
	Contract Expenditure – CEA Technologies Pty Ltd	(17.8)	
	Contract Expenditure – US Government (AT-D-YAI)	-	1, 2
	Other Contract Payments / Internal Expenses	(26.1)	2
		(190.0)	
Jun 23	Total Expenditure	(822.0)	
Jun 23	Remaining Budget	410.8	
Notes			
1	Price and expenditure related to missile procurement is classified. This expenditure has been reported as part of Other Contract Payments/Internal Expenses.		
2	Other Contracts Payments/Internal Expenses comprises: RMAs, operating expenditure, contractors, consultants, and other capital expenditure not attributable to the aforementioned contracts.		

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
212.3	157.6	182.3	<u>Portfolio Budget Statement (PBS) to Portfolio Additional Estimates Statement (PAES)</u> : The variation is primarily due to early achievement of Raytheon Australia Pty Ltd milestones into FY 2021-22 from FY 2022-23 (approx. \$40.0m) and reprogramming of spares and FMS payments from FY 2022-23 to FY 2023-24 (\$12.0m), and Global Price Basis Update (approx. \$3.0m). <u>PAES to Final Plan</u> : The variation is primarily due to increase in contract escalation estimate (approx. \$12.0m), increase to FMS disbursements (approx. \$8.0m), and other minor activities including Global Price Basis Update (approx. \$4.7m).
Variance \$m	(54.6)	24.7	Total Variance (\$m): (30.0)
Variance %	(25.7)	15.6	Total Variance (%): (14.1)

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(2.7)	Australian Industry	As at 30 June 2023, FY 2022-23 expenditure is \$190.0m against a budget of \$182.3m. The variance of \$7.7m is primarily due to FMS disbursements related to AMRAAM being more than originally anticipated, offset by an underspend on CEA Technologies Pty Ltd payments.
		-	Foreign Industry	
		-	Early Processes	
		-	Defence Processes	
		10.4	Foreign Government Negotiations/Payments	
		-	Cost Saving	
		-	Effort in Support of Operations	
		-	Additional Government Approvals	

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.

182.3	190.0	7.7	Total Variance
		4.2	% Variance

2.3A Details of Project Major – Price

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 23 \$m			
Raytheon Australia Pty Ltd	Jun 19	680.1	786.5	Firm or Fixed	Standard Defence Contract	1
CEA Technologies Pty Ltd	Nov 19	137.1	161.2	Firm or Fixed	Standard Defence Contract	2
US Government (AT-D-YAI)	Mar 20	-	-	Reimbursement (for FMS)	FMS	3
Notes						
1	Raytheon Australia Pty Ltd contract value as at 30 June 2023 is based on actual expenditure and remaining commitment, and includes adjustments for indexation (where applicable). The price increase since contract signature is primarily due to indexation and foreign exchange rate variation (\$84.4m), the inclusion of spares into the contract (\$14.0m) and an \$8.0m increase due to project delays, as noted in Section 1.2.					
2	CEA Technologies Pty Ltd contract value as at 30 June 2023 is based on actual expenditure and remaining commitment, and includes adjustments for indexation (where applicable). The price increase since contract signature is primarily due to indexation and foreign exchange rate variation (\$20.1m), plus the inclusion of spares into the contract (\$4.0m).					
3	Pricing related to missile procurement is classified.					

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

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 23		
Raytheon Australia Pty Ltd	7	7	NASAMS Fire Units plus training equipment.	-
CEA Technologies Pty Ltd	Tactical Radars Operational Radars	Tactical Radars Operational Radars	Radars plus training and support equipment.	-
US Government (AT-D-YAI)	Classified	Classified	Missiles.	-
Major equipment accepted and quantities to 30 Jun 23				
Nil				
Notes				
1	N/A			

2.4 Australian Industry Capability

Summary
The project has contracted Australian Industry Capability (AIC) targets based on opportunities to maximise internationally competitive Australian industry involvement which is captured in Raytheon Australia Pty Ltd and CEA Technologies Ltd's AIC Plans in support of their manufacturing, integration, assembling, test and certification of the capability and support services activities.
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	NASAMS	Oct 19	N/A	Oct 19	0	-
	CEA Technologies Pty Ltd Radars	Apr 20	N/A	Apr 20	0	-
Preliminary Design	NASAMS	May 20	N/A	May 20	0	1
Detailed Design	NASAMS	Dec 20	N/A	Dec 20	0	-
	CEA Technologies Pty Ltd Radars	Jul 21	N/A	Aug 21	1	-
Notes						
1	Preliminary Design aspects for CEA Technologies Pty Ltd Radars were covered in the NASAMS Preliminary Design Review.					

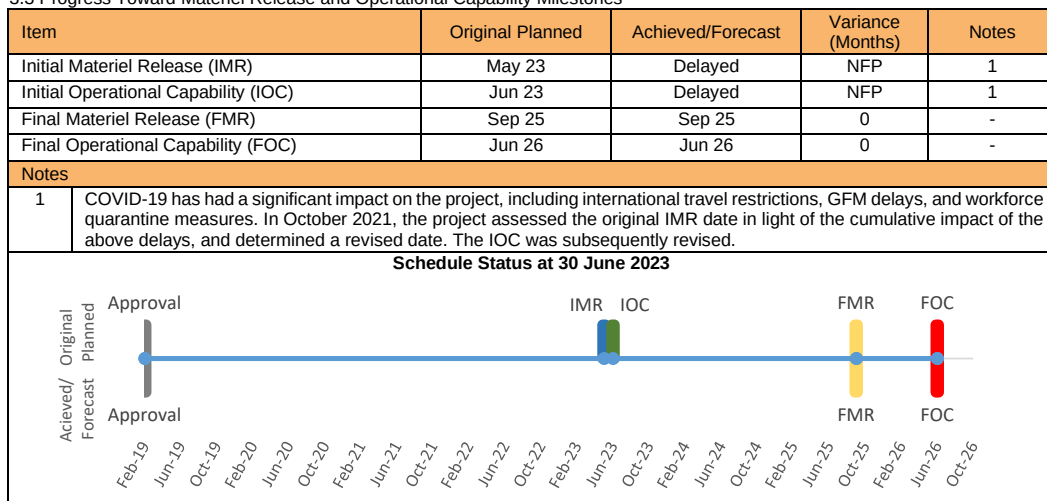
Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

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	First of Type (FoT) Canister Launcher FAT	Jan 22	Nov 21	Nov 21	(2)	1
	FoT Fire Distribution Centre FAT	Apr 22	Aug 22	Nov 22	7	2
	Flight Trial	Jun 22	Apr 23	Apr 23	10	2
Acceptance (NASAMS Fire Units)	Fire Unit 1 (First)	Mar 23	Delayed	Delayed	Not For Publication (NFP)	2, 3
	Fire Unit 7 (Final)	May 24	N/A	May 24	0	-
Acceptance (CEA Technologies Pty Ltd Radars)	Tactical Radar (First)	Mar 23	N/A	Delayed	NFP	-
	Tactical Radar (Final)	Jun 24	N/A	Jun 24	0	-
	Operational Radar (First)	Mar 23	N/A	Delayed	NFP	-
	Operational Radar (Final)	Apr 24	N/A	Apr 24	0	-
Notes						
1	This milestone was achieved early because the exit criteria was modified to allow completion in Norway, with subsequent shipment to Australia. This shipment commenced in April 2022.					
2	This milestone was adjusted as a result of COVID-19 related delays, including workforce quarantine measures and travel restrictions.					
3	Fire Unit composition varies per Fire Unit (i.e. number and type of launchers and other major systems).					

3.3 Progress Toward Materiel Release and Operational Capability Milestones

**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 requirements as expressed in the Materiel Acquisition Agreement.
	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)	- Fire Unit with Tactical Radar. - Classroom Trainer installed. - Basic Support Equipment. - Initial Spares. - Systems accepted and certified. - Support Contract in operation.	Not yet Achieved
Initial Operational Capability (IOC)	- One operationally deployable Fire Unit. - Vehicles to support Fire Unit. - Operator and maintainer training. - Completion of Operational Test & Evaluation.	Not yet Achieved
Final Materiel Release (FMR)	- All Fire Units. - All Radars. - All spares and support equipment.	Not yet Achieved
Final Operational Capability (FOC)	- Complete mission system comprising all materiel elements defined in IMR and FMR. - Doctrine published. - All certification and accreditation complete. - Facilities complete.	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 delays to provision of Government-supplied systems will lead to integration and testing delays, with potential cost increases and delays to IOC.	The timely provision of these systems is required as early as possible in the testing phase, to ensure that technical risk is not transferred to later stages. A temporary loan of equipment has been requested for integration testing which, if approved, will mitigate this risk. Additional integration testing is occurring on legacy equipment, which will enable early testing of a significant amount of functionality. This risk has now been reduced to Medium.
2	There is a risk that the development and testing of the system interfaces will take longer than planned, impacting other system level tests, and leading to IOC delays.	System interface testing is prioritising critical functionality, which has the greatest potential to impact subsequent testing stages. Industry capacity is being managed through appropriate governance arrangements, to ensure that prioritisation is effectively implemented. This risk has been reduced to Medium.
Emergent Risks (risk not previously identified but has emerged during 2022–23)		
Ref#	Description	Remedial Action
1	There is a risk that IFF Certification will be delayed, with a corresponding delay to IOC.	Re-testing is expected to be completed by IMR, with certification to be achieved by IOC.
2	There is a risk that escalation costs will exceed the original budgeted amount by significant levels, leading to lack of funds available to pay adjusted contract milestone payments. This has been caused by higher than expected inflation levels.	The project will seek contingency funding to cover the shortfall.

5.2 Major Project Issues

Ref#	Description	Remedial Action
1	N/A	N/A

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

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects 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 five lessons related to Contract Management, First of Type Equipment, Schedule Management, Governance, and Requirements Management. Two 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. Mandated System Reviews (MSRs) in large projects can cover many complex issues, over several days. They require review of large amounts of data in advance. Lead-in reviews are a great way to focus attention of relevant stakeholders on particular issues. They can be conducted months in advance of the MSR. A lead-in review is a separate meeting or workshop held to discuss a particular MSR agenda item. They can often be used to gain concurrence on a particular issue, thereby saving time in the MSR, and giving stakeholders a chance to consider. They also help focus reviewers on key issues prior to the MSR. Conduct lead-in reviews as a standard part of preparation for large MSRs.	Contract Management
Lesson Type – Observation. RMAs or Risk Reduction activities are often completed during First Pass to Second Pass, usually to investigate technical feasibility or capability definition. Extending these activities to include formal requirements development and system definition can place the project in a much more mature state at Contract Signature. Contracts can sometimes be established with immature requirements, and requirements definition completed post effective-date may result in cost, schedule or capability adjustments post-Second Pass. By focusing on system specification refinement between First Pass to Second Pass, this risk can be mitigated. Include formal and funded system definition activities between First Pass to Second Pass.	Risk Management

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2023

Unit	Name
Division	Land Systems Division
Branch	Land Manoeuvre Systems Branch

Project Data Summary Sheet¹

Project Number	LAND121 Phase 3B
Project Name	MEDIUM HEAVY CAPABILITY, FIELD VEHICLES, MODULES AND TRAILERS
First Year Reported in the MPR	2013-14
Capability Type	Replacement
Capability Manager	Chief of Army
Government 1st Pass Approval	Jun 04 – Phase 3 Dec 11 – Phase 3B
Government 2nd Pass Approval	Aug 07 – Phase 3 Jul 13 – Phase 3B
Budget at 2nd Pass Approval	\$2,549.2m (Budget split from Phase 3) \$3,284.8m (Revised Second Pass Approval)
Total Approved Budget (Current)	\$3,399.7m
2022–23 Budget	\$26.3m
Complexity	ACAT I



Section 1 – Project Summary

1.1 Project Description

LAND121 Phase 3 was established to replace the current fleet of Australian Defence Force (ADF) Field Vehicles, Modules and Trailers (FVM&T) and will enhance the ground mobility of the ADF.

In December 2011, Government approved the splitting of LAND121 Phase 3 into two projects:

- LAND121 Phase 3A – Lightweight and Light Capability (LLC), incorporating the approved Phase 5A; and
- LAND121 Phase 3B – Medium and Heavy Capability (MHC).

LAND121 Phase 3B will upgrade and replace the existing medium and heavy vehicle and trailer fleet. Vehicles (protected and unprotected) consisting of nine variants, will be introduced by the project including cargo, tractor, recovery and tanker functions. Ten trailer variants for general cargo, equipment transport, and tanker capability will also be acquired. Fleet flexibility will be supplemented by flatracks and modules that will permit the rapid deployment of stores (including maintenance and combat engineering), fuel and water tankers and specialist bridging capabilities.

The following vehicles, trailers and modules are being acquired:

- 2,536 MHC vehicles and 3,054 modules (including 55 Command Post Heavy (CPH) modules) supplied by Rheinmetall MAN Military Vehicles Australia Pty Ltd;
- 1,582 trailers from Haulmark Trailers (Australia) Pty Ltd;
- 122 Geländewagen (G-Wagon) fitted with maintenance modules (GMM) supplied by Mercedes-Benz Australia/Pacific Pty Ltd and associated trailers supplied by Haulmark Trailers (Australia) Pty Ltd, acquired by LAND121 Phase 3A;
- 49 in-service Bushmaster Protected Mobility Vehicles upgraded to customised General Maintenance Vehicle variants and associated trailers;
- 18 Line Laying Modules acquired by LAND121 Phase 3A;
- A further 664 specialist modules are to be acquired.
 - 170 Personnel Restraint Modules (PRM) from United Rentals Australia Pty Ltd; and
 - 494 Modules Gun Ammunition (MHGA) and Modules Gun Stores (MHGS) from ECLIPS Pty Ltd.

1.2 Current Status

Cost Performance

In-year

As at 30 June 2023, Financial Year (FY) 2022-23 expenditure was \$26.3m against a FY 2022-23 budget of \$26.3m. The project met their End of Financial Year (EOFY) budget.

Project Financial Assurance Statement

As at 30 June 2023, project LAND121 Phase 3B has reviewed the approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial and 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.

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.

Contingency Statement
The project has not applied contingency in FY 2022-23.
Schedule Performance
Phase 3B has progressed through the design phases for all Rheinmetall MAN Military Vehicles Australia Pty Ltd contracted vehicles, modules and Haulmark Trailers (Australia) Pty Ltd trailers. The project achieved the Initial Materiel Release (IMR) milestone in November 2018, ahead of the scheduled date of December 2018 and achieved Initial Operational Capability (IOC) with a caveat on vehicle air certification, by the originally planned date of December 2019. Rheinmetall MAN Military Vehicles Australia Pty Ltd has been requested by Air Movements Training and Development Unit (AMTDU) to provide additional technical data to inform air certification clearance. This issue is being closely managed by Capability Acquisition and Sustainment Group (CASG) and the Capability Manager. In the 2021-22 PDSS, the project reported potential delays to the Final Materiel Release (FMR) and Final Operational Capability (FOC) milestones from COVID-19 impacts in meeting the Directed Training Requirement (DTR); the outstanding work to achieve air certification; and, the time required to finalise the user requirements and deliver the remaining specialist modules. These delays have now been realised. Army identified that FOC would not be met as currently approved and would be delayed from December 2023 until December 2026.
Materiel Capability/Scope Delivery Performance
As described in the Schedule Performance above, the project achieved IOC with a caveat on air certification. Schedule management remains a key focus and is being closely managed by CASG and the Capability Manager. As at 30 June 2023 Rheinmetall MAN Military Vehicles Australia Pty Ltd delivered 2,536 of 2,536 vehicles and 2,999 of 3,054 modules. Haulmark Trailers (Australia) Pty Ltd has delivered 1,582 of 1,582 MHC companion trailers and 122 light/lightweight GMM companion trailers acquired by LAND121 Phase 3A. Mercedes-Benz Australia/Pacific Pty Ltd has delivered 122 of 122 GMM. Thales has upgraded 49 of 49 in-service Bushmaster Protected Mobility Vehicles to customised General Maintenance Vehicle variants along with associated trailers. 18 Line Laying Modules have been acquired by LAND121 Phase 3A. A contract was signed with United Rentals Australia Pty Ltd, for the delivery of 170 PRM modules in December 2021. A contract was signed with ECLIPS Pty Ltd, for the delivery of 450 MHGA and 44 MHGS modules on 29 May 2023. The Capability Manager has advised that the CPH module scope under LAND121 Phase 3B is being reconsidered, and an alternate project for delivery may be identified.
Note
Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.

1.3 Project Context

Background
Project LAND121 is a multi-phased project to provide the ADF with the FVM&T and associated support systems to meet ADF mobility requirements including logistic distribution, command and liaison, casualty evacuation, troop lift, and the provision of mobility for specialist assets such as command shelters and communications terminals. In August 2007, LAND121 Phase 3 was approved to acquire 1,187 Mercedes-Benz G-Wagons, and 973 matching trailers from Haulmark Trailers (Australia) Pty Ltd. In August 2011, Government approved the acquisition of an additional 959 G-Wagons and 826 trailers under LAND121 Phase 5A. Phase 3 was also intended to acquire medium and heavy FVM&T; however, the Commonwealth withdrew from negotiations with the preferred tenderer, and a tender resubmission process was initiated in December 2008. In December 2011, Defence announced negotiations would commence with the preferred tenderers, Rheinmetall MAN Military Vehicles Australia Pty Ltd for the MHC vehicle and module requirements and with Haulmark Trailers (Australia) Pty Ltd for the MHC trailer requirements. Concurrently, Government approved the splitting of LAND121 Phase 3 into two projects: LAND121 Phase 3A for the LLC approved under Phase 3 and amalgamating this with the additional scope approved under Phase 5A; and LAND121 Phase 3B to progress the Phase 3 MHC scope elements. This decision effectively closed Phase 3 and amounted to a combined pass approval for the new Phase 3A and an 'interim pass' approval for the new Phase 3B. The December 2011 approval allowed the continuation of contracted activities toward the LLC acquisition and the ongoing negotiations for the MHC contracts for Phase 3B. Phase 3B was required to seek a supplementary second pass approval following contract negotiations. Phase 3A LLC Contract Amendments were executed in January 2012 and Phase 3B achieved second pass approval in July 2013 with contracts executed shortly after.
Uniqueness
LAND121 Phase 3B is to deliver the FVM&T capability to multiple locations throughout Australia and on operational service overseas. This presents a unique logistic challenge in having a robust support system that will achieve stated availability requirements for the lowest life cycle cost.
Major Risks and Issues
The project is currently managing the following major risks: • MHGA/MHGS, PRM and CPH delivery delays; • Hazards from carrying Ammunition on communications enabled Gun Tow Vehicle (GTV). The project is currently managing the following emergent risk:

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

- Inadequate contractor/supplier resourcing. The project is managing the following major issues: - Finalisation of User Requirements for uncontracted modules; - AMTDU Certification; and, - Impact of COVID-19.
Other Current Related Projects/Phases LAND121 is a multi-phased project providing the ADF with current-generation high-capability FVM&T. Other LAND121 projects are: LAND121 Phase 4 - Protected Mobility Vehicle - Light (Hawkei). Will acquire and deliver into service 1,098 Protected Mobility Vehicles – Light (PMV-L) and 1,058 associated trailers. The PMV-L will perform command, reconnaissance, liaison and utility roles. LAND121 Phase 5B - Medium and Heavy Capability within the Non-Combat Vehicles Program. Approved in June 2018, will acquire and deliver into service an additional (to Phase 3B) 1,044 vehicles with 872 modules and 812 trailers.
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 11	Original Approved (Prior to budget split of 3A and 3B)	3,237.7	1
Jun 12	Exchange Variation	(66.5)	
	Budget as of 30 June 2012	3,171.2	
Jul 12	Real Variation – Scope (Funds retained by 3A)	(622.0)	2
	Original Approved (Phase 3B budget split from Phase 3)	2,549.2	
Jul 12	Exchange Variation to opening budget	23.3	3
	Real Variation – Scope	7.0	4
	Real Variation – Scope	21.0	5
	Real Variation – Project Supplementation	684.2	6
	Total at Second Pass Approval (Revised)	3,284.8	
Nov 18	Real Variation - Budgetary Adjustment	(30.0)	7
Jun 23	Exchange Variation	144.9	
Jun 23	Total Budget	3,399.7	
	Project Expenditure		
Prior to Jul 22	Contract Expenditure – Rheinmetall MAN Military Vehicles Australia Pty Ltd (Acquisition)	(2,065.5)	
	Contract Expenditure – Haulmark Trailers (Australia) Pty Ltd (Acquisition)	(470.9)	
	Contract Expenditure – Rheinmetall MAN Military Vehicles Australia Pty Ltd (Support)	(15.5)	
	Contract Expenditure – United Rentals Australia Pty Ltd (Acquisition)	(3.0)	
	Other Contract Payments / Internal Expenses	(256.8)	8
		(2,811.7)	
FY to Jun 23	Contract Expenditure – Rheinmetall MAN Military Vehicles Australia Pty Ltd (Acquisition)	(11.0)	
	Contract Expenditure – Haulmark Trailers (Australia) Pty Ltd (Acquisition)	(1.6)	
	Contract Expenditure – United Rentals Australia Pty Ltd (Acquisition)	(1.5)	
	Other Contract Payments / Internal Expenses	(12.2)	9
		(26.3)	
Jun 23	Total Expenditure	(2,838.1)	

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.

Jun 23	Remaining Budget	561.6	
Notes			
1	Phase 3 project budget prior to the split into Phase 3A and Phase 3B.		
2	Retention of Light Capability scope by LAND121 Phase 3A.		
3	Update of exchange rates from approval to 2012-13 PBS rates.		
4	Transfer of funds from LAND116 Phase 3 for acquisition of trailers.		
5	Transfer of funds from JP2059 Phase 2 Bulk Liquid Distribution for acquisition of some vehicles and associated equipment to facilitate fuel and water transportation.		
6	Provision for general program supplementation associated with easing cost pressures identified during scoping for project approval, as per revised second pass approval.		
7	Budget Adjustment of \$30.0m was approved by Government in November 2018. The \$30.0m adjustment from LAND121 Phase 3B will be returned to the budget of LAND121 Phase 5B in 2023-24. LAND121 Phase 5B relates to the acquisition and delivery into service of an additional 1,044 vehicles, 872 modules and 812 trailers. LAND121 Phase 3B and LAND121 Phase 5B are managed by the same project team at Defence.		
8	Other Contract Payments/Internal Expenses comprise of: (\$83.5m) for other project office costs not associated with the prime contracts, (\$73.2m) for salaries, (\$64.1m) for the acquisition of G-Wagons by LAND121 Phase 3A on behalf of LAND121 Phase 3B, and (\$22.3m) for the Protected Mobility Vehicle. An adjustment of \$13.7m was required due to the transition back to accrual accounting from a cash methodology in FY 2019-20.		
9	Other Contract Payments/Internal Expenses comprise of: (\$7.9m) for salaries and (\$4.3m) for other project office costs not associated with prime contracts.		

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
49.1	27.3	26.3	<u>Portfolio Budget Statement (PBS) to Portfolio Additional Estimates Statement (PAES):</u> The variation is due primarily to reprogramming of the uncontracted modules. <u>PAES to Final Plan:</u> Variance is due to savings on training costs.
Variance \$m	(21.8)	(1.0)	Total Variance (\$m): (22.8)
Variance %	(44.4)	(3.7)	Total Variance (%): (46.5)

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		0.0	Australian Industry	The project met their EOFY budget.
		-	Foreign Industry	
		-	Early Processes	
		-	Defence Processes	
		-	Foreign Government Negotiations/Payments	
		-	Cost Saving	
		-	Effort in Support of Operations	
		-	Additional Government Approvals	
26.3	26.3	0.0	Total Variance	
		0.0	% Variance	

2.3A Details of Project Major Contracts – Price

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 23 \$m			
Rheinmetall MAN Military Vehicles Australia Pty Ltd (Acquisition)	Jul 13	1,585.9	2,119.7	Variable	Standard Defence Contract	1, 2, 3
Haulmark Trailers (Australia) Pty Ltd (Acquisition)	Jul 13	397.7	485.1	Variable	Standard Defence Contract	1, 2, 3
Rheinmetall MAN Military Vehicles Australia Pty Ltd (Support)	Jul 13	32.3	46.7	Variable	Standard Defence Contract	1, 2, 4
United Rentals Australia Pty Ltd	Dec 21	29.9	30.7	Variable	Standard Defence Contract	3
ECLIPS Pty Ltd	May 23	19.7	21.7	Variable	Standard Defence Contract	3, 5

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

Notes	
1	Additional vehicles and trailers, worth \$28.3m and \$4.7m respectively, were funded and procured by LAND121 Phase 3A, on behalf of the LAND121 Phase 3B project.
2	Contract value as at 30 June 2023 is based on actual expenditure to 30 June 2023 and remaining commitment at current exchange rates of EURO 0.6002 and USD 0.6610 based on XR RBA on 30 June 2023, and includes adjustments for indexation (where applicable).
3	Price at 30 June 2023 varies from Price at Signature due to contracted price escalation, and contract changes related to in-scope capability and support.
4	As of 1 July 2020, the Support Contract which has previously been managed by LAND121 Phase 3B has transitioned to Commercial and General Service Vehicle Systems Program Office (CGSVSPO) under CA16 fleet.
5	The contract is for the replacement of the existing ADF set of stores and ammunition modules with two modules that will form part of the Army's artillery capability and integrate for use with the LAND121 Phase 3B MHC Vehicle and Trailer fleet.

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

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 23		
Rheinmetall MAN Military Vehicles Australia Pty Ltd (Acquisition)	2,536	2,536	MHC vehicles with associated modules	1
Haulmark Trailers (Australia) Pty Ltd (Acquisition)	1,582	1,582	MHC trailers	1
Rheinmetall MAN Military Vehicles Australia Pty Ltd (Support)	N/A	N/A	MHC Support Contract for vehicles and modules	2
United Rentals Australia Pty Ltd	170	170	Personnel Restraint Module	-
ECLIPS Pty Ltd	494	494	Gun Stores and Ammunition Modules	3
Major equipment accepted and quantities to 30 Jun 23				
As at 30 June 2023 Rheinmetall MAN Military Vehicles Australia Pty Ltd has delivered 2,536 of 2,536 of the following vehicles: • Mediumweight Tray: all deliveries completed; • Mediumweight Tray with Crane: all deliveries completed; • Mediumweight Tipper (dump): all deliveries completed; • Heavy Integrated Load Handling: all deliveries completed; • Heavy Tipper: all deliveries completed; • Heavy Tractor: all deliveries completed; • Medium Recovery: all deliveries completed; • Heavy Recovery: all deliveries completed; and • Heavy Tanker: all deliveries completed. and 2,999 of 3,054 of the following modules: • Flatracks: all deliveries completed; • Bridge Boat Interface: all deliveries completed; • Mediumweight Combat Engineer Section Stores: all deliveries completed; • Mediumweight Maintenance: all deliveries completed; • Mediumweight Stores: all deliveries completed; • Heavy Stores: all deliveries completed; • Heavy Bulk Fuel Pump and Storage: all deliveries completed; • Heavy Bulk Fuel Storage: all deliveries completed; • Heavy Bulk Water Pump and Storage: all deliveries completed; • Heavy Bulk Water Storage: all deliveries completed; and • CPH Module: delivery not yet commenced. As at 30 June 2023 Haulmark Trailers (Australia) Pty Ltd has delivered 1,582 of 1,582 of the following matched trailers: • Mediumweight Cargo trailers: all deliveries completed; • Heavy ILH trailers: all deliveries completed; • Heavy Equipment Trailers: all deliveries completed; • Medium Equipment Transporters: all deliveries completed; • Heavy Bulk Fuel Tankers: all deliveries completed; • Heavy Equipment Transporters: all deliveries completed; • Dolly Low Loaders: all deliveries completed; • Heavy Cargo trailers: all deliveries completed; • Heavy Bulk Water Tankers: all deliveries completed; and • Dolly Road Trains: all deliveries completed. As at 30 June 2023, United Rentals Australia Pty Ltd has delivered none of the 170 of the PRM. As at 30 June 2023, ECLIPS Pty Ltd has delivered none of the 494 of the MHGA/MHGS.				
Notes				
1	The quantity figures being communicated publicly excludes vehicle and trailer prototypes.			

2	As of 1 July 2020, the Support Contract which has previously been managed by LAND121 Phase 3B has transitioned to CGSVSPO under CA16 fleet.
3	The contract is for the replacement of the existing ADF set of stores and ammunition modules with two modules that will form part of the Army's artillery capability and integrate for use with the LAND121 Phase 3B MHC Vehicle and Trailer fleet.

2.4 Australian Industry Capability

Summary
The project has contracted Australian Industry Capability (AIC) targets based on, where appropriate, to identify Local Industry Capability which is captured in Rheinmetall MAN Military Vehicles Australia Pty Ltd, Haulmark Trailers (Australia) Pty Ltd, and United Rentals Australia Pty Ltd's AIC Plans in support of their relevant design, development and production of specific hardware, sub-systems and components, project management, systems integration, and test and evaluation activities.
The project has no contracted AIC targets for ECLIPS Pty Ltd due to the low complexity of the procurement, although ECLIPS Pty Ltd has an Australian Industry Activity schedule.
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
Preliminary Design	Vehicles	Dec 14	Aug 15	Dec 15	12	1, 2
	Modules (Rheinmetall MAN Military Vehicles Australia Pty Ltd)	Aug 14	Feb 15	Mar 15	7	1, 2
	Trailers	Jun 16	Jan 17	Jan 17	7	1, 3
	Personnel Restraint Module	Oct 22	Mar 23	Apr 23	6	4
	MHGA/MHGS	Nov 23	Nov 23	Oct 23	(1)	-
Detailed Design	Vehicles	May 15	Sep 16	Jun 17	25	1, 2
	Modules (Rheinmetall MAN Military Vehicles Australia Pty Ltd)	Nov 14	Jun 15	Mar 16	16	1, 2
	Trailers	Jan 17	Jul 17	Jun 17	5	1, 3
	Personnel Restraint Module	Jan 24	Nov 23	Nov 23	(2)	5
	MHGA/MHGS	Mar 24	Mar 24	Feb 24	(1)	-
Critical Design	Vehicles	Aug 15	Jan 17	Dec 17	28	1, 2
	Modules (Rheinmetall MAN Military Vehicles Australia Pty Ltd)	Mar 15	Nov 15	Sep 16	18	1, 2
Notes						
1	All dates represent the approval of the exit for the reviews of the last vehicle, module and trailer variants. All vehicles, contracted modules and trailers have now completed preliminary, detailed and critical design review processes.					
2	Vehicle and module variance is due to two re-plans. The first was due to major delays in finalisation of contracts between the prime contractor and its subcontractors. The second was an adjustment to the schedule by the contractor in order to reduce production risks by concentrating on the most mature vehicle variants and slower ramping up of Protected Vehicles.					
3	Trailer variance is due to a change in scope by the Commonwealth of Australia to Group C Trailers.					
4	The Preliminary Design Review (PDR) was conducted in March 2023 and exited in April 2023. The variance to PDR was as a consequence of significant changes to the System Specification, which resulted in delays in exiting the System Definition Review.					
5	Original/contracted date had a logic error. A contract change was executed in November 2022 to correct the logic and update the contracted date.					

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, Acceptance Test and Evaluation (AT&E)	Vehicles	Jul 16	Aug 18	Nov 23	88	1, 2, 3, 4, 7
	Modules (Rheinmetall MAN Military Vehicles Australia Pty Ltd)	Nov 15	Jun 17	Jun 21	67	1, 2, 3, 4, 5, 7
	Trailers	Sep 17	May 18	Jun 18	9	1, 6
	Personnel Restraint Module	Nov 23	Jul 24	Jul 24	8	1, 8
	MHGA/MHGS	Jan 25	Jan 25	Jan 25	0	1
Notes						
1	All dates represent the approval of the Acceptance Verification Reports (AVRs) for the tests of the last vehicle, module and trailer variant.					

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

2	Delays by Rheinmetall MAN Military Vehicles Australia Pty Ltd to secure its subcontractor impacted the completion of verification.
3	Senior management attention (Defence and the Rheinmetall MAN Military Vehicles Australia Pty Ltd board) was expected to improve the schedule performance for completion of AT&E.
4	Current planned date changes to Vehicles and Modules were in accordance with Contract Change Proposal 064 signed 15 July 2016.
5	A CCP in accordance with CCP117 signed 13 July 2017 was executed to address an additional nine-month variance associated with Rheinmetall MAN Military Vehicles Australia Pty Ltd sub-contractor, Holmwood Highgate (Aust.) Pty Ltd delay in progressing the Liquid Module Program.
6	Current planned date changes are in accordance with Group C Integrated Baseline Review (June 2016) outcomes and agreements.
7	The remaining AVRs required to complete the AT&E Program relate to transportation and delays in AMTDU certification has delayed the approval of the remaining AVRs.
8	Original/contracted date had a logic error. A contract change was executed in November 2022 to correct the logic and update the contracted date.

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Dec 18	Nov 18	(1)	1
Initial Operational Capability (IOC)	Dec 19	Dec 19	0	2
Final Materiel Release (FMR)	Dec 22	Apr 26	40	3
Final Operational Capability (FOC)	Dec 23	Dec 26	36	3
Notes				
1	IMR was achieved one month earlier than forecast due to all elements of IMR being satisfied and agreed with the Capability Manager in November 2018.			
2	IOC was declared with air certification caveat on 12 December 2019.			
3	The current forecasted dates for FMR and FOC have been delayed by 40 and 36 months respectively due to the additional time required to finalise the user requirements and delivery of the specialist modules, the ongoing work required to achieve air certification and the impact of COVID-19 on the DTR schedule.			

Schedule Status at 30 June 2023

The Gantt chart displays the timeline for the project from July 2013 to January 2027. The 'Original Planned' dates are shown as grey bars, and the 'Achieved / Forecast' dates are shown as colored bars. The milestones are: Approval (Jan-13), IMR (Jan-19), IOC (Jan-20), FMR (Jan-23), and FOC (Jan-24). The chart shows that IMR and IOC were achieved on time, while FMR and FOC are significantly delayed.

Milestone	Original Planned	Achieved / Forecast
Approval	Jan-13	Jan-13
IMR	Dec-18	Nov-18
IOC	Dec-19	Dec-19
FMR	Dec-22	Apr-26
FOC	Dec-23	Dec-26

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 is currently meeting materiel capability requirements as expressed in the Materiel Acquisition Agreements (MAA) and in accordance with the requirements of the relevant Technical Regulatory Authorities.
	Amber: IOC was achieved with caveats due to delays in achievement of air certification. Achieving air certification by FOC remains a Medium risk after mitigation. Schedule management remains a key focus and is being closely managed by CASG and the Capability Manager. The Capability Manager has advised that the CPH module scope under LAND121 Phase 3B is being reconsidered, and an alternate project for delivery may be identified.
	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)	IMR requires the following to be delivered: 659 medium and heavy vehicles, 436 modules, 57 trailers, sufficient training for operators and maintainers to support Army's introduction into service plan and adequate logistic support arrangements. Achieved in November 2018.	Achieved
Initial Operational Capability (IOC)	IOC requires the following to be delivered: Based on a Battle Group, which is approximately 100 vehicles, deployed on a Major Defence Training activity (Exercise TALISMAN SABRE or equivalent). IOC was declared by Chief of Army in December 2019 with an air certification caveat.	Achieved with an air certification caveat
Final Materiel Release (FMR)	FMR requires the following to be delivered: 2,707 medium and heavy vehicles, 3,858 modules and 1,753 trailers, achieve the DTR across the entire MHC for operators and maintainers and logistic support arrangements. Forecast achievement April 2026. The current forecasted date for FMR has been delayed by 40 months (due to the additional time required to finalise the user requirements and deliver the specialist modules, the ongoing work required to achieve air certification and the impact of COVID-19 on the DTR schedule).	Not yet Achieved
Final Operational Capability (FOC)	FOC requires the following to be delivered: Complete delivery of 2,707 vehicles, 1,753 trailers and 3,858 modules, acceptance and Introduction Into Service to meet Chief of Army Preparedness Directive requirement to deploy and support a Multi Role Combat Brigade and concurrent Battle Group on operations. Forecast achievement December 2026. The current forecasted date for FOC has been delayed by 36 months (three years) due to the additional time required to finalise the user requirements and deliver the specialist modules, the ongoing work required to achieve air certification and the impact of COVID-19 on the DTR schedule.	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	MHGA/MHGS, PRM and CPH delivery. There is a risk that a combination of technical complexity, contractual complexity, and certification requirements will delay the delivery of modules past the agreed date. That date is FMR and FOC under MAA version 2.2.	The project's overall progress indicates a reduction of technical complexity associated with the remaining modules and increased understanding of technical and contractual requirements. Furthermore, Army identified that FOC would not be met as currently approved and would be delayed from December 2023 until December 2026. This risk has been re-assessed in line with the above and has been downgraded and will be removed at the next MPR. The schedule risk for the delivery of the modules will be managed by the project.
2	Hazards from carrying ammunition on communications enabled GTV. The GTV is fitted with a communications node. Some ammunition components are sensitive to electromagnetic radiation emitted by the communications node. There is a risk that designing to reduce the risk that the fitted communications node will damage or initiate ammunition components on the GTV, may delay MHGA design, incur unidentified/unbudgeted costs and constrain or lessen desired capability.	A number of viable risk treatments have been identified and CASG will be working with the contractor to implement the appropriate risk treatment through the design, training, doctrine and introduction into service process. Consequently, this risk was re-assessed and downgraded and will be removed at the next MPR.
Emergent Risks (risk not previously identified but has emerged during 2022–23)		
Ref#	Description	Remedial Action
3	Inadequate contractor/supplier resourcing. Contractors' deliverables may be impacted by their inability to provide sufficient workforce to meet contracted requirements.	This risk was identified and created in March 2023. Contractors' workforce limitation can lead to delays in delivery of capability and design milestones. The project office is regularly monitoring the contractors' resourcing capacity and working collaboratively to prioritise outstanding activities.

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

5.2 Major Project Issues

Ref#	Description	Remedial Action
1	Finalisation of user requirements for uncontracted modules. There is a risk that uncontracted modules may not have robust user requirements, which can be taken to industry to satisfy the capability need. This may lead to cost, schedule or capability risks for the project and Capability Manager.	Overall, the issue of finalisation of user requirements for the remaining modules has been downgraded due to the following: - PRM – A contract was signed in December 2021 with United Rentals Australia Pty Ltd for the delivery of 170 PRM modules. - MHGA/MHGS – The Operational Concept Document (OCD) and Functional Performance Specification for the MHGA/MHGS project have been completed and a contract was signed in May 2023 with ECLIPS Pty Ltd. - CPH – the OCD and User Requirements are currently being reviewed by the Capability Manager. Consequently this issue was re-assessed and downgraded and will be removed at the next MPR.
2	AMTDU certification. There is a risk that air transportability will affect project schedule, performance and cost. IOC has been declared with air certification caveats.	Significant progress has been made in obtaining full or caveated clearance for most FVM&T. The Capability Manager has agreed to waive some of the air transportability requirements for Trailers - Medium Equipment Transporters and Heavy Equipment Transporters due to size and weight constraints. Additionally, ongoing engagement with AMTDU and Rheinmetall MAN Military Vehicles Australia Pty Ltd have increased confidence in closing out the remaining clearances. Consequently, this issue was re-assessed and downgraded.
3	Impact of COVID-19. There is a risk that disruptions as a result of the COVID-19 pandemic will cause delays in the achievement of project milestones. The pandemic could impact: supply chains, delivery of mission systems to meet contractual and roll-out schedules, cancellation of events for media/industry, suspension of training delivery, reduced organizational ability to maintain business tempo and business as usual activities; all of which could cause delay to the project.	The level of risk associated with the impact of COVID-19 on the project has been reduced due to proactive risk mitigation effort and effective control measures being undertaken. Consequently, this issue was re-assessed and downgraded and will be removed at the next MPR.

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 17 lessons related to Requirements Management, Contract Management, Resourcing and Governance. 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. Durability testing of Commercial Off The Shelf (COTS) equipment early in the project life-cycle (pre-PDR) helped mitigate project risk through early identification of defects and hardening of equipment. Rigorous testing of COTS equipment early in the project life-cycle is encouraged.	Requirements Management
Lesson Type – Observation. Projects of this size and scale will often have numerous dependent projects, many of which will rely on the bigger project running to schedule. The number of requests for information from numerous stakeholder groups sometimes requires prioritisation in order to remain focused on project priorities. This needs careful management to ensure wider Defence priorities and objectives are achieved/supported.	Governance
Lesson Type – Observation. The importance of the Integrated Logistics Support (ILS) discipline cannot be underestimated. ILS involvement and input is recommended to be considered from the establishment of the project and contract establishment, and implementation. Emphasis on ILS together with engineering and project management involvement in Major Systems Reviews and the design process is critical in ensuring that ILS products can adequately support the delivery of the capability.	Resourcing

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2023

Unit	Name
Division	Land Systems
Branch	Land Vehicle Systems

Project Data Summary Sheet¹

Project Number	LAND121 Phase 4
Project Name	PROTECTED MOBILITY VEHICLES LIGHT
First Year Reported in the MPR	2016-17
Capability Type	Replacement
Capability Manager	Chief of Army
Government 1st Pass Approval	Oct 08
Government 2nd Pass Approval	Aug 15
Budget at 2nd Pass Approval	\$1,944.9m
Total Approved Budget (Current)	\$1,971.5m
2022–23 Budget	\$155.7m
Complexity	ACAT I



Section 1 – Project Summary

1.1 Project Description

LAND121 Phase 4 will acquire and deliver into service 1,100 Protected Mobility Vehicles – Light (PMV-L) and 1,058 companion trailers for command, liaison, reconnaissance and utility roles; and the associated training and support systems. The PMV-L will replace around one third of the Land Rover fleet, and represents a brand new capability that will provide the Australian Defence Force (ADF) with a highly protected and deployable light vehicle fleet designed to provide an optimum balance of six fundamental requirements: survivability, mobility, usability, payload, sustainability and communications. The PMV-L fleet will consist of two variants, which may perform specific mission roles:

- 4-Door PMV-L variant: The 4-Door vehicle may perform the following roles:
 - Command – Carriage of up to four personnel with additional integrated electronic command, control and communication systems.
 - Liaison – Carriage of up to four personnel with a general communication fit.
 - Reconnaissance – Carriage of up to four personnel to perform light infantry, reconnaissance and Air Force security functions.
- 2-Door PMV-L variant: The 2-Door vehicle will perform the following role:
 - Utility – Carriage of two personnel and cargo.

Thales Australia Ltd has been contracted by Defence for the development, production and through-life-support of the PMV-L capability. Thales Australia Ltd is also the nominated Prime Systems Integrator for the Integral Computing System (ICS).

1.2 Current Status

Cost Performance

In-year

As at 30 June 2023, Financial Year (FY) 2022-23 expenditure was \$153.9m against FY 2022-23 budget of \$155.7m. The variation of \$1.8m is primarily related to a reduction in Introduction into Service (IIS) and vehicle rollout expenditure. This was due to the halt in vehicle rollout stemming from a braking issue discovered on the vehicles in November 2022.

Project Financial Assurance Statement

As at 30 June 2023, LAND121 Phase 4 has reviewed the projects approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial and 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 2022-23.

Schedule Performance

Initial Materiel Release (IMR) and Initial Operational Capability (IOC) were re-scheduled to May 2020 and December 2020 respectively, due to Hawkei reliability issues, design maturity and the production delays caused by Steyr Motors' voluntary administration.

Remedies under the contract, including liquidated damages, were received during FY 2020-21 as a result of the reliability issues. While stop payments had previously been initiated, none occurred during the FY 2020-21 or FY 2022-23.

Army endorsed the declaration of IMR with caveats on 26 May 2020. The caveats related to delays in the delivery of some elements of the Hawkei Support System, and Verification and Validation (V&V) activities, primarily due to COVID-19 restrictions. As at 30

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.

June 2021, all caveats had been resolved.

Defence formally advised Thales Australia Ltd on 30 September 2020 that it had been granted approval to exit Stage Two – Low-Rate Initial Production (LRIP) and enter Stage Three – Full-Rate Production (FRP).

Army's declaration of IOC was deferred a further six months, pending resolution of a vehicle safety incident that occurred on 23 November 2020. Defence temporarily suspended the use of the Hawkei fleet on 25 November 2020 until the issue was resolved. The incident involved the application of the Anti-Lock Braking System under specific operating conditions. The technical solution, developed by Thales Australia Ltd to resolve the issue has been implemented on the ADF's fleet of Hawkei vehicles.

The Hawkei capability commenced Phase-In under the Protected Mobility Family of Vehicles Through Life Support (TLS) Contract on 3 May 2021.

Army declared IOC for the Hawkei capability on 20 May 2021.

Thales Australia Ltd successfully completed all Phase-In activities with the Hawkei Operative Date under the TLS commencing on 26 November 2021.

Final Materiel Release (FMR) and Final Operational Capability (FOC) have been rescheduled from December 2022 and June 2023, to December 2023 and June 2024 respectively. The rescheduled FMR and FOC were formalised during the October Integrated Investment Program Portfolio Budget Statement (PBS) Biannual Update 2022 and will be reflected in the next Materiel Acquisition Agreement (MAA) update.

On 11 November 2022, Thales Australia Ltd advised Defence that it had identified a new issue impacting the brakes on the Hawkei. Defence has accepted Thales Australia Ltd's recommendation to restrict the use of the Hawkei fleet as a precautionary measure until Thales Australia Ltd determines the root cause of the issue. Once the root cause has been identified, Defence and Thales Australia Ltd will work closely to determine any remedial action required to resolve the issue.

In June 2023 Thales Australia Ltd proposed an interim solution to fix the issue until an enduring solution addresses the root cause. Thales Australia Ltd and Defence are working closely to implement this interim solution to meet Defence priorities.

Materiel Capability/Scope Delivery Performance

16 PMV-L pre-production baseline vehicles and nine trailers were delivered for development and testing purposes under Stages One and Two. The acceptance process for the LRIP vehicles and trailers commenced in January 2018, with the first vehicles being formally accepted by the Commonwealth in March 2018. As at 30 June 2023 the Commonwealth has accepted 874 vehicles and 891 trailers.

Defence conducted a trial involving the deployment of two Hawkei vehicles to Iraq and Afghanistan. The vehicles were deployed into Iraq as part of Task Group Taji and then redeployed in April 2018 to the Australian contingent in Kabul, Afghanistan. This trial commenced in December 2017 and concluded in August 2018. The key trial objectives included the identification of operational and support issues and deployment considerations for the Hawkei capability.

Thales Australia Ltd advised the Commonwealth on 29 November 2018 that the Hawkei engine supplier, Steyr Motors, had entered into voluntary administration, which would result in a delay in the supply of engines. Thales Australia Ltd advised Defence that it had acquired Steyr Motor Australia Pty Ltd on 23 August 2019. Thales Australia Ltd's procurement of Steyr Motor Australia Pty Ltd will ensure the continuity of engine supply and the long-term sustainability of the Hawkei program. The IMR milestone was re-scheduled to May 2020 due to Hawkei reliability issues, design maturity and production delays caused by Steyr Motor Australia Pty Ltd entering voluntary administration.

The Hawkei support system continues to be developed. Operator Training commenced at the Army School of Transport in September 2018. Maintainer Training commenced in November 2019 at the Army School of Electrical and Mechanical Engineers.

A Hawkei Operational Test and Evaluation (OT&E) activity was successfully conducted in August 2020 to inform Army's declaration of IOC.

The Systems Acceptance Audit (SAA) was conducted in two parts on 8 September 2020 and 1-3 December 2020. SAA Part One confirmed that the Hawkei mission and support systems met the required specification. Thales Australia Ltd was granted approval to exit SAA Part One on 16 September 2020.

SAA Part Two confirmed the Hawkei FRP design baseline and associated support system is delivered as contracted. Thales Australia Ltd was granted approval to exit SAA Part Two on 20 August 2021.

LAND121 Phase 4 has rolled out 423 Hawkei vehicles as at 30 June 2023, to Army units in Perth, Adelaide, Brisbane, Darwin and Townsville, as well as to Army training units in Puckapunyal and Bandiana.

Note

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

1.3 Project Context

Background

LAND121 Phase 4 addresses the ADFs land mobility assets emanating from the absence of lightweight and light class field vehicles with the requisite levels of ballistic and blast protection.

Government agreed First Pass Approval in October 2008, to pursue the development of a next generation PMV-L by joining the United States (US) Joint Light Tactical Vehicle (JLTV) Program (Option One) and at the same time retain the possibility of acquiring a Market Available Vehicle (MAV) in the event JLTV proves unsuitable (Option Two).

In May 2009, Government directed that an Australian indigenous option for PMV-L be considered. In June 2009, a Manufactured and Supported in Australia (MSA) Option (Option Three) was pursued through the release of a Request for Proposal. In 2009, Defence joined the US JLTV Program Development Group funding.

First to Interim Pass funding was provided in November 2009 following approval of MAA V2.0, where Government agreed that LAND121 Phase 4 would return to Government for an Interim Pass decision on which option was to be pursued to Second Pass.

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

In May 2010, Government agreed that the MSA (Option Three) be further investigated prior to Interim Pass through the conduct of initial prototyping activities. Stage One MSA funding was provided in July 2011 to assess six developmental Line of Departure vehicles, two from each of the three companies - Force Protection Europe Ltd, General Dynamics Land Systems-Australia and Thales Australia Ltd. The procurement process determined that there were no off-the-shelf options available that met all ADF requirements. Government refined its direction in December 2011 that:

- Directed Defence to cease active participation in the US JLTV Program but continue to monitor the US JLTV Program, given its potential to provide an alternative at Second Pass; and,
- Select Thales Australia Ltd's PMV-L as the preferred vehicle for further development and testing under Stage Two of the MSA (Option Three).

MSA Stage Two funding was provided in April 2012 that enabled Thales Australia Ltd to carry out further development of their PMV-L, culminating in a program of trials and testing of the prototypes in late 2013. A Risk Reduction Activity aimed at reducing residual technical risk to an acceptable level was carried out in 2014.

In August 2015, Government provided Second Pass Approval for LAND121 Phase 4 to acquire the Thales Australia Ltd's PMV-L. LAND121 Phase 4 contract was established in October 2015 for 1100 PMV-L vehicles and 1058 trailers based on a minimum fifty percent of the production or manufacturing costs to be incurred in Australia.

Support requirements for the PMV-L have been incorporated into the existing Protected Mobility Vehicle-Medium (Bushmaster) TLS Contract. It is anticipated that integrating the support arrangements for both fleets will reduce the overall cost of ownership of the vehicle systems by approximately \$270.0m over the 15-year life of the vehicle systems. In October 2021, Government approved a reduction to project scope of two Hawkei vehicles for buy-back by Thales Australia Ltd to support a potential export opportunity. The reduction in the total quantity of vehicles to be delivered to the Commonwealth from 1,100 to 1,098 has been formalised in an acquisition contract change and will be reflected through an update to the MAA.

Uniqueness

LAND121 Phase 4 is a developmental project specifically designed to meet the ADFs requirements. The uniqueness of the PMV-L stems from the combination of the following in a single vehicle:

- A high level of blast, ballistic and fragmentation protection, enabling greater deployability within high risk operational environments.
- External Air Transport Mass, enabling the capability to be the ADFs only protected vehicle capable of being lifted by ADF Chinook helicopters.
- A next-generation Generic Vehicle Architecture based C4I solution - ICS.
- Utilise a modular armour system to enable enhanced protection based on mission specific roles.

Major Risks and Issues

The project currently has four high rated risks and one high rated issue (pre-mitigation rating).

The four high rated risks in section 5.1 are:

- There is a risk that misalignment of interdependent project schedules to support Hawkei integration will delay the rollout to Army.
- There is a risk that disruptions as a result of the COVID-19 pandemic, major conflict and/or event will cause supply chain delays.
- There is a risk there will not be time to train the quantity of personnel required to undertake Hawkei IIS Training to achieve Army's Directed Training Requirement (DTR) by FOC.
- There is an emergent risk that insufficient prime vendor resourcing may impact project schedule and performance due to the inability to deliver contractual deliverables on time or to the expected standard.

The one High rated issue in section 5.2 is the rollout of the Hawkei and the establishment of its support system being impacted by constrained resourcing which delays the delivery of Integrated Logistics Support Deliverables.

Other Current Related Projects/Phases

LAND121. Is a multi-phased program providing the ADF with current-generation high-capability field vehicles, modules and trailers. The other current LAND121 projects are:

- LAND121 Phase 3B – Medium and Heavy Capability.** This project is providing the ADF with 2,536 protected and unprotected medium and heavy vehicles, along with 1,582 matched trailers. This will provide payloads of between four and 70 tonnes for a range of logistics functions, including vehicle recovery, freight, bulk liquid distribution and personnel carriage.
- LAND121 Phase 5B – Medium and Heavy Capability within the Non-Combat Vehicles Program.** This project is a follow-on acquisition from LAND121 Phase 3B, and is providing the ADF with an additional 1,044 medium and heavy vehicles, 872 modules and 812 trailers.

LAND200 Tranche 2 – Battlefield Command Systems. This project seeks to expand and evolve the Battle Management System – Command and Control (BMS-C2) and supporting Tactical Communications Network from Battle Group (BG) to Brigade Headquarters. LAND200 Tranche 2 is also scoped to enhance data interoperability and information exchange with other government agencies and Coalition partners by integrating the BMS-C2 onto the Mission Partner Environment. Refer to Section 2.3 for further information relating to the contractual arrangements between LAND200 Tranche 2, LAND121 Phase 4 and Thales Australian Ltd.

LAND154 Phase 4 – Joint Counter Improvised Explosive Device Capability. This project replaces the ADF's existing Force Protection Electronic Counter Measures (FPECM) capability through improved military off-the-shelf technology, procured via the US Foreign Military Sales program. FPECM mission systems will include both a Dismounted System and a Vehicle Mounted System (VMS). The VMS will be integrated onto a range of ADF mobility platforms, including the Hawkei.

LAND19 Phase 7B – Short Range Ground Base Air Defence. This project will acquire a new Short Range Ground Based Air Defence capability, replacing Army's existing RBS-70 system. Under the scope of LAND19 Phase 7B, the tactical radar and high mobility launcher system will be integrated onto the Hawkei mission system.

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			
May 08	Original Approval (Government First Pass Approval)	1.8	1
Nov 09	Real Variation – Scope	5.7	2
Jul 11	Real Variation – Scope	31.5	3
Apr 12	Real Variation – Scope	48.4	
Sep 15	Government Second Pass Approval	1,857.6	
	Total at Second Pass Approval	1,944.9	4
Jul 10	Price Indexation	0.4	5
Jun 23	Exchange Variation	26.2	
Jun 23	Total Budget	1,971.5	
Project Expenditure			
Prior to Jul 22	Contract Expenditure – Thales Australia Ltd (Prime Contract)	(1,362.6)	
	Contract Expenditure – Thales Australia Ltd prototyping activities (MSA Stage One and Stage Two Contract)	(58.7)	6
	Other Contract Payments / Internal Expenses	(105.9)	7
		(1,527.1)	
FY to Jun 23	Contract Expenditure – Thales Australia Ltd (Prime Contract)	(137.7)	
	Other Contract Payments / Internal Expenses	(16.2)	8
		(153.9)	
Jun 23	Total Expenditure	(1,681.0)	
Jun 23	Remaining Budget	290.5	9
Notes			
1	This amount reflects funding approval at Government First Pass Approval.		
2	This amount reflects approval to undertake MSA Stage One prototyping.		
3	This amount reflects funding approval at Interim Pass for MSA Stage Two prototyping.		
4	The Budget and Expenditure amounts do not reflect the \$43.0m paid in 2009. Due to the payment being provided by Capability Development Group and was not part of the LAND121 Phase 4 project budget.		
5	Up until July 2010, indexation was applied to project budgets on a periodic basis. The cumulative impact of this approach was \$0.3m. In addition to this amount, the impact on the project budget as a result of out-turning was a further \$0.1m having been applied to the remaining life of the project.		
6	These expenditures relate to pre Second Pass costs associated with exploring the Government initiated MSA Option (Option Three) and the contracts are now closed.		
7	Other Contract Payment/Internal Expenses comprise of: External Service Providers (\$32.4m), Non-Prime contracts (\$29.6m); MAV prototyping activities (\$17.7m); Support Contract Phase-In Payments (\$8.3m); costs related to testing/trials (\$8.0m); project administrative costs (\$5.9m); legal costs (\$2.2m) and US JLTV Program (\$1.8m).		
8	Other Contract Payment/Internal Expenses comprise of: Non-prime contracts (\$8.9m); External Service Providers (\$6.4m); admin and legal costs (\$0.8m); cost related to testing/trials (\$0.02m).		
9	Totals in the columns may not total due to rounding.		

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
170.3	152.8	155.7	<u>PBS to Portfolio Additional Estimates Statement (PAES)</u> : The variation is primarily due to the schedule delays caused by the braking problem. <u>PAES to Final Plan</u> : The variation is primarily due to Foreign Exchange updates.
Variance \$m	(17.5)	3.0	Total Variance (\$m): (14.5)
Variance %	(10.3)	1.9	Total Variance (%): (8.5)

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.

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(1.8)	Australian Industry	The variation is primarily related to a reduction in IIS and vehicle rollout expenditure. This was due to the halt in vehicle rollout stemming from a braking issue discovered on the vehicles in November 2022.
		-	Foreign Industry	
		-	Early Processes	
		-	Defence Processes	
		-	Foreign Government Negotiations/Payments	
		-	Cost Saving	
		-	Effort in Support of Operations	
		-	Additional Government Approvals	
155.7	153.9	(1.8)	Total Variance	
		(1.2)	% Variance	

2.3A Details of Project Major Contracts – Price

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 23 \$m			
Thales Australia Ltd	Jul 10	9.0	58.7	Firm or Fixed	Standard Defence Contract	3
Thales Australia Ltd	Oct 15	1,328.5	1,573.0	Firm or Fixed	Standard Defence Contract	1, 2, 3, 4, 5 6, 7
Notes						
1	Price variation from Contract Signature is due to approved Contract Change Proposals (CCP), predominantly to progress the development and integration of ICS.					
2	Contract value as at 30 June 2023 is based on actual expenditure to 30 June 2023 and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable).					
3	Price variation from contract signature was to exercise the MSA Stage Two option.					
4	The contract has been re-evaluated as being a 'fixed' price because the contract value is 'fixed', plus price escalation.					
5	The contract price and scope were increased under CCP078 to incorporate the LAND200 Tranche 2 design work.					
6	Costs related to the LAND200 Tranche 2 design, procurement and installation will be funded by LAND200 \$12.5m, while this project contributes \$2.0m primarily for the design, development and installation of the vehicle installation harnesses for Royal Australian Air Force and Protected Mobility Integrated Capability Assurance vehicles.					
7	The contract incorporates liquidated damages received during FY 2020-21 of \$6.2m via CCP086.					

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

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 23		
Thales Australia Ltd	2 PMV-L	8 PMV-L	Design, develop and demonstrate prototype vehicles.	-
Thales Australia Ltd	1,100 PMV-L 1,058 Trailers	1,098 PMV-L 1,058 Trailers	Thales Australia Ltd is contracted to deliver 1,098 PMV-L (633 4-Door and 465 2-door vehicles) and 1,058 Trailers.	1, 2, 3
Major equipment accepted and quantities to 30 Jun 23				
Defence received 10 pre-production baseline vehicles and five trailers from Thales Australia Ltd on schedule for the purpose of various test and evaluation activities under Stage One (Engineering and Manufacturing Development) of the LAND121 Phase 4 Acquisition Contract. Defence received an additional six pre-production baseline vehicles and four trailers for reliability testing, and V&V activities in Stage Two. The Commonwealth has accepted 874 vehicles and 891 trailers as at 30 June 2023, which includes the 138 vehicles and 138 trailers required for IMR.				
Notes				
1	The 16 test vehicles and nine test trailers for development and testing activities are in addition to the 1,098 PMV-L and 1,058 trailers.			
2	In October 2021, Government approved a reduction to project scope of two Hawkei vehicles for buy-back by Thales Australia Ltd to support a potential export opportunity. The reduction in the total quantity of vehicles to be delivered to the Commonwealth from 1,100 to 1,098 has been formalised in an acquisition contract change and will be reflected through an update to the MAA.			
3	The contract incorporates liquidated damages received during FY 2020-21 of \$6.2m via CCP086.			

2.4 Australian Industry Capability

Summary
The project has contracted Australian Industry Capability (AIC) targets to meet MSA requirements that is captured in Thales Australia Ltd's AIC Plan across the areas of manufacturing and production.
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
Detailed Design	PMV-L and Trailer	Mar 16	N/A	Apr 16	1	1
	Integral Computing System (ICS)	Jan 17	N/A	Dec 16	(1)	2
Preliminary Design	ICS	Sep 16	N/A	Sep 16	0	-
Critical Design	PMV-L, Trailer and ICS	Apr 17	Aug 17	Oct 17	6	3
Support System Detailed Design (Operator)	Support System	Jun 17	Jun 18	Aug 18	14	4, 5
Support System Detailed Design (Maintainer)	Support System	Jun 17	Jan 19	Jun 20	36	5, 6
Notes						
1	The variance is due to the Contractors delay in closing out the action items.					
2	The Contractor and the project agreed to conduct the review early, thus the early achievement. The Commonwealth approval of ICS Detailed Design Review Minutes of Meeting was achieved on 19 December 2016.					
3	The variance is due to the vehicle performance exceeding the number of critical failures allowable under Reliability Growth Trial (RGT). Stage One (Engineering and Manufacturing Development) was extended by a four-month period via CCP032 (executed 5 April 2017) to allow Thales Australia Ltd to remediate the critical failures and to undertake an additional RGT in order to fulfil the contractual requirements under Stage Two.					
4	The variance of Support System Detailed Design Review (SSDDR) of 14 months is due to the LRIP baseline not being ready for review until Critical Design Review exit in October 2017 and the contractor failed to meet the entry criteria in the SSDDR Checklist.					
5	The SSDDR was split into separate 'Operator' and 'Maintainer' reviews after the execution of CCP055 in November 2018 to align the training deliverables with the IIS of the capability.					
6	An additional eight-month delay to SSDDR (Maintainer) occurred due to delays in finalising the Hawkei Reliability Program, which impacted the finalisation of the FRP vehicle baseline. The Commonwealth confirmed formal exit of SSDDR to Thales Australia Ltd on 19 June 2020.					

3.2 Contractor Test and Evaluation Progress

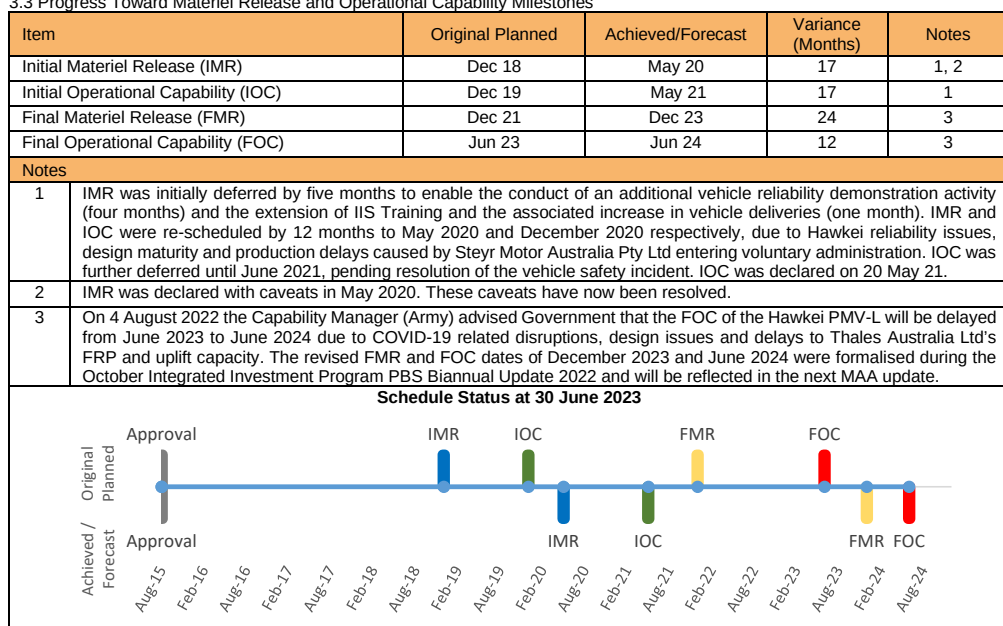
Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/ Forecast	Variance (Months)	Notes
Maintenance Demonstration	PMV-L, Trailer and ICS	Dec 16	Dec 16	Jul 17	7	1
Reliability Growth Trial	PMV-L and Trailer	Mar 17	Jul 17	N/A	N/A	2
Reliability Demonstration Test (RDT)	PMV-L and Trailer	Feb 18	N/A	Nov 18	9	3
Development Test & Evaluation (DT&E)	PMV-L, Trailer and ICS	Mar 17	Sep 17	Sep 17	6	4
Initial Maintenance Evaluation (ME)	PMV-L, Trailer and ICS	Oct 17	Jan 18	Jun 18	8	5
Final Maintenance Evaluation	PMV-L, Trailer and ICS	TBA	N/A	TBA	N/A	5, 6
Acceptance Verification and Validation (AV&V)	PMV-L, Trailer and ICS	Jun 18	Jan 19	Jul 20	25	7, 8
Production Reliability Acceptance Test (PRAT)	PMV-L and Trailer	Jun 18	Jan 19	Jun 20	24	8, 9
Low-Rate Initial Production Acceptance Last Batch	PMV-L, Trailer and ICS	Jun 18	Jan 19	Oct 19	16	7, 8
Full-Rate Production Acceptance Last Batch	PMV-L, Trailer and ICS	Oct 20	May 21	Dec 23	37	7, 8, 10

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

Notes	
1	The variance is due to the Commonwealth rejecting the first two versions of the Maintenance Demonstration Acceptance Verification Reports (AVR) submitted on 24 January 2017 and 30 March 2017. The approved version of the report was submitted to the Commonwealth on 1 June 2017, with the Notice of Approval signed on 3 July 2017.
2	RGT was separated into the following three activities: - RGT Number One was conducted over the period July to December 2016 and provided Thales Australia Ltd with the opportunity to resolve any issues with the vehicles ahead of the formal trial activities that commenced under RGT Number Two. - RGT Number Two commenced in November 2016. In January 2017, the pilot Hawkei vehicles had exceeded the seven allowable critical failures under the contract. Identified key root causes include supplier quality issues and immature components affecting hardware and software integration. A six-week corrective action period was implemented to allow Thales Australia Ltd to undertake engineering upgrades. - RGT Number Three (May to July 2017) followed this, which demonstrated reliability improvements on a number of sub-systems, but a number of recurring failures were evident.
3	Thales Australia Ltd was granted exit of Stage One (Engineering and Manufacturing Development) on 5 September 2017, with the caveat that Thales Australia Ltd continued to address the reliability issues. The RDT was introduced as a CCP to confirm that failures identified during the RGT had been rectified before entering into the Production Readiness Acceptance Test. The nine months delay in completing RDT is due to the delay in remediating the outstanding reliability issues.
4	As part of the extension of Stage One (Engineering and Manufacturing Development), DT&E was extended to facilitate further development testing and to mitigate against the AV&V activities required under Stage Two (LRIP).
5	The approval of AVR for the initial ME was delayed by seven months due to the initial submission of the report being rejected by the Commonwealth, primarily due to the incompleteness of the Interactive Electronic Technical Publication presented by Thales Australia Ltd.
6	Thales Australia Ltd's compliance against the deficiencies identified in the initial ME were addressed in the second ME. Subsequent MEs have been conducted to address engineering changes as the vehicles design developed. The Final ME will be scheduled following the completion of a CCP to incorporate it into the prime contract.
7	AV&V was delayed by 25 months due to the requirement to extend reliability testing, which impacted on the date that the LRIP vehicle build state was established between the Commonwealth and Thales Australia Ltd. The delay in establishing the vehicle build state impacted on vehicle availability to conduct AV&V activities. The reliability issues, design maturity and production delays further impacted the completion of AV&V. Sea, air and rail V&V activities were previously delayed by COVID-19 movement restrictions, but were completed prior to the declaration of IOC. External Airlift of a Hawkei (under a CH-47) is yet to be certified.
8	As part of the extension of Stage One (Engineering and Manufacturing Development), the start dates of some Stage Two (LRIP) and Stage Three (FRP) activities were delayed.
9	PRAT was finalised on 10 June 2020 with the Commonwealth's approval of the Integrated Reliability Maintainability and Testability Report from Thales Australia Ltd.
10	Defence is assessing in detail the projects revised vehicle delivery schedule from Thales Australia Ltd against the projects milestones. The revised schedule factors in delays due to Thales Australia Ltd's FRP capacity, the requirement to uplift early production vehicles to the contracted product baseline, the November 2022 vehicle braking safety issue, and COVID-19 global supply chain challenges. Thales Australia Ltd have proposed an interim solution to fix the vehicle braking safety issue until an enduring solution addresses the root cause. The impact of this will be incorporated into the schedule.

3.3 Progress Toward Materiel Release and Operational Capability Milestones



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 the materiel capability requirements as expressed in the MAA and in accordance with the requirements of the Technical Regulatory Authorities.
	Amber: N/A
	Red: In October 2021, Government approved the reduction to project scope of two Hawkei vehicles to support an export opportunity. This represents a reduction of 0.2% of the number of vehicles to be delivered by the project. This reduction has not yet been updated within the MAA. Defence continues to support Thales Australia Ltd's pursuit of export opportunities, and will receive royalty fees from any future overseas sales of the Hawkei.
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)	The capability delivered at IMR: 108 PMV-L and 108 Trailers to be delivered in accordance with the Force Generation Cycle; 22 PMV-L and 22 Trailers for IIS Training (increased from 14 PMV-L and 14 Trailers); - Eight PMV-L and eight Trailers for the conduct of V&V, and PRAT; and, - Logistics support arrangements, including Training, Supply and Maintenance Systems. IMR was achieved with caveats in May 2020. As at 30 June 2021, all of these caveats have been resolved.	Achieved
Initial Operational Capability (IOC)	Declaration of IOC was made by the Capability Manager following the conduct of a BG sized OT&E activity to validate the Hawkei Fundamental Inputs to Capability (FIC) components. IOC was declared in May 2021.	Achieved
Final Materiel Release (FMR)	By FMR, the following will be delivered: 1,098 PMV-L and 1,058 Trailers; and, - IIS Training and transfer of IIS training packages.	Not yet Achieved
Final Operational Capability (FOC)	Declaration of FOC will be made by the Capability Manager supported by the results of OT&E and confirmation by the Capability Acquisition and Sustainment Group (CASG) that the FIC components have been delivered as agreed. The FOC criteria are to be defined by the Capability Manager.	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 misalignment of interdependent project schedules to support Hawkei integration will delay the rollout to Army.	Thales Australia Ltd to complete an early Long Lead Time Item procurement for LAND200 components. Establishment of a LAND200 communications suite that can be fitted with T1 or T2 radios.
2	There is a risk that disruptions as a result of the COVID-19 pandemic, major conflict and/or event will cause disruption to the supply chain.	Project and Branch senior leadership continue to provide oversight and regularly engage with Thales Australia Ltd leadership to review actions plans. The project office continuous reviews its stockholding strategy, including increasing stock on hand and ordering stock earlier.
3	There is a risk that there will not be enough time to train the quantity of personnel required to undertake Hawkei IIS Training to achieve Army's DTR by FOC.	Adjustment of training milestones in the MAA, as agreed to between the Project Office and the Capability Manager. Establishment of regional training teams to increase training throughput. Working group convened between the Project Office, Capability Manager and Army Logistic Training Centre to develop solutions to address the issue. Working group meets periodically to track DTR achievement. Remedial actions continue to be implemented to achieve DTR in accordance with the current project schedule.

Emergent Risks (risk not previously identified but has emerged during 2022–23)		
Ref#	Description	Remedial Action
1	There is a risk that insufficient prime vendor resourcing may impact project schedule and performance due to the inability to deliver contractual deliverables on time or to the expected standard.	The Commonwealth of Australia provides prioritisation of work packages. Regular contract progress meetings between LAND121 Phase 4 project office and Thales Australia Ltd stakeholders. Fortnightly sync meetings between Thales Australia Ltd and Director General Land Vehicle Systems. A purchase order prioritised delivery of extant work under contract as well as proposed work packages not yet contracted during the commercial wrap-up negotiations.

5.2 Major Project Issues

Ref#	Description	Remedial Action
1	The rollout of the PMV-L and the establishment of its support system has been impacted by constrained resourcing, resulting in delays to the delivery of Integrated Logistics Support Deliverables.	Monitoring of deliverables against agreed schedule. Weekly progress meetings between the project team and the vendor. Fortnightly meetings between senior Commonwealth and vendor representatives.

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 six lessons related to Requirements Management, First of Type Equipment, Contract Management, Schedule Management, Resourcing and Governance. The project has not categorised any of its lessons information as a whole of Defence Lesson Learned.	The project has not categorized any of its lessons information as a whole-of-Defence Lesson Learned.
Lesson Type – Insight. Developmental Capability. The PMV-L is a technically complex development project that requires active engagement with the contractor, multiple interagency stakeholders and projects from other domains. Maintaining close collaboration and communication with all stakeholders is critical for understanding the technical requirements for a first-of-type capability, and facilitating proactive risk management and contingency planning.	First of Type Equipment
Lesson Type – Observation. Vehicle Acceptance Resourcing and Planning. The early planning and generation of dedicated Commonwealth Production Liaison and Vehicle Acceptance staff (and processes) enables improved planning in conjunction with the original equipment manufacturer for Vehicle Acceptance and Quality Assurance processes. This improves transition from design into the production and Vehicle Acceptance stage of the program.	Contract Management Governance Resourcing
Lesson Type – Insight. Hawkei Reliability Growth. Reliability programs must incorporate sufficient schedule for reliability growth of the capability to set the conditions for a successful outcome. Reliability fixes must be supported by Objective Quality Evidence before proceeding to the next reliability test.	Schedule Management Requirements Management

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2023

Unit	Name
Division	Land Systems
Branch	Land Vehicle Systems Branch

Project Data Summary Sheet¹

Project Number	LAND200 Tranche 2
Project Name	BATTLEFIELD COMMAND SYSTEM
First Year Reported in the MPR	2019–20
Capability Type	Upgrade
Capability Manager	Chief of Army
Government 1st Pass Approval	Aug 13
Government 2nd Pass Approval	Sep 17
Budget at 2nd Pass Approval	\$930.0m
Total Approved Budget (Current)	\$971.4m
2022–23 Budget	\$168.0m
Complexity	ACAT I



Section 1 – Project Summary

1.1 Project Description

LAND200 was intended to deliver a Battlefield Command System (BCS) capability that provides Army with a Battle Management System (BMS) and an integrated Tactical Communications Network (TCN) that is transforming command and control of Land Forces into a modern networked system. The BCS would provide fast, accurate, secure and reliable digital communications that would enable tactical Land Forces to make better informed decisions, by distributing the right information to the right people at the right time, increasing the likelihood of operational success and soldier safety via friendly force tracking.

LAND200 Tranche 2 (LAND200-2) was contracted to expand and evolve the LAND200 Tranche 1 (LAND200-1) capability across Army with new collaborative planning, control and monitoring tools for Brigade and Divisional-level headquarters. Integrating the BCS into an additional 540 platforms including; M1A1 Tank, M88 Armoured Recovery Vehicle Hawkei, Bushmaster and Medium Heavy Cargo trucks. The Program was scoped to embed BCS training into Army's training institutions, to evolve from paper based to a digital based learning capability.

The Commonwealth is the LAND200-2 Program's Prime System Integrator (PSI), previously supported by two prime contractors; Elbit Systems of Australia – contractor for the BMS and L3Harris Technologies – contractor for the TCN.

1.2 Current Status

Cost Performance

In-year

For Financial Year (FY) 2022-23, the project spent \$102.1m against a planned budget of \$168.0m, resulting in a variance of \$65.8m. The variation has two sources; The first relates to a reduction in scope of the BMS Acquisition Contract and the scheduled expiry of the BMS Sustainment Contract.

The second source to the in-year variance stems from L3Harris Technologies not achieving Acceptance Test & Evaluation (AT&E) milestones as contracted. The Commonwealth has enacted Stop Payments as a result and therefore fewer payments were processed this FY, which significantly contributed to the in-year variance.

Project Financial Assurance Statement

As at 30 June 2023, project LAND200-2 has reviewed the approved scope and budget for elements required to be delivered by Defence. Having reviewed the current financial contractual obligations of Defence, current known risks and estimated future expenditure for this project Defence considers, as at the reporting date, there is sufficient budget, including contingency, remaining for the project to complete against the agreed scope. Although the Elbit Systems of Australia scope component of the project has been reduced by agreement between the Commonwealth and Elbit Systems of Australia the project is still in negotiation to resolve open issues with L3Harris Technologies, the impact of these amendments to the project budget, scope and schedule is yet to be determined.

Contingency Statement

The project has not applied contingency in the FY 2022-23.

Schedule Performance

LAND200-2 had established contracts with Elbit Systems of Australia for delivery of the BMS and has a current contract with L3Harris Technologies for delivery of the TCN. Having played a critical role in digitising Army, Elbit Systems of Australia has completed the integration and installation of Tranche 1 components onto the Medium Heavy Cargo trucks and has delivered BMS training systems and other artefacts including Release 1 (R1) of current configuration of the BMS software.

In June 2021, Elbit Systems of Australia advised that completion of the BMS Contract's Final Acceptance milestone would occur no earlier than February 2024. Subsequently Elbit Systems of Australia and the Commonwealth have agreed to reduce the scope of Land 200-2, so as to exclude the scope that was undeliverable for reasons of schedule, Government Furnished Equipment

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.

(GFE) availability and continued Commonwealth priority.

For the TCN, L3Harris Technologies has completed Preliminary Design and Detailed Design, however a Stop Payment was invoked with L3Harris Technologies in April 2022, due to an inability to achieve System Acceptance. This Stop Payment has been in force for all of FY 2022-23. Associated with the Stop Payment was a requirement for L3Harris Technologies to produce acceptable remediation plans for the TCN to agree the way forward for the project. When these plans were submitted they were not deemed acceptable to the Commonwealth.

This failure in negotiating a way forward, led the Commonwealth to issue L3Harris Technologies a Default Notice in March 2023 for not achieving Milestones 13b and 13c of the Contract. These Milestones were for successful conduct of Test Readiness. L3Harris Technologies, while disputing the Default Notice, have continued to maintain relationships with the Commonwealth and are working to address the matters at the highest level. The continuing negotiations between the Commonwealth and L3Harris Technologies will shape the way forward for the delivery of the contracted commitments.

Materiel Capability/Scope Delivery Performance

LAND200-2 has delivered:

- 150 Medium Heavy Cargo trucks fitted with the Tranche 1 BCS node, Foundation Training Classroom requirements, and new and retrofitted BMS Training Assemblages, BMS – Command and Control (BMS-C2) Software Release 0 and BMS-C2 Software R1.

LAND200-2 is contracted to deliver a further:

- 390 vehicle BCS node integrations and installations with the M1A1 Tank, M88 Armored Recovery Vehicle, Protected Mobility Vehicle-Medium (PMV-M) Bushmaster and the Protected Mobility Vehicle-Light (PMV-L) Hawkei platforms.

Defence and Elbit Systems of Australia discussions, in connection with the remaining scope under the BMS contract have concluded. Having delivered important and diverse capability over four years the parties have reached an agreement to reduce the scope of the contract. The reduced scope required Elbit Systems of Australia to deliver the Release 1.1 (R1.1) software as it existed in June 2022, with the remaining scope removed. The Elbit Systems of Australia agreement had no negative effect on the agreed project scope. TCN scope in the BCS will depend on resolution of open contract issues with L3Harris Technologies.

Note

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

1.3 Project Context

Background

The LAND200 program is a core program that fundamentally influences the way Land Forces plan, command and control operations from frontline soldiers and combat vehicles up to and including deployed Joint Force Headquarters. LAND200-2 systems provide war-fighters with common battlefield awareness and information superiority through a highly capable, mobile and secure networked environment.

In August 2013, LAND200-2 (combining JP2072 Phase 3 and LAND75 Phase 4) received Government Combined First Approval and built upon the LAND200 Tranche 1 (LAND200-1) and LAND75 Phase 4 Battle Group and Below Command, Control and Communications System (BGC3) delivered to approximately one-third of the Land Force. The BGC3 prime contractor was Elbit Systems of Australia which integrated Raytheon Australia and L3Harris Technologies radios acquired by JP2072 Phases 1 and 2.

LAND200-2 scope focused on further development of the BMS that commenced under LAND75. No Military Off-The-Shelf BMS product was available that provided all of the Army requirements.

In September 2017, Second Pass Government Approval was provided for LAND200-2 that both projects (JP2072 Phase 3 and LAND75 Phase 4) formulate under the name LAND200-2 BCS. LAND200-2 intended to deliver integrated BMS-C2 with a supporting TCN into new vehicle platforms as part of the digitised Land force. In addition to this, a modernised TCN with a new vehicle mounted communications system solution will be acquired by current and future LAND200 platforms programs.

Other deliveries included BMS-C2 and TCN training and simulation across land forces and expanded functionality of the BMS-C2 to incorporate additional decision and planning tools for use at the Joint Task Force and Brigade Headquarters (BHQ) level. For the TCN, L3Harris Technologies has completed Preliminary Design and Detailed Design, however a Stop Payment was invoked with L3Harris Technologies in April 2022, due to an inability to achieve System Acceptance. This Stop Payment has been in force for all of FY 2022-23.

Uniqueness

LAND200-2 is delivering the core of Army's digital Command, Control and Communications capability. It is a highly complex project in part due to the integration of new leading edge technologies but also of programmatic interdependencies associated with the BCS being integrated into all the Land Forces deployable headquarters from Platoon to the Division and nearly all of Army's Land platforms and several Naval amphibious capabilities.

Major Risks and Issues

The current delivery risks for the project relate to the integration of the TCN system into a number of platforms.

The project is also managing the following major risks:

- Platform integration for the PMV-M.
- Platform integration for the PMV-L.

The project is also managing the following project issue constructively with L3Harris Technologies:

- Delivery Schedule Delay.

Other Current Related Projects/Phases

LAND200-2 has direct BCS integration interdependencies with several other Defence Projects and Products, including:

LAND121 Phase 4 – Protected Mobility Vehicles Light (PMV-L). The PMV-L Hawkei Mounted Combat System Program Office

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

(Product CA01 M1A1 Tank and M88 Armoured Recovery Vehicle); and Commercial and General Service Vehicle Systems Program Office (Product CA-04 PMV-M –Bushmaster).

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			
Sep 17	Original Approved (Government Second Pass Approval)	930.0	1
	Total at Second Pass Approval	930.0	
Jun 23	Exchange Variation	41.4	
Jun 23	Total Budget	971.4	
Project Expenditure			
Prior to Jul 22	Contract Expenditure – L3Harris Technologies	(310.9)	2
	Contract Expenditure – Elbit Systems of Australia	(280.1)	
	Contract Expenditure – Downer EDI Engineering Power Pty Ltd	(32.7)	
	Contract Expenditure – Thales Australia Ltd	(6.5)	3
	Other Contract Payments / Internal Expenses	(31.1)	
		(661.3)	
FY to Jun 23	Contract Expenditure – Elbit Systems of Australia	(90.0)	
	Contract Expenditure – Downer EDI Engineering Power Pty Ltd	(6.9)	4
	Contract Expenditure – Thales Australia Ltd	(3.7)	
	Other Contract Payments / Internal Expenses	(1.5)	5
	Contract Expenditure – L3Harris Technologies	-	2
		(102.1)	
Jun 23	Total Expenditure	763.4	
Jun 23	Remaining Budget	208.0	6
Notes			
1	The Second Pass budget excludes First to Second Pass Approval funding for Work Packages B, C and D (these prices were combined with the Combined Pass Approval for Work Package A captured within the JP2072 Phase 3 and LAND75 Phase 4 projects).		
2	Stop Payment was invoked with L3Harris Technologies in April 2022, due to an inability to achieve System Acceptance. This Stop Payment has been in force for all of FY 2022-23.		
3	Other Contract Payments/Internal Expenses includes: (\$14.1m) for Technical Services, (\$6.9m) for Specialist Military Equipment, (\$4.3m) for Miscellaneous, (\$3.0m) for Operational Plant & Equipment, (\$1.7m) for Travel and (\$1.6m) for Software Licenses.		
4	This is the provision of a multi-discipline workforce to deliver the Land Command, Control, Communications and Computer Systems (LC4S) Branch Integrated Works Package (IWP).		
5	Other Contract Payments/Internal Expenses includes: (\$0.9m) for Technical Services, (\$0.5m) for Military Integrated Logistics Information System and Hardware purchases and (\$0.1m) for Miscellaneous.		
6	Funding for the work associated with the transfer of the 38 PMV-M Gateway (GW) vehicles to LAND4111 from LAND200-2 has yet to be finalised.		

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
164.0	200.4	168.0	Portfolio Budget Statement (PBS) to Portfolio Additional Estimate Statement (PAES): The variation is primarily due to delays to the BMS and TCN prime contracts. The scope of Elbit Systems of Australia component of the LAND200-2 projects was reduced by agreement between the Commonwealth and Elbit Systems of Australia. Defence and the L3Harris Technologies are working through known issues to finalise a number of Contract Change Proposals (CCP) to update the payment and delivery schedules and hence the FY 2021-22 underspend was carried forward into FY 2022-23 with the expectation to settle contract negotiations in-year.

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.

			PAES to Final Plan: FY 2022-23 saw the finalisation of negotiations with one of the project prime contracts and further slippage to the L3Harris Technologies contract. The budget for TCN related milestones was shifted to FY 2023-24.
Variance \$m	36.4	(32.4)	Total Variance (\$m): 4.0
Variance %	22.2	(16.2)	Total Variance (%): 2.4

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(65.8)	Australian Industry	For FY 2022-23 the project spent \$102.1m against a planned budget of \$168.0m, resulting in a variance of \$65.9m. The variation has two sources: The first relates to a reduction in scope of the BMS Acquisition Contract and the scheduled expiry of the BMS Sustainment Contract. The second source to the in-year variance stems from L3Harris Technologies not achieving AT&E milestones as contracted. The Commonwealth has enacted Stop Payments as a result and therefore fewer payments were processed this FY, which significantly contributed to the in-year variance.
		-	Foreign Industry	
		-	Early Processes	
		-	Defence Processes	
		-	Foreign Government Negotiations/Payments	
		-	Cost Saving	
		-	Effort in Support of Operations	
		-	Additional Government Approvals	
168.0	102.1	(65.8)	Total Variance	
		(39.2)	% Variance	

2.3A Details of Project Major Contracts – Price

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 23 \$m			
Elbit Systems of Australia	Sep 17	365.2	370.1	Firm or Fixed	Standard Defence Contract	1, 3
L3Harris Technologies	Sept 17	330.0	364.5	Firm or Fixed	Standard Defence Contract	1, 2
Downer EDI Engineering Power Pty Ltd	Aug 19	17.7	51.4	Variable	Standard Defence Contract	1, 4
Thales Australia Ltd	May 21	12.7	14.0	Firm or Fixed	Standard Defence Contract	1, 5
Notes						
1	Price variation from Contract Signature is due to approved CCP30 where Elbit Systems of Australia's scope was changed.					
2	The contract is for the provision of TCN systems.					
3	The scope of this contract has changed, via negotiation and agreement of a CCP with Elbit Systems of Australia to remove the installation and integration from platforms.					
4	LAND200-2 pays for its share of the workforce provided for the provision of above the-line professional services via this Major Service Provider (MSP) contract. The variance in contract value is due to the time elapsed since contract signature, which was August 2019 and the ongoing workforce required to deliver the project.					
5	Installation of the LAND200-2 BCS within Hawkei vehicles will be the subject of a separate procurement.					

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

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 23		
Elbit Systems of Australia	N/A	N/A	Development of BMS software and integration and installation of systems into the M1A1, M88 and PMV-M.	1, 2
L3Harris Technologies	N/A	N/A	Development TCN software and provision of Army/ Navy Portable, Radio, Communication - 158 radios.	3
Downer EDI Engineering Power Pty Ltd	N/A	N/A	Provision of multi-discipline workforce to deliver the LC4S Branch IWP via the Capability Acquisition and Sustainment Group (CASG) MSP Arrangement.	4
Thales Australia Ltd	N/A	N/A	Delivery of the design solution for integration of the LAND200-2 BCS within Hawkei vehicles.	5
Major equipment accepted and quantities to 30 Jun 23				
On 16 Mar 2023, Elbit Systems of Australia delivered nine configurations of the BMS R1.1 Software in the state it existed as of 30 June 2022.				
Notes				
1	In the reporting period the Commonwealth accepted nine configurations of BMS R1.1 Software.			
2	The scope of this contract changed, via negotiation and agreement with Elbit Systems of Australia to remove the installation and integration from platforms.			

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

3	TCN systems include the following communication nodes: General Service Vehicle (GSV) Node PMV-L x 108, Manoeuvre (MNV) Node M1A1 x 59, MNV Node M88 x 7, MNV Node PMV-L x 126, GSV Node MHC x 150, Command and Control Variant (C2V) Node PMV-M x 57, and C2V Node PMV-L x 33.
4	As a project within LC4S Branch, LAND200-2 pays for its share of the workforce provided via this arrangement for the provision of above the-line professional services.
5	Installation of LAND200-2 deliverables within Thales Australia Ltd Hawkei vehicles will be the subject of a separate procurement.

2.4 Australian Industry Capability

Summary
The project has no contracted Australian Industry Capability (AIC) targets for L3Harris Technologies, Elbit Systems of Australia & Thales Australia Ltd but their public plans indicate opportunity for local industry involvement for software development, network simulation, logistic support, design modification and modelling services and proposed future opportunities available through Professional Networks and State Government Industry activities.
There are no AIC targets or AIC Plan for Downer EDI Engineering Power Pty Ltd as they are one of several contractors under the CASG-wide MSP contract that provides above the line work force to projects.
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	TCN Systems Requirement Review	Jul 18	N/A	Aug 18	1	1
	BMS Systems Requirements Review	N/A	N/A	N/A	N/A	2
Preliminary Design	TCN Preliminary Design Review (PDR)	May 19	N/A	Sep 19	4	3
	BMS PDR (Various Reviews)	N/A	N/A	N/A	N/A	2
	M1A1/M88 PDR	Jan 20	N/A	N/A	N/A	4
	PMV-L PDR	Oct 21	N/A	Mar 23	17	5
	PMV-M PDR	Sep 19	N/A	Sep 21	18	6
	BCS PDR	Feb 21	N/A	Mar 23	25	7
Detailed Design	TCN Detailed Design Review (DDR)	Sep 19	Aug 20	Oct 20	13	8
	BMS R1 DDR	Nov 19	N/A	NA	NA	9
	BMS R1.1 DDR	Aug 20	N/A	NA	NA	10
	BMS R2 DDR	Nov 20	N/A	N/A	N/A	11
	DDR M1A1/M88	Jul 20	N/A	Dec 20	5	4
	DDR PMV-L	Jan 22	N/A	N/A	N/A	5
	DDR PMV-M	Feb 21	N/A	N/A	N/A	6
	BCS DDR	Jun 21	N/A	Not For Publication (NFP)	NFP	7
Note						
1	System Requirements Review was delayed due to the rejection by the Commonwealth of the System Specification when first submitted for approval and the need for revisions by the contractor.					
2	There is no discrete BMS Systems Requirements Review. BMS software does not follow the traditional Systems Engineering Review process. The Commonwealth has implemented a series of software specific agile reviews. In March 2023 Elbit Systems of Australia and the Commonwealth have agreed to reduce the scope of Land 200-2, so as to exclude that which is undeliverable for reasons of schedule, GFE availability and continued Commonwealth priority. This indicates that the contract is complete and therefore planned future milestones post acceptance of R1.1 will no longer form part of the BCS schedule.					
3	TCN Preliminary Design Review variance resulted from the late entry into and exit from the Systems Definition Review.					
4	This scope item was originally planned to be delivered under the Elbit Systems contract, however, this was not able to be progressed because of an inability to obtain original design information from the United States (US) Original Equipment Manufacturer to allow for Weapons Integrated Battle Management System (WINBMS) development. Instead of a formal Provisional Design Review / DDR, a tailored TCN Node has been installed in the Main Battle Tank/Armoured Recovery Vehicle (M1A1/M88) in response to an immediate obsolescence and risk mitigation request from Army Headquarters					

	(AHQ), to replace the current radios. This work was performed as an internal CASG Engineering Change Proposal, supported by L3Harris Technologies. The full BCS node functionality will be realised in the M1A1/M88 by FMR. A tailored design review was conducted to confirm the functional baseline into the platform.
5	CCP078 to the LAND121 Phase 4 Acquisition Contract with Thales Australia Ltd was signed in May 2021. LAND200-2 will pay Thales Australia Ltd to produce the LAND200-2 BCS integration design solution within Hawkei vehicles. Installation of the BCS nodes within Hawkei vehicles will be the subject of a separate procurement.
6	This was a BMS related design milestone. This scope item will not be performed under the Elbit Systems of Australia contract. Instead, alignment of the LAND200-2 and the Protected Mobility Integration and Capability Assurance (PMICA) Non-Recurring Engineering (NRE) design requirements and installation will be performed by Thales Australia Ltd. L3Harris Technologies will be engaged as a subcontractor to Thales Australia Ltd.
7	The Commonwealth is the PSI responsible for the integration of the BMS and the TCN to realise the BCS. This is not supported by a contract because this is an internal to Commonwealth responsibility. The achievement of this milestone is not dependent upon the achievement of platform Design Reviews. This review will be subject to the re-baseline of the contract post the resolution of the open contract items under negotiation between L3Harris Technologies and the Commonwealth of Australia (CoA).
8	For the TCN DDR the contract date was updated with the approval of TCN CCP021. Stop Payments were invoked in October 2020 due to an inability to achieve the exit criteria associated with the DDR milestone. The Commonwealth worked with L3Harris Technologies to achieve the exit criteria and the Stop Payment condition was lifted in late October 2020.
9	BMS R1 DDR milestone event was delayed due to delayed completion of key design artefacts that were required to accurately describe the R1 capability.
10	A BMS software R1.1 was required due to a change in requirements requested by the Commonwealth. This was confirmed at BMS CCP004. The Commonwealth noted a number of Action Items requiring remediation at the conclusion of the DDR milestone. The Commonwealth endorsed progress to commence Test & Evaluation activities in order for the program to progress through the Software Readiness Review 1.1 milestone. The reduction in scope removed this milestone from project scope.
11	The Commonwealth implemented a change to the hosting for the secure environment from the Defence Secret Network to the Mission Partner Environment (MPE), requiring revised work requirements Delay of Release 2 (R2) DDR is linked to the delay in delivery of R1.1, as well as issues with external interdependencies. The reduction in scope removed this milestone from project scope. As R1.1 was the final deliverable agreed between the CoA and Elbit Systems of Australia there were no further R2 requirements for the Elbit Systems of Australia contract.

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	TCN Acceptance Test & Evaluation (AT&E)	May 21	N/A	Delayed from Feb 23	NFP	1
	BMS R1 AT&E	Jun 19	N/A	Mar 20	9	2
	BMS R1.1 AT&E	Aug 20	N/A	N/A	N/A	3
	BMS R2 AT&E	Dec 20	N/A	N/A	N/A	4
	M1A1/M88 Platform Integration AT&E	Apr 21	N/A	Delayed from Oct 23	NFP	5
	PMV-L AT&E	Jan 22	N/A	N/A	N/A	6
	PMV-M AT&E	Feb 20	N/A	N/A	N/A	7
	BCS AT&E	Oct 21	N/A	Delayed from Feb 23	NFP	8
Acceptance	TCN System Acceptance	Jun 20	Aug 21	Delayed From Oct 23	NFP	9
	BMS Acceptance R1	Jan 20	N/A	Mar 20	3	10
	BMS Acceptance R1.1	Sep 20	N/A	N/A	N/A	5, 8
	BMS Acceptance R2	Mar 21	N/A	N/A	N/A	4
	M1A1 Tank	Feb 22	N/A	N/A	N/A	5
	M88	May 22	N/A	N/A	N/A	5
	PMV-L	May 22	N/A	N/A	N/A	6
	PMV-M	Apr 21	N/A	N/A	N/A	7
	BCS Acceptance	May 22	N/A	Delayed from Nov 23	NFP	8
Note						
1	TCN System Integration delay was directly driven from delays to progress through the Test Readiness Review (TRR), a condition influenced by L3Harris Technologies inability to meet the TRR entry criteria, and by the Commonwealth's inability to deliver some of the Government Furnished Materiel (GFM). The CoA did not approve remediation planning and the Commonwealth and L3Harris Technologies are currently in negotiations to agree a way forward for the project. The Commonwealth and the Contractor continue to engage constructively to ensure that there is a clear understanding of open matters between them in connection with contractual matters include supply of GFM.					
2	The BMS AT&E delay flows from the delay to the DDR and is now removed from the scope.					
3	CoA and Elbit Systems of Australia agreement to accept R1.1 as it existed on 30 June 2022 removes the requirement for further Test and Evaluation.					

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

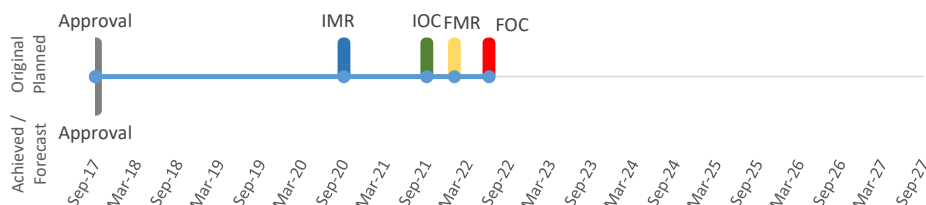
4	The Commonwealth implemented a change to the hosting for the secure environment from the Defence Secret Network to the MPE, requiring revised work requirements. Delay of R2 AT&E is linked to the delay in delivery of R1.1 achievement, as well as issues with external interdependencies. Concurrent work has continued in the development of software to minimise further delay.
5	This scope item will not be performed under the Elbit Systems of Australia contract.
6	CCP078 to the LAND121 Phase 4 Acquisition Contract with Thales Australia Ltd was signed in May 2021. LAND200-2 will pay Thales Australia Ltd to produce the LAND200-2 BCS integration design solution within Hawkei vehicles. Installation of the BCS nodes within Hawkei vehicles will be the subject of a separate procurement.
7	This scope item will not be performed under the Elbit Systems of Australia contract. Instead, alignment of the LAND200-2 and the PMICA, NRE design requirements and installation will be performed by Thales Australia Ltd. Harris Communication Australia will be engaged as a subcontractor to Thales Australia Ltd.
8	The Commonwealth is the PSI responsible for the integration of the BMS and the TCN to realise the BCS. This is not supported by a contract because this is an internal Commonwealth responsibility. The achievement of this milestone is not dependent upon the achievement of platform acceptance. Note that the BMS component of the project has been removed from scope.
9	TCN System Acceptance has been affected by delays in the availability of some GFM and further delays in milestones. The TCN System Acceptance milestone was updated with CCP021. TCN System Acceptance has been further delayed because of contractor delays in the completion of test procedures required for entry into AT&E. CCP037 was rejected by the Commonwealth in April 2022. L3Harris Technologies was directed to re-submit a remediation plan. This was received in July 2022 and rejected by the Commonwealth in September 2022.
10	The delay to the Software Release Review and associated acceptance for BMS R1 resulted from delays in achieving the R1 Software Design Review / TRR. This has been removed from the Scope.

3.3 Progress toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Sep 20	Delayed from Jul 23	NFP	1, 2
Initial Operational Capability (IOC)	Sep 21	Delayed from Mar 24	NFP	1, 2
Final Materiel Release (FMR)	Jan 22	Delayed from Feb 25	NFP	1, 2
Final Operational Capability (FOC)	Jun 22	Delayed from Aug 25	NFP	1, 2

Notes	
1	IOC and FOC delays are being driven by time taken to establish new contracts for platform integration; availability of some GFM; materiel and data from interdependent projects that are experiencing separate, but parallel delays and concerns over contractor performance. Elbit Systems of Australia's milestones are no longer relevant due to project reduction in scope.
2	The forecast achievement of these milestones is expected to change as a result of delays to design and acceptance milestones. The magnitude of this delay is being considered. The re-planning of relevant milestones will occur post re-negotiation with L3Harris Technologies and the CoA for the remaining TCN component of the project.

Schedule Status at 30 June 2023



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	
48%	Green: The project expects to meet Materiel Capability requirements as expressed in the Materiel Acquisition Agreement with the exception of the items referred to in the Red section below. Elbit Systems of Australia and the Commonwealth agreed to reduce the scope of Land 200-2 to exclude items that were undeliverable for reasons of schedule, GFE availability and continued Commonwealth priority. The delivery of R1.1 as it existed at 30 June 2022 has a slight positive effect on Materiel Capability / Scope Delivery, which is why the assessed percentage remains the same as the last report.

	Amber: Defence and Elbit Systems of Australia discussions regarding the remaining scope under the BMS contract have concluded. This agreement had a slight positive effect on the BCS and no effect on the 'at risk' or 'not delivered' aspects of the project. As the Elbit Systems of Australia agreement had no negative effect on the agreed project scope it therefore has not had an impact on this rating. This required Elbit Systems of Australia to deliver the R1.1 software as it existed on 30 June 2022, with the remaining scope removed. The TCN Contract is currently subject to a Default Notice, which is the primary driver for the amber assessment against the remaining scope of the BCS. Resolution of the ongoing contract negotiations with L3Harris Technologies will see this assessment updated.
	Red: The project will not deliver the WINBMS capability. The remaining 38 PMV-M GW vehicles originally within the project's scope will now be delivered by the LAND4111 Project. As the Elbit Systems of Australia agreement had no negative effect on the agreed project scope it therefore has not had an impact on this rating. Assessment against the remaining TCN scope in the BCS will depend on resolution of open contract issues with L3Harris Technologies.
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 Report. This table needs to be read in the context of the whole of this project's PDSS. The measures of Materiel Capability/Scope Delivery Performance comprise the combined BMS and TCN capabilities. While the percentages represent the overall capability, individual percentages for BMS and TCN scope performance may fluctuate independently. The materiel capability and scope as at 30 June 23 is reflective of the contractual arrangements. Changes to Materiel Capability and Scope Delivery will be updated post resolution of the open contract issues for the TCN component of the BCS when they have been agreed and resolved.	

4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	IMR comprises the delivery of: - Foundation Training Classroom requirements. - Training Integration Syndicate Rooms. - BMS Headquarters (HQ) hosted on MPE. - BGC3 Training Assemblage. - BMS Simulator. - MNV Nodes fitted to 16 M1A1 Tanks. - MNV Nodes fitted to 2 M88 Hercules. - C2V Nodes fitted to 11 PMV-L Hawkei. - MNV Nodes fitted to 42 PMV-L Hawkei. - GSV Nodes fitted to 36 PMV-L Hawkei. - GW Nodes fitted to 19 PMV-M Bushmaster. - GSV Node fitted to 50 MHC Trucks.	Not yet Achieved
Initial Operational Capability (IOC)	IOC incorporates the components of Fundamental Inputs to Capability (FIC) sufficient to constitute an operational capability: - Commander and staff in a BHQ are able to use the BMS to support the planning and conduct of operations. - The data network includes sufficient material to support a Battle Group (BG) sized force to plan and conduct operations using the BMS and WINBMS. - The TCN is established using Tranche 1 and Tranche 2 solutions to support a BG deployment. - The BMS is able to interface with Joint Conflict and Tactical Simulation and Virtual Battlespace Simulator systems to establish an initial simulation system. - Capability Manager sign-off of IOC.	Not yet Achieved
Final Materiel Release (FMR)	FMR comprises the delivery of: - Foundation Training Classroom requirements. - Training Integration Syndicate Rooms. - BMS HQ hosted on MPE. - BGC3 Training Assemblage. - BMS Simulator MNV Nodes fitted to 59 M1A1 Tanks. - MNV Nodes fitted to 7 M88 Hercules. - C2V Nodes fitted to 33 PMV-L Hawkei. - MNV Nodes fitted to 126 PMV-L Hawkei. - GSV Nodes fitted to 108 PMV-L Hawkei. - GW Nodes fitted to 57 PMV-M Bushmaster. - GSV Node fitted to 150 MHC Trucks.	Not yet Achieved

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

Final Operational Capability (FOC)	FOC incorporates the components of FIC sufficient to constitute full operational capability. - Each of Army's three Combat Brigades has one digitised BG and a small number of combat support vehicles. - Defence will be able to deploy a digitised BG and BHQ. - Defence could also configure and group all three BG under the digitised BHQ, all at the same readiness notice. - Capability Manager sign-off of FOC.	Not yet Achieved
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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)		
Ref#	Description	Remedial Action
1	There is a risk that there will be a funding shortfall for the combined implementation of the LAND200-2 modification and the PMICA upgrades on the PMV-M vehicles.	The project sponsor in Army has been advised of the likely funding shortfall, with further consideration to be held following the availability of costs from PMICA and Thales Australia Limited. The request for contingency funds no longer required by the project at this time, therefore this risk has been retired.
2	There is a schedule risk associated with being unable to realise the intended BCS Capability at IMR because of the BMS Project scope reduction and the schedule delays in the TCN Project.	A CCP is required to reset the baseline for the TCN Project. Upon agreement of the CCP this risk can be retired.
Emergent Risks (risk not previously identified but has emerged during 2022–23)		
Ref#	Description	Remedial Action
1	There is a risk that installation of the LAND200-2 scope on PMV-M GW vehicles will be beyond the project's remaining uncommitted budget availability, with the result that a call on contingency will be necessary to fund this work.	FY 2022-23 process to provide sufficient funds for this task. This was subsequently withdrawn as a result of the BMS project closure. Further refinement and analysis will be required once the L3Harris Technologies negotiations are completed.
2	There is a risk that installation of the LAND200-2 scope on PMV-L vehicles will be beyond the Project's remaining uncommitted budget availability, with the result that a call on contingency will be necessary to fund this work.	Review this post project scope discussions with L3Harris Technologies at which time an assessment against the remaining scope of work for the BCS project will be undertaken to determine if contingency may be required to be called upon.

5.2 Major Project Issues

Ref#	Description	Remedial Action
1	There was a schedule issue that the delivery of BMS R2 was delayed resulting in a delay to the capability delivery and a delay to the completion of the BMS contract.	Discussions and agreements from the outcomes of reviews undertaken have been addressed in the agreement achieved to remove the scope. This issue has been retired.
2	There was a BMS software schedule issue. The Commonwealth and Elbit Systems of Australia were unable to agree that the R1.1 delivered BMS-C2 software has satisfied the release criteria associated with the Software Release Review 1.1.	Discussions and agreements from the outcomes of reviews undertaken have been addressed in the Agreement achieved to remove the scope. This issue retired.
3	There is a delay to TCN System Acceptance stemming from an inability to exit the TRR.	The Commonwealth and L3Harris Technologies Ltd continue to work collaboratively to determine the best way forward.
4	Required updates to the Australian Land Data Model will be released by Land Network Integration Centre (LNIC) after the Elbit Systems of Australia and L3Harris Technologies contract development gates have passed resulting in additional costs and schedule delay to delivering the FOC capability.	This risk has been realised and is now being managed as an issue. Coordinated briefings have been established with the LNIC, the LAND200-2 Project Office and the two major contractors. Future updates to the Australian Land Data Model will involve negotiation between the LAND200-2 Project Office and the LNIC regarding the required level of compliance and the schedule for implementation so that commercial considerations can be addressed with the contractors. Defence may need to seek additional contingency and inform Government of the new schedule to incorporate new requirements that have a significant capability realisation benefit to Army. This issue is retired. BMS contract is closed and assessment against the remaining TCN scope in the BCS will depend on resolution of open contract issues with L3Harris Technologies.
5	There is a schedule risk due to the length of time to achieve security accreditation of TCN software it may delay the achievement of TCN Systems Acceptance.	This was previously reported as a risk and is now being managed as an issue. Additional resourcing will be allocated to the security accreditation team within the Commonwealth to minimise the impact. This will be reassessed post L3Harris Technologies negotiations.

6	The BMS Simulation – Tactics, Training and Procedures Capability will be delayed resulting in a delay to the capability delivery and a delay to the completion of the BMS contract.	This risk has been realised and as a result of the reduction in scope of the BMS contract. This issue is retired.
7	There is technical issue associated with TCN integration with the MPE due to incomplete definition of the MPE.	Maintain pressure on AHQ to provide better definition of the MPE. This issue has been retired.

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 Instructions 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 four lessons related to Commercial and Schedule Management. Three project lessons are provided below (note this does not include all project lessons):	The project has not categorized any of its lessons information as a whole-of-Defence Lessons Learned.
Lesson Type – Observation. Projects and Programs involving multiple contracts for delivery of capability must establish clear strategies and alignment for integration requirements across the complete scope of work. Contractual mechanisms to align obligations between parties is essential where integrated solutions to deliver Defence capability is necessary.	Commercial
Lesson Type – Insights. Project and Program performance must be proactively managed through application of valid data to address performance. A clear understanding of the importance of performance data to the effective management of scope delivery is essential between parties. Data quality and schedule integrity enhances project predictability, reduces risks, and improves the likelihood of delivering defence capability.	Schedule Management
Lesson Type – Observation. Options to 'off ramp' scope elements that display unrecoverable deviation from the approved baseline must be unambiguously articulated within a 'risk sharing' partnership. A culture that encourages acceptable capability solutions to be delivered at the time they are required is essential for timely delivery of Minimum Viable Capability to the Capability Manager.	Commercial

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2023

Unit	Name
Division	Joint Systems
Branch	Land Command, Control, Communications and Computer Systems

Project Data Summary Sheet¹

Project Number	LAND400 Phase 2
Project Name	MOUNTED COMBAT RECONNAISSANCE CAPABILITY
First Year Reported in the MPR	2019–20
Capability Type	Replacement
Capability Manager	Chief of Army
Government 1st Pass Approval	Dec 14
Government 2nd Pass Approval	Mar 18
Budget at 2nd Pass Approval	\$5,762.7m
Total Approved Budget (Current)	\$5,657.3m
2022–23 Budget	\$616.4m
Complexity	ACAT I



Section 1 – Project Summary

1.1 Project Description

LAND400 Phase 2 will acquire the Boxer 8x8 Combat Reconnaissance Vehicle (CRV) to meet Army's land combat reconnaissance requirements. The project is approved to acquire 211 vehicles, additional modules, training systems and support systems to replace the in-service capability provided by the Australian Light Armoured Vehicle.

1.2 Current Status

Cost Performance

In-year

As at 30 June 2023, Financial Year (FY) 2022-23 expenditure was \$569.6m against a Year End (YE) budget of \$616.4m. The YE variance is primarily due to a delay to the procurement of sparring equipment, delay to delivery of radio equipment and slippage of contract milestones with Rheinmetall Defence Australia Pty Ltd and other contracted parties.

Project Financial Assurance Statement

As at 30 June 2023, LAND400 Phase 2 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 FY 2022-23.

Schedule Performance

The project has successfully achieved both Initial Materiel Release (IMR) (with exceptions) and Initial Operational Capability (IOC). The project schedule was adjusted in 2023 (resulting in increased variance to some milestones) to incorporate a series of contractual changes, principally focused on incorporating capability improvements and addressing supply chain delays and workforce availability. The project experienced delays in the exit of some design reviews and is working intensively with Rheinmetall Defence Australia Pty Ltd to ensure the achievement of Final Operational Capability (FOC) remains on track for 2027.

Materiel Capability/Scope Delivery Performance

The project achieved IMR with exceptions, in June 2021 and achieved IOC in June 2022. Final Materiel Release (FMR) planned for January 2027 and FOC remains planned for June 2027.

Note

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

1.3 Project Context

Background

Government First Pass Approval occurred in December 2014 for a replacement CRV. An assessment prior to First Pass Approval identified that current Military-Off-The-Shelf solutions were unlikely to meet all of Army's capability requirements. Government Second Pass Approval occurred in March 2018 with Rheinmetall Defence Australia Pty Ltd as the preferred tenderer to deliver the Australianised Boxer 8x8 CRV. In August 2018, Defence signed the acquisition contract for 211 Boxer CRV, to be delivered in two blocks.

The Smart Buyer Process was introduced to Defence during 2016 and became a mandatory requirement for Defence projects during 2017. As the new process was introduced after LAND400 Phase 2 had approached the market, it was not feasible to

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.

implement it within the timeframe available. In June 2022, Defence achieved through acceptance of the Block I Boxer CRV achieved Initial Operational Capability on schedule. The Block II Boxer CRVs will be substantially built and assembled in Australia consistent with the transition of technology, manufacturing techniques and assembly line production to Australia. There will remain some vehicle subsystems for which the transfer of manufacture or assembly from Europe to Australia is not be cost-effective and will continue to be sourced from Europe. Final assembly, integration, set to work, and testing of these elements will occur in Australia. Selected low-volume CRV variants will continue to be assembled in Germany. On the 07 June 2023, Defence advised Rheinmetall Defence Australia Pty Ltd that it was enforcing the Stop Payment for Milestone 070 'Exit of the Recovery Detail Design Review (DDR)' due to the delay in milestone achievement and delay in the conducting the Integrated Baseline Review. The Boxer CRV will form part of Army's modernised Armoured Fighting Vehicle capability, until its life-of-type (approximately 2055).	
Uniqueness LAND400 Phase 2 is unique for two reasons. Firstly, Australia is the first nation acquiring a Boxer vehicle with a manned-turret, a variant that other countries have expressed an interest in buying. Secondly, the project is acquiring a uniquely designed Reconfigurable Driver Training Simulator – a system that was designed in Australia, won an Essington-Lewis Award for the best minor acquisition under \$50.0m million in 2020, and is attracting global interest for follow-on sales.	
Major Risks and Issues The project is currently managing the following High risk: - Failure to achieve FOC on schedule. The project is currently managing the following issues: - Training equipment fails to enter DDR on schedule. - The Recovery (RECOV) Variant fails to enter DDR on schedule. - The project is managing a small quantity of residual issues associated with two milestones (IMR and IOC).	
Other Current Related Projects/Phases LAND400 Phase 2 is reliant on the delivery of LAND200 Tranche 2 capabilities: Battlefield Management System (BMS). Enables vehicle commanders to monitor, direct and review operations with electronic displays of maps and combat data; and Tactical Communications Network (TCN). Provides secure, mobile communications infrastructure to support the distribution of the BMS and other combat systems used by Army. These subsystems are scoped to be delivered to Army by LAND200 Tranche 2. Army's BMS and TCN integration into the CRV platform were not scoped in LAND200 Tranche 2, as LAND200 Tranche 2 preceded LAND400 Phase 2 approval - hence there is no direct dependency. LAND400 Phase 2 will deliver an interim capability effect to fill the BMS and TCN requirements that will be further developed under future projects. The project is reliant on: LAND154 Phase 2 - Joint Counter Improvised Explosive Device Capability. Force Protection Electronic Counter Measures solution integrated into the CRV as Government Furnished Equipment.	
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 14	Original Approved (Government First Pass Approval)	116.7	
Mar 18	Government Second Pass Approval	5,646.0	
	Real Variation – Transfer		
	Total at Second Pass Approval	5,762.7	
Jun 23	Exchange Variation	(105.3)	
Jun 23	Total Budget	5,657.3	
Project Expenditure			
Prior to Jul 22	Contract Expenditure – Rheinmetall Defence Australia Pty Ltd	(1,571.6)	
	Contract Expenditure – NIOA Pty Ltd	(78.2)	
	Contract Expenditure – Universal Motion Simulators Pty Ltd	(26.7)	
	Contract Expenditure – EOS Defence System Pty Ltd	(6.8)	

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.

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

FY to Jun 23	Other Contract Payments / Internal Expenses	(167.7)	1
		(1,851.0)	
	Contract Expenditure – Rheinmetall Defence Australia Pty Ltd	(466.0)	2
	Contract Expenditure – NIOA Pty Ltd	(12.1)	
	Contract Expenditure – EOS Defence System Pty Ltd	(5.9)	
	Contract Expenditure – Varley Rafael Australia Pty Ltd	(0.7)	
Jun 23	Contract Expenditure – Universal Motion Simulators Pty	(0.5)	
	Other Contract Payments / Internal Expenses	(84.4)	3
		(569.6)	
	Total Expenditure	(2,420.6)	
Jun 23	Remaining Budget	3,236.8	
Notes			
1	Other Expenses (\$167.7m) are for Risk Mitigation Activity Contracts with Rheinmetall Landsysteme GmbH and BAE Systems Australia Pty Ltd (\$50.0m), Project Office Administration (\$62.3m), Command, Control, Communications, Computers and Intelligence (C4I) (\$23.8m), Extended Payment Terms Finance Charge (\$17.4m), Support Contract (\$3.4m), German Quality Assurance (\$3.2m), Test and Evaluation (\$3.4m), Risk Mitigation Activity – Other (\$0.9m), Remote Weapon Station – Block I (\$0.6m), Support (\$1.4m), Customs Duty (\$0.8m) and other (\$0.5m).		
2	Stop Payment Milestone 070 has been executed effected as at 14 May 2023, which affects payments to only Rheinmetall Defence Australia Pty Ltd contract, with no impact to accruals for 30 June 2023.		
3	Other Expenses (\$84.4m) are for C4I (\$54.5m), Project Office Administration (\$18.3m), Extended Payment Terms Arrangement (\$6.6m), Support (\$1.9m), Anti-Tank Guided Missile (\$1.5m) German Quality Assurance (\$0.7m), Test and Evaluation (\$0.4m), other (\$0.3m) and Customs Duty (\$0.2m).		

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
508.8	685.7	616.4	<u>Portfolio Budget Statement (PBS) to Portfolio Additional Estimates Statement (PAES)</u> : The variation from PBS to PAES is primarily due to a milestone schedule and commercial reset of the Rheinmetall Defence Australia Pty Ltd acquisition contract. <u>PAES to Final Plan</u> : The variation from PAES to Final Plan is primarily due to later than expected achievement of a milestone in the Rheinmetall Defence Australia Pty Ltd acquisition contract. The delay is caused by a combination of technical and labour shortage issues.
Variance \$m	176.9	(69.3)	Total Variance (\$m): 107.7
Variance %	34.8	(10.1)	Total Variance (%): 21.2

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(32.8)	Australian Industry	The YE variance is primarily due to the delay to the procurement of sparing equipment, delay to delivery of radio equipment and slippage of contract milestones with Rheinmetall Defence Australia Pty Ltd and other contracted parties.
		(12.8)	Foreign Industry	
		-	Early Processes	
		(1.2)	Defence Processes	
		-	Foreign Government Negotiations/Payments	
		-	Cost Saving	
		-	Effort in Support of Operations	
		-	Additional Government Approvals	
616.4	569.6	(46.8)	Total Variance	
		(7.6)	% Variance	

2.3A Details of Project Major Contracts – Price

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 23 \$m			
NIOA Pty Ltd	Jul 18	47.3	99.2	Firm or Fixed	Standard Defence Contract	4
Rheinmetall Defence Australia Pty Ltd	Aug 18	3,890.2	3,849.9	Firm or Fixed	Standard Defence Contract	1, 3
Universal Motion Simulators Pty Ltd	Dec 18	29.1	31.4	Firm or Fixed	Standard Defence Contract	-

EOS Defence System Pty Ltd	Dec 19	50.2	59.9	Firm or Fixed	Standard Defence Contract	2, 3
Varley Rafael Australia Pty Ltd	May 23	45.7	46.0	Firm or Fixed	Standard Defence Contract	5
Notes						
1	Contract value as at signature is based on PBS 2018-19 budgeted exchange rates. The commitment value included price escalation estimates.					
2	Contract value as at signature is based on Mid-Year Economic and Fiscal Outlook 2019-20 budgeted exchange rates. The commitment value included price escalation estimates.					
3	The price at 30 June 2023 is \$40.3m lower than the price at Rheinmetall Defence Australia Pty Ltd contract signature due to contract changes, exchange rate variation and price escalation. The price at 30 June 2023 is \$9.7m higher than the price at EOS Defence System Pty Ltd contract signature due to contract changes, exchange rate variation and price escalation.					
4	Contract value as at signature reflects initial order quantity only not current value including additional purchase orders.					
5	Contract value as at signature is based on PBS 2023-24 budgeted exchange rates.					

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

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 23		
NIOA Pty Ltd	Classified	Classified	Explosive Ordnance.	-
Rheinmetall Defence Australia Pty Ltd	211	211	CRV, 12 Mission Modules, Support and Test Equipment and Training Equipment.	1
Universal Motion Simulators Pty Ltd	6 1	6 1	Reconfigurable Driver Simulator – Fixed Part Task Trainer – Reconfigurable Driver Simulator.	-
EOS Defence System Pty Ltd	82	82	Remote Weapon Station.	-
Varley Rafael Australia Pty Ltd	Classified	Classified	Explosive Ordnance.	-
Major equipment accepted and quantities to 30 Jun 23				
As at 30 June 2023:				
25 CRV have been accepted. - A classified quantity and variety of explosive ordnance has been accepted.				
Notes				
1	In FY 2019-20, the quantity reported at contract signature was 223 – this figure included 211 CRV and the 12 additional Mission Modules. This figure has been updated to 211 to more correctly define the number of complete CRV.			

2.4 Australian Industry Capability

Summary
The project has no contracted Australian Industry Capability (AIC) targets with NIOA Pty Ltd as the contract is managed by Land Explosive Ordnance. NIOA Pty Ltd has an AIC plan that maximises Australian Industry involvement across Design Development, Production Activities, Integrated Logistics Support (ILS) and Contractor Data Requirement Lists.
The project has contracted AIC targets based on opportunities to maximise internationally competitive Australian industry involvement which is captured in Rheinmetall Defence Australia Pty Ltd's AIC Plans in the support of their design, manufacturing, integration, ILS and Project Management activities.
The project has contracted AIC targets with Universal Motion Simulators Pty Ltd. Universal Motion Simulators Pty Ltd has an AIC plan that maximise Australian Industry involvement across Design Development, Production Activities, ILS, Contractor Data Requirement Lists and Project Management Office activities.
The project has contracted AIC targets with EOS Defence System Pty Ltd. EOS Defence System Pty Ltd has an AIC plan that maximise Australian Industry involvement across the Design Development, Production, Contractor Data Requirement Lists and Project Management Office activities.
The project has identified AIC targets based on those opportunities that maximise internationally competitive Australian industry involvement which will be captured in Varley Rafael Australia Pty Ltd Domestic Manufacture Business Case to be delivered in November 2023 in the support of their design, manufacturing, integration, ILS and project management activities.
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	Block I – Multi Purpose Vehicle	N/A	N/A	Nov 18	N/A	1, 2
	Block I – Reconnaissance	Nov 18	N/A	Nov 18	0	1

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

	Block II – Joint Fires and Surveillance	Jul 19	N/A	Jul 19	0	1
	Block II – Command and Control	Jun 19	N/A	Jul 19	1	1
	Block II – Reconnaissance	Jan 19	N/A	Feb 19	1	1
	Block II – Repair	Aug 19	Oct 19	Sep 19	1	1
	Block II – Recovery	Feb 19	N/A	Feb 19	0	1
Preliminary Design	Block I – Multi Purpose Vehicle	N/A	N/A	Jan 19	N/A	1, 2
	Block I – Reconnaissance	May 19	N/A	May 19	0	1
	Block II – Joint Fires and Surveillance	Dec 20	Jan 23	May 23	30	1, 3, 9, 10
	Block II – Command and Control	Jul 20	Jan 23	May 23	35	1, 4, 9, 10
	Block II – Reconnaissance	Jul 19	N/A	Sep 19	2	1, 3, 5
	Block II – Repair	Dec 21	May 23	Mar 24	27	1, 9, 10
	Block II – Recovery	Feb 20	Sep 22	Aug 22	30	1, 6, 9
Critical Design	Block I – Multi Purpose Vehicle	Jan 19	N/A	Aug 19	7	1, 2, 7
	Block I – Reconnaissance	Oct 19	N/A	Nov 19	1	1
	Block II – Joint Fires and Surveillance	Nov 21	Oct 23	Jun 24	31	1, 3, 9, 10
	Block II – Command and Control	Apr 21	Oct 23	Jun 24	38	1, 4, 9, 10
	Block II – Reconnaissance	May 20	May 22	Aug 22	27	1, 8, 9
	Block II – Repair	Sep 22	Feb 24	Feb 25	29	1, 9, 10
	Block II – Recovery	Mar 21	May 23	Dec 23	33	1, 9, 10
Notes						
1	The date represents the exit of the Design Review.					
2	The Multi-Purpose Vehicle was only required to conduct a DDR.					
3	Delay was due to the introduction of the Electronic Architecture and COVID-19 Contract Change Proposals (CCP), uncertainty with the load list, and delays associated with the Command and Control variant.					
4	Delay was due to a combination of the introduction of the Electronic Architecture and COVID-19 CCPs, and uncertainty with the load list.					
5	Delay was due to a failure to satisfy all Preliminary Design Review (PDR) requirements which resulted in Defence invoking a Stop Payment in July 2019 – this has now been lifted.					
6	Delay was due to a Commonwealth request for a risk reduction activity (in the form of a capability demonstration) to be incorporated into the review.					
7	Delay was due to the late achievement of PDR and an underestimation of the time required to implement the design changes following the fitment exercise.					
8	Delay was due to a combination of the Stop Payment (in July 2019) – Note 5 refers; the introduction of the Electronic Architecture and COVID-19 CCPs; the entry criteria for this activity not being met; and failure to exit the design review on schedule.					
9	The additional variance is due to the execution of CCP026 which incorporated a series of capability improvements and addressed further COVID-19 delays.					
10	The variance for FY 2022-23 was due to supply chain issues and also the ability of the main contractor to adequately resource the program with appropriately skilled resources.					

3.2 Contractor Test and Evaluation Progress

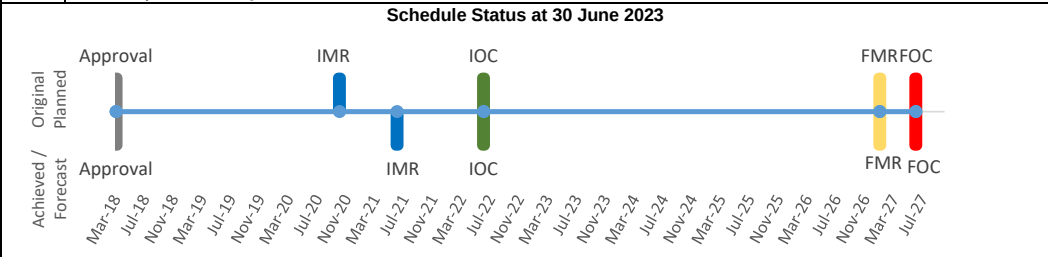
Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/ Forecast	Variance (Months)	Notes
System Integration and Acceptance	Block I – Multi Purpose Vehicle	Oct 20	N/A	Dec 20	2	1, 2
	Block I – Reconnaissance	Oct 20	N/A	Jun 21	8	1, 2
	Block II – Joint Fires and Surveillance	Oct 26	Apr 27	Jun 27	8	1, 3, 4, 5
	Block II – Command and Control	Jun 26	Apr 27	Jun 27	12	1, 3, 5
	Block II – Reconnaissance	Oct 26	May 27	Jul 27	9	1, 3, 4, 5
	Block II – Repair	Jun 26	May 27	Jul 27	13	1, 3, 5
	Block II – Recovery	Mar 26	Oct 26	Feb 27	11	1, 3, 4, 5
Notes						
1	Dates specified are based on acceptance of the final delivery for each variant.					
2	Delivery was delayed due to a combination of production and manufacturing delays in Europe and the impact of COVID-19 in both Europe and Australia.					
3	The variance is due to a combination of technical changes made to all variants and the impact of COVID-19 in both Europe and Australia.					

4	While the forecasts are earlier than currently contracted, the milestones have still slipped overall compared to the previously reported forecasts.
5	The variance for FY 2022-23 have been related to supply chain issues and also the ability of Rheinmetall Defence Australia Pty Ltd to adequately resource the program with appropriately skilled resources.

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Oct 20	Jun 21	8	1, 2, 3
Initial Operational Capability (IOC)	Jun 22	Jun 22	0	1, 4
Final Materiel Release (FMR)	Jan 27	Jan 27	0	1, 6
Final Operational Capability (FOC)	Jun 27	Jun 27	0	1, 5, 6

Notes	
1	Refer to Section 4.2 for definitions of these milestones.
2	The variance is due to a combination of production and manufacturing delays in Europe and the impact of COVID-19 in both Europe and Australia.
3	IMR was met with the delivery of 21 vehicles to the 7 th Brigade in June 2021. IMR was declared with three exceptions which are further explained in Section 5.2.
4	IOC was declared on 29 June 2022, when the first operationally-deployable CRV element (the first Mounted Combat Squadron) including mission, support and training systems, and facilities, if required, was delivered to the first Combat Brigade and support organisations, and accepted into service. The Block I vehicles experienced some technical issues during Operational Test and Evaluation activities, however these were not impediments to a IOC declaration – these are explained further in Section 5.2.
5	The project is working intensively with Rheinmetall Defence Australia Pty Ltd to ensure FOC is achieved on schedule.
6	The outcomes of the update to the Materiel Acquisition Agreement (MAA) and the conduct of the Integrated Baseline Review may have an impact on the Forecasted dates for FMR and FOC. The revision and approved Version 2 of the MAA is not expected until Quarter 4, 2023.



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 the Materiel Capability Requirements as expressed in the MAA.
	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)	IMR occurred in June 2021 when 21 CRV mission systems were delivered to 7 th Brigade, Brisbane; and the initial contractor-provided logistics support arrangements were established. These included: user documentation, technical data, maintenance support, logistics instructions, engineering support, spares, and training systems.	Achieved with Exceptions
Initial Operational Capability (IOC)	IOC occurred on schedule in June 2022 when the first operationally deployable CRV element, including mission support, training systems and facilities, if required, were delivered to one Combat Brigade and support organisations, and accepted into operational service.	Achieved
Final Materiel Release (FMR)	FMR will occur with final delivery of the CRV capability. It includes: - Delivery of all vehicles, spares and attrition, and simulation training enablers for the CRV capability to all gaining units; and, - Logistics support arrangements, including: user documentation; technical data; maintenance support, logistics instruction, engineering support; spares; training systems; and facilities. Forecast: January 2027.	Not yet Achieved
Final Operational Capability (FOC)	FOC will occur when: - The full scope of LAND400 Phase 2, including mission, support and training systems, and facilities (if required), has been delivered to the three Combat Brigades and support organisations, and accepted into operational service. - Support arrangements are finalised in accordance with the ILS Plan. - The three Armoured Cavalry Regiments are declared operationally ready by the Capability Manager (including training fleets, and spares and attrition stock vehicles). Forecast: June 2027.	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	<u>Failure to achieve FOC on schedule</u> There is a risk that FOC will not be achieved on schedule due to the combined impacts of COVID-19, technical difficulties, global supply chain disruption, and problems faced by Rheinmetall Defence Australia Pty Ltd.	The Commonwealth has worked intensively with Rheinmetall Defence Australia Pty Ltd to reduce delays. Despite this, the project assesses that achievement of FOC is currently a High risk and is being actively managed by Commonwealth and Industry senior leadership.
Emergent Risks (risk not previously identified but has emerged during 2022–23)		
Ref#	Description	Remedial Action
	N/A	

5.2 Major Project Issues

Ref#	Description	Remedial Action
1	<u>Training equipment fails to enter DDR on Schedule</u> There is a risk that delays in training equipment delivered by Rheinmetall Defence Australia Pty Ltd will impact project schedule and capability.	The Commonwealth is working closely with Rheinmetall Defence Australia Pty Ltd to seek assurance of the training equipment design maturity to enter into a DDR and also support a Training Readiness Review to meet the requirements of schedule and capability.
2	<u>The RECOV Variant fails to enter DDR on Schedule</u> There is a risk that RECOV Variant design maturity level will impact DDR entry milestone dates.	The Commonwealth is working closely with Rheinmetall Defence Australia Pty Ltd to actively manage any delays to DDR during fortnightly Program Management Review meetings. The Commonwealth is supporting Rheinmetall Defence Australia Pty Ltd to provide review and acceptance of DDR activities.
3	<u>IMR Exceptions</u> IMR was declared with three exceptions relating to: - the completion of Functional Configuration Audit and Physical Configuration Audit, - the integration of electronic counter measures, and - transportability studies including air transportability and integration with other Army vehicles.	The project has completed remediation work to address the integration of electronic counter measures. The project expects to complete the remaining two exceptions in October 2023.

4	<u>Block I Technical Issues</u> There is an issue that the Block I vehicles experienced some minor technical issues during introduction into use – issues like these are to be expected in a project of this size and complexity. Whilst the issues did result in increased risk being accepted by the Capability Manager, none were impediments to the declaration of IOC. The issues were associated with human factors, towing, and air transportability.	The project is working intensively with Rheinmetall Defence Australia Pty Ltd to address these and is expected to be resolved in 2023 within the timeframes required by Army. The issue for the Block I towing has been resolved with the approval of the acceptance test report and approval of the Engineering Change Proposal. The human factors issues have been addressed with the approval of the Engineering Change for the Turret Software Upgrade. For the air transportability issue there is agreed way forward to resolve the issue.
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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 Capability Acquisition and Sustainment Group (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 eight lessons related to Requirements Management, Resourcing and Governance and Governance. 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. Whole of capability focus – The project should establish and maintain a 'whole of capability' focus in delivering the Boxer CRV, including management of all fundamental inputs to capability and commonality and alignment across the support and training systems to retain its effectiveness in rapidly changing threat and technology environments.	Requirements Management
Lesson Type – Observation. Capability Manager and stakeholder engagement are an essential part of the tender governance – arrangements should be established for regular participation of the 3-star Capability Manager and Deputy Secretary CASG in senior governance arrangements. It is recommended that each major acquisition program invite participation from Contestability Division, Joint Force Design, Industry Division and Defence Science and Technology at all levels of the Tender Evaluation Organisation.	Governance
Lesson Type – Observation. Industry engagement – Early engagement of 'Industry' (as one of the fundamental inputs to capability) is required to maximise Australian industry participation in delivering the capability. The requirements, guidance and parameters for industry involvement should be included in the tender documentation and facilitated industry engagement should be a standard part of any major acquisition project.	Requirements Management

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2023

Unit	Name
Division	Armoured Vehicle Division
Branch	Armoured Fighting Vehicles Branch

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

Project Data Summary Sheet¹

Project Number	LAND907 Phase 2 and LAND8160 Phase 1
Project Name	MAIN BATTLE TANK UPGRADE/ COMBAT ENGINEERING VEHICLE ACQUISITION
First Year Reported in the MPR	2022–23
Capability Type	Upgrade by Replacement & New
Capability Manager	Chief of Army
Government 1st Pass Approval	Oct 19
Government 2nd Pass Approval	Dec 21
Budget at 2nd Pass Approval	\$2,065.7m
Total Approved Budget (Current)	\$2,283.0m
2022–23 Budget	\$142.4m
Complexity	ACAT II



Section 1 – Project Summary

1.1 Project Description

The two projects, LAND907 Phase 2 and LAND8160 Phase 1 are being progressed jointly as the Heavy Armour Capability.

LAND907 Phase 2 will upgrade the M1A1 Abrams Main Battle Tank (MBT) to M1A2 Abrams System Enhancement Package version 3 (M1A2 SEPv3) MBT. The project will deliver 75 M1A2 Abrams SEPv3 MBT to Army. The upgrade will be by replacement so that Army's MBT capability is maintained throughout the life of the project.

LAND8160 Phase 1 will deliver Combat Engineering Vehicles (CEV) and Armoured Recovery Vehicles (ARV):

- 29 new M1150 Assault Breacher Vehicles (ABV) for breaching minefields and other battlefield obstacles, and undertaking minor earthworks, all while the crew are protected inside the vehicle.
- 17 new M1110 Joint Assault Bridges (JAB) to enable gap crossing.
- Six additional M88A2 ARV for repair and recovery of vehicles on the battlefield.

Both projects will deliver training and simulation systems for their respective vehicles. The Immersive Tactical Trainer (ITT) is an M1A2 Abrams SEPv3 MBT crew trainer that will be delivered in both a containerised version (ITT-C) for deployment to the field and a fixed version (ITT-F) for installation in buildings.

The MBT, CEV and ARV will be acquired through the United States Government (USG) Foreign Military Sales (FMS) program and the training and simulation systems are being developed by Australian industry.

1.2 Current Status

Cost Performance

In-year

As at 30 June 2023, Financial Year (FY) 2022-23 project expenditure was \$80.0m against a FY 2022-23 budget of \$142.4m, the variance of \$62.4m is primarily due the FMS arrangement with the USG and the nature of the FMS program, associated with procurements of MBT, CEV and ARV.

Project Financial Assurance Statement

As at 30 June 2023, project LAND907 Phase 2 / LAND8160 Phase 1 has reviewed the 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 2022-23.

Schedule Performance

The project achieved Government First Pass Approval in October 2019 and Government Second Pass Approval in December 2021. A Materiel Acquisition Agreement (MAA) was approved in December 2022 between the Australian Army and Capability Acquisition and Sustainment Group (CASG) to document key milestones for the delivery and introduction into service of the MBT, CEV, ARV and training and simulation systems in line with government approval.

The USG FMS materiel delivery program remains on schedule to deliver the MBT, CEV and ARV to achieve all MAA milestones. A minor delay to the delivery of the ITT has been agreed due to circumstances beyond the control of both projects and the contractor. This delay will neither affect the introduction into service training schedule, nor the achievement of any MAA milestones.

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.

Overall, the project is on track to deliver all vehicles and training systems against all MAA milestones and government approval. The project continues to work closely with its government partners in the United States (US) and its Australian industry partners to monitor progress and identify any risk to schedule.
Materiel Capability/Scope Delivery Performance As at 30 June 2023, the project has not delivered any capability. However, it is on track to deliver its full scope of 75 MBT, 46 CEV, 6 ARV and simulation and training systems in accordance with Government approval and the agreed MAA.
Note
Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.

1.3 Project Context

Background LAND907 Phase 2 will acquire 75 upgraded, by replacement, M1A2 Abrams SEPv3 MBT through USG FMS program and associated training and simulation systems. LAND8160 Phase 1 will introduce into service new CEV, additional M88A2 ARV and associated training and simulation systems. A Smart Buyer workshop was conducted in February 2017 to identify the risks and drivers for the Project Execution Strategy, which identified integration, finance and in-service support as key drivers. At Gate 0 in June 2017, it was directed that the two projects be progressed jointly as the Heavy Armour Capability System. Smart Buyer workshops were conducted in May 2018 to support development of a combined Project Execution Strategy for these projects in the lead up to First Pass consideration. These workshops identified schedule, finance and in-service support as key focus areas for the Project Execution Strategy and Business Case. The projects achieved First Pass Government Approval in October 2019. In November 2020, Government Approval was given through the Defence biannual update to down select to a single MBT variant (M1A2 SEPv3 Abrams) and to procure 160 M1 Abrams vehicles, previously withdrawn from service in the US, for use as seed stock to be converted into MBT, ABV and JAB as they share a common M1 chassis. 160 base vehicles are required to produce 75 MBT, 29 ABV and 17 JAB as some attrition is expected during the re-build process. This approach supports Army meeting enduring MBT preparedness requirements with the in-service fleet, whilst the upgraded MBTs are built. It also achieves best value for money due to the high cost of transporting Australian MBTs to the US for upgrade. A Smart Buyer Environmental Scan Workshop was held in December 2020 to assist development of one element of the Project Execution Strategy. A full Smart Buyer process was not conducted as it was agreed by the program sponsor (Army) and program manager (CASG) that the previously approved strategies remained sound and provided an adequate basis for execution of the projects. The projects received Second Pass Approval from Government in December 2021.
Uniqueness The new generation M1A2 Abrams SEPv3 MBT variant includes enhancements to survivability, lethality, mobility and communications. The CEV will deliver an armoured engineering capability that addresses capability roles for assault breaching, armoured bridging and armoured engineering. Unique training simulators will be delivered by Australian industry through the acquisition of a Reconfigurable-Driver Simulator, M1A2 Abrams ITT and Reconfigurable-Desktop Tactical Trainer.
Major Risks and Issues As a largely off the shelf purchase of MBT, CEV and ARV via FMS, no major risks or issues have been identified at this stage.
Other Current Related Projects/Phases LAND907 Phase 1 – Tank Replacement Project. LAND907 Phase 2 is the successor to the LAND907 Phase 1 Tank Replacement Project, which delivered the M1A1 Abrams Integrated Management, Situational Awareness Abrams MBT.
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		
Oct 19	Original Approved (Government First Pass Approval)	29.0	1
Jan 21	Real Variation – Subsequent Government Approval	24.0	
Dec 21	Government Second Pass Approval	2,012.7	
	Total at Second Pass Approval	2,065.7	
	Exchange Variation	217.3	
Jun 23	Total Budget	2,283.0	

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.

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

Project Expenditure			
Prior to Jul 22	Contract Expenditure – FMS Case AT-B-ULU	(39.2)	2
	Contract Expenditure – FMS Case AT-B-UKQ	(7.6)	
	Contract Expenditure – FMS Case AT-B-ULX	(5.9)	
	Contract Expenditure – FMS Case AT-B-UKX	(5.4)	
	Contract Expenditure – Thomas Global Systems Australia	(2.6)	
	Other Contract Payments / Internal Expenses	(11.6)	
		(72.3)	
FY to Jun 23	Contract Expenditure – FMS Case AT-B-ULU	(35.9)	3
	Contract Expenditure – Thomas Global Systems Australia	(9.3)	
	Contract Expenditure – FMS Case AT-B-UKX	(6.6)	
	Contract Expenditure – FMS Case AT-B-ULX	(2.9)	
	Contract Expenditure – FMS Case AT-B-UKQ	(1.2)	
	Other Contract Payments/Internal Expenses	(24.0)	
		(80.0)	
Jun 23	Total Expenditure	(152.2)	
Jun 23	Remaining Budget	(2,130.8)	

Notes

1	Early release of Government Gate 2 funding.
2	Other Contract Payments/Internal Expenses comprises of, Project Office Support (\$10.0m), Platforms Equipment (\$1.5m) and Reconfigurable Driver Simulator (\$0.1m).
3	Other Contract Payments/Internal Expenses comprises of, Project Office Support (\$11.3m), Platforms Equipment (\$5.6m), Interim Services Contract (\$4.8m), Reconfigurable Driver Simulator (\$2.0m) and Other FMS (\$0.3m).

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
0.0	181.3	142.4	<u>Portfolio Budget Statement (PBS) to Portfolio Additional Estimates Statement (PAES)</u> : The variance in Estimate PBS and Estimate PAES is due to the timing of Second Pass Approval. <u>PAES to Final Plan</u> : The decrease primarily relates to the timing of FMS disbursements relating to MBT and CEV FMS cases. This is based on the latest advice from the US Program Office. This has been offset as a result of the difference in foreign exchange movements, which resulted in a gain and therefore a shift of expenditure. This is the first review for the project since the budget was approved at Second Pass.
Variance \$m	181.3	(38.9)	Total Variance (\$m): 142.4
Variance %	100.0	(21.5)	Total Variance (%): 100.0

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		0.5	Australian Industry	In-year variance of \$62.5m is primarily due the FMS arrangement with the USG and the nature of the FMS program, associated with procurements of MBT, CEV and ARV through. Additionally, some elements of simulation & training have contributed to the variation.
		(62.9)	Foreign Industry	
		-	Early Processes	
		-	Defence Processes	
		-	Foreign Government Negotiations/Payments	
		-	Cost Saving	
		-	Effort in Support of Operations	
		-	Additional Government Approvals	
142.4	80.0	(62.4)	Total Variance	
		(43.8)	% Variance	

2.3A Details of Project Major Contracts – Price

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 23 \$m			
FMS Case – AT-B-UKX	Sep 20	4.3	34.2	Reimbursement (for FMS)	FMS	1, 2
FMS Case – AT-B-UKQ	Jan 20	13.9	13.1	Reimbursement (for FMS)	FMS	2

FMS Case – AT-B-ULU	Dec 21	1,114.1	1,209.6	Reimbursement (for FMS)	FMS	2, 3
FMS Case – AT-B-ULX	Dec 21	490.1	598.6	Reimbursement (for FMS)	FMS	2
Thomas Global Systems Australia	Jan 22	37.3	40.5	Firm or Fixed	Standard Defence Contract	4
Notes						
1	Price increase is a result of additional resources to support the establishment of the Major FMS cases.					
2	Variations on MBT upgrade, CEV, and USG Technical Assistance and Unique Armor Design FMS cases are due to exchange rate fluctuations. The amendment to FMS case AT-B-UKX is included.					
3	FMS case AT-B-ULU was signed in December 2020 for seed stock acquisition for \$18.8m (including GST). The contract details above detail Amendment #1 which incorporated the production of the M1A2 Abrams SEPv3 MBT.					
4	The contract price has increased due to an agreed three-month delay, due to factors outside both parties control.					

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

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 23		
FMS Case – AT-B-ULU	75	75	AT-B-ULU includes the acquisition and management of the 160 seed stock vehicles, preparation of seed stock vehicles for production (as MBT, ABV and JAB) and production of the M1A2 Abrams SEPv3 MBT. In addition, the provision of initial spare parts, technical manuals and publications and the fielding of the tanks in Australia and initial training conducted by US personnel.	1
FMS Case – AT-B-ULX	52	52	AT-B-ULX includes the production and delivery of 29 M1150 ABV, 17 M1110 JAB and six M88A2 ARV. In addition, the provision of initial spare parts, technical manuals and publications and the fielding of the MBT in Australia and initial training conducted by US personnel.	-
FMS Case – AT-B-UKX	N/A	N/A	AT-B-UKX Technical Assistance case includes the engagement of an Australia Management Office within the USG to manage the FMS Program as part of the Project Execution Strategy.	-
FMS Case – AT-B-UKQ	N/A	N/A	AT-B-UKQ includes the development and production of the Australian armour package.	-
Thomas Global Systems Australia	16	16	Acquisition of the ITT simulators to address the Training needs for the MBT capability.	-
Major equipment accepted and quantities to 30 Jun 23				
No major equipment being delivered and accepted prior to 30 June 2023 as planned.				
Notes				
1	Seed Stock Background In November 2020, Government Approval was given through the Defence biannual update to down select to a single MBT variant (M1A2 Abrams SEPv3) and to procure 160 M1 Abrams vehicles, previously withdrawn from service in the US, for use as seed stock to be converted into MBT, ABV and JAB as they share a common M1 chassis. 160 base vehicles are required to produce 75 MBT, 29 ABV and 17 JAB as some attrition is expected during the re-build process.			

2.4 Australian Industry Capability

Summary
The project has no contracted Australian Industry Capability (AIC) targets for US Government FMS acquisition, as there are no required AIC activities or AIC targets.
The project has contracted AIC targets based on opportunities to maximise internationally competitive Australian industry involvement including, but not limited to the targets captured in Thomas Global Systems Australia AIC Plans in the support of their management of the ITT contract for design, development, training, project management office support, Integrated Logistics Support management, logistics support, and the development and maintenance of contract deliverables.
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	M1A2 Abrams SEPv3 MBT (AT-B-ULU)	N/A	N/A	N/A	N/A	1

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

	M1150 Assault Breacher Vehicle (AT-B-ULX)	N/A	N/A	N/A	N/A	2
	M1110 Joint Assault Bridge (AT-B-ULX)	N/A	N/A	N/A	N/A	2
	M88A2 Hercules Armoured Recovery Vehicle (AT-B-ULX)	N/A	N/A	N/A	N/A	2
	Immersive Tactical Trainer	May 22	May 22	May 22	0	3
Preliminary Design	M1A2 Abrams SEPv3 MBT (AT-B-ULU)	N/A	N/A	N/A	N/A	1
	M1150 Assault Breacher Vehicle (AT-B-ULX)	N/A	N/A	N/A	N/A	2
	M1110 Joint Assault Bridge (AT-B-ULX)	N/A	N/A	N/A	N/A	2
	M88A2 Hercules Armoured Recovery Vehicle (AT-B-ULX)	N/A	N/A	N/A	N/A	2
	Immersive Tactical Trainer	Jul 22	Oct 22	Oct 22	3	4
Critical Design	M1A2 Abrams SEPv3 MBT (AT-B-ULU)	N/A	N/A	N/A	N/A	1
	M1150 Assault Breacher Vehicle (AT-B-ULX)	N/A	N/A	N/A	N/A	2
	M1110 Joint Assault Bridge (AT-B-ULX)	N/A	N/A	N/A	N/A	2
	M88A2 Hercules Armoured Recovery Vehicle (AT-B-ULX)	N/A	N/A	N/A	N/A	2
	Immersive Tactical Trainer	Apr 23	Jul 23	Jul 23	3	5
Notes						
1	The Commonwealth is not in contract for the above major reviews, nor similar reviews with the US Army due to being an FMS Case arrangement under (FMS Case AT-B-ULU). The US Army has contractual arrangements in place with subcontractors that does include similar major reviews. The Commonwealth is not privy to these contractual arrangements.					
2	The Commonwealth is not in contract for the above major reviews, nor similar reviews with the US Army due to being an FMS Case arrangement under (FMS Case AT-B-ULX). The US Army has contractual arrangements in place with subcontractors that does include similar major reviews. The Commonwealth is not privy to these contractual arrangements.					
3	The ITT System Requirements Review was completed on schedule.					
4	The ITT Preliminary Design Review was completed with an agreed three-month delay, due to factors outside both parties control.					
5	The ITT Critical (Detailed) Design Review experienced an agreed delay of three months due to factors beyond the control of both parties.					

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	M1A2 Abrams SEPv3 MBT (AT-B-ULU)	NFP	NFP	NFP	NFP	1
	M1150 Assault Breacher Vehicle (AT-B-ULX)	NFP	NFP	NFP	NFP	2
	M1110 Joint Assault Bridge (AT-B-ULX)	NFP	NFP	NFP	NFP	2
	M88A2 Hercules Armoured Recovery Vehicle (AT-B-ULX)	NFP	NFP	NFP	NFP	2
	Immersive Tactical Trainer – Fixed (ITT-F)	NFP	NFP	NFP	NFP	3
	Immersive Tactical Trainer – Containerised (ITT-C)	NFP	NFP	NFP	NFP	3
Acceptance	M1A2 Abrams SEPv3 MBT (AT-B-ULU)	NFP	NFP	NFP	NFP	1
	M1150 Assault Breacher Vehicle (AT-B-ULX)	NFP	NFP	NFP	NFP	2
	M1110 Joint Assault Bridge (AT-B-ULX)	NFP	NFP	NFP	NFP	2
	M88A2 Hercules Armoured Recovery Vehicle (AT-B-ULX)	NFP	NFP	NFP	NFP	2
	Immersive Tactical Trainer – Fixed (ITT-F)	NFP	NFP	NFP	NFP	3
	Immersive Tactical Trainer – Containerised (ITT-C)	NFP	NFP	NFP	NFP	3

Notes	
1	The Commonwealth is not in contract for the above major reviews, nor similar reviews with the US Army due to being an FMS Case arrangement under (FMS Case AT-B-ULU). The US Army has contractual arrangements in place with subcontractors that does include similar major reviews. However, the Commonwealth is not privy to these contractual arrangements. There are no contractual obligations to meet proposed milestones.
2	The Commonwealth is not in contract for the above major reviews, nor similar reviews with the US Army due to being an FMS Case arrangement under (FMS Case AT-B-ULX). The US Army has contractual arrangements in place with subcontractors that does include similar major reviews. However, the Commonwealth is not privy to these contractual arrangements. There are no contractual obligations to meet proposed milestones.
3	Both projects will deliver training and simulation systems for their respective vehicles. The ITT is an M1A2 Abrams SEpv3 MBT crew trainer that will be delivered both in a containerised version (ITT-C) for deployment to the field and a fixed version (ITT-F) for installation in buildings.

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	NFP	NFP	NFP	1
Initial Operational Capability (IOC)	NFP	NFP	NFP	1
Final Materiel Release (FMR)	NFP	NFP	NFP	1
Final Operational Capability (FOC)	NFP	NFP	NFP	1
Notes				
1	Dates associated with capability realisation are not for public release.			
Schedule Status at 30 June 2023 Dates associated with capability realisation are NFP Original Planned Achieved / Forecast Approval Approval Nov-21 May-22 Nov-22 May-23 Nov-23 May-24 Nov-24 May-25 Nov-25 May-26 Nov-26 May-27 Nov-27 May-28 Nov-28 May-29 Nov-29 May-30 Nov-30 May-31 Nov-31				

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: LAND907 Phase 2 / 8160 Phase 1 expects to provide deliverables and capability requirements as per the agreement with Government.
	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)	IMR will occur when the required missions systems for commencement of introduction into service training have been delivered to Army. Initial logistics support arrangements are in place including: • User documentation. • Technical data. • Maintenance support. • Logistics instruction. • Engineering support. • Spares. • Training systems. • Facilities.	Not yet Achieved
Initial Operational Capability (IOC)	IOC will occur with the provision of sufficient equipment and trained and qualified personnel to sustain the MBT and CEV on operations (or equivalent) in a land environment.	Not yet Achieved
Final Materiel Release (FMR)	FMR will occur when the final mission systems have been delivered. Delivery of simulation training systems and enablers. Logistics support arrangements are in place to support Force Generation (develop and provide forces to enable military effects across operating environments) exercises and operational deployments, including: • User documentation. • Technical data. • Maintenance support. • Logistics instruction. • Engineering support. • Spares. • Training systems facilities.	Not yet Achieved
Final Operational Capability (FOC)	FOC will occur when all major and support system elements have been delivered with the capability having been fully certified within the Combat Brigades and training schools. Contractual arrangements, stable through life support and facilities are functional to enable Force Generation and an enduring operational deployment of the capability.	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
N/A	N/A	N/A
Emergent Risks (risk not previously identified but has emerged during 2022–23)		
Ref#	Description	Remedial Action
N/A	N/A	N/A

5.2 Major Project Issues

Ref#	Description	Remedial Action
N/A	N/A	N/A

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 one lesson related to Contract Management listed below:	The project has not categorised any of its lessons information as a whole-of-Defence Lesson Learned.
Lesson Type – Observation. Close Government-to-Government relationships are required to ensure synchronisation and alignment of programs. The establishment of a Resident Project Office (Australian Project Staff collocated with the USG Project Office) has achieved this.	Contract Management

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2023

Unit	Name
Division	Armoured Vehicle Division
Branch	Armoured Fighting Vehicle

Project Data Summary Sheet¹

Project Number	AIR555 Phase 1
Project Name	AIRBORNE INTELLIGENCE, SURVEILLANCE, RECONNAISSANCE AND ELECTRONIC WARFARE (ISREW) CAPABILITY
First Year Reported in the MPR	2021-22
Capability Type	New
Capability Manager	Chief of Air Force
Government 1st Pass Approval	Dec 15
Government 2nd Pass Approval	Sep 17
Budget at 2nd Pass Approval	\$2,166.3m
Total Approved Budget (Current)	\$2,360.2m
2022–23 Budget	\$212.0m
Complexity	ACAT II



Section 1 – Project Summary

1.1 Project Description

AIR555 Phase 1 will deliver four first-of-type MC-55A Peregrine aircraft, being modified Gulfstream Aerospace Corporation (GAC) G550 platforms. The aircraft will incorporate the next evolution of an operationally proven Airborne Intelligence, Surveillance, Reconnaissance and Electronic Warfare (ISREW) capability.

The capability will be a critical enabler for the Australian Defence Force's (ADF) fifth generation war fighting platforms and will conduct routine and rapid surveillance in order to provide real time threat warning and intelligence support to the ADF, and will be a primary contributor of information to support Intelligence Mission Data production.

AIR555 Phase 1 is predominately a Foreign Military Sales (FMS) program through the United States Air Force (USAF). The USAF's Prime Contractor for the acquisition of AIR555 Phase 1 is L3Harris Technologies, Inc.

Three domestic delivery agencies are involved in the major systems and fundamental inputs to capability (FIC): Capability Acquisition & Sustainment Group (CASG), Security & Estate Group (SEG), and Chief Information Officer Group (CIOG), with CASG acting as the Integrated Project Manager.

AIR555 Phase 1 facilities will be located at four locations. The main operating base facilities will be built as a component of the ISREW Precinct at Royal Australian Air Force (RAAF) Base Edinburgh. Construction of the facilities commenced at RAAF Base Edinburgh in 2020. Facilities at three forward operating bases will also be delivered.

1.2 Current Status

Cost Performance

In-year

Financial Year (FY) 2022-23 expenditure was \$192.5m (to end June 2023) against the budget of \$212.0m (to end June 2023). The variation is associated with slippage to Prime Contract effort on FMS.

Project Financial Assurance Statement

As at 30 June 2023, AIR555 Phase 1 has reviewed the projects 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 including contingency remaining for the project to complete against the agreed scope.

Contingency Statement

The project has not applied contingency in FY 2022-23.

Schedule Performance

The FMS materiel delivery schedule has been impacted by risks realised through the Phase 1 engineering at the GAC facility, workforce challenges, global supply issues, and flight testing.

In consultation with the Sponsor and USAF, the project has assessed mitigation strategies to minimise schedule delays and interim milestone deliveries within the Materiel Acquisition Agreement (MAA). Based on the resultant schedule review, AIR555 Phase 1 provided a re-baselined schedule for Sponsor and Government approval in November 2021. This resulted in an adjustment to project schedule for Initial Operational Capability (IOC).

Subsequent to this MAA update, in October 2022 the USAF advised of delays to aircraft delivery. Government has been advised

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.

that this delay has impacted the IOC date.
Additional notification was received from USAF in June 2023 of further delays to aircraft delivery. Completion of Information and Communications Technology (ICT) Integration is impacted by delays to aircraft delivery.
The program has significant engineering, integration and flight test activities yet to be completed, which have the potential to result in further schedule delays. The completion of an initial series of flight test activities are critical milestone events which will inform the project on the residual schedule risks associated with achieving the IOC and Final Operational Capability (FOC) milestones.
Materiel Capability/Scope Delivery Performance
As at 30 June 2023, this project has not delivered any materiel capability.
The AIR555 Phase 1 facilities built at Edinburgh is being managed with consideration of the Intelligence, Surveillance and Reconnaissance (ISR) Enterprise at the RAAF Base. The Interim Operating Facility, the first facility to be delivered through SEG, was completed in Quarter 4, 2022, which will support the integration and test of ground systems for AIR555 Phase 1. The simulator facility was completed in Quarter 1, 2023.
Note
Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.

1.3 Project Context

Background
AIR555 Phase 1 will deliver an ISREW capability to Defence through a FMS acquisition. Government provided initial (Government Gate Zero) project approval in July 2014. The Capability Gate Review Board in November 2014, delayed the progression of AIR555 Phase 1 until the Force Structure Review and Defence Capability Plan 2015 were released.
Government Gate 1 (First Pass) approval occurred in December 2015. AIR555 Phase 1 First to Second Pass activity included development of a detailed acquisition schedule, High Quality Cost Estimate (HQCE) and technical Risk Reduction Activities (RRAs). These were conducted under FMS Cases through the USAF Big Safari ISREW program managed by the 645 th Aeronautical Systems Group, with L3Harris Technologies, Inc. Mission Integration as the USAF Prime Contractor.
The costs developed through the HQCE, when combined with the inability to change the AIR555 Phase 1 Integrated Investment Program allocation and phasings, necessitated a further review of the project by the Capability Manager Gate Review (CMGR) and Investment Committee (IC). The results of this review were a review of the number of aircraft, and a revised IOC and FOC dates. The CMGR and IC also agreed to purchase two unmodified G550 aircraft during First Pass activities, which in turn were to be delivered to L3Harris Technologies, Inc. Mission Integration.
Gate 2 (Second Pass) Government approval was provided in September 2017. Government approved the production of four MC-55A Peregrine aircraft, two Aircraft Capability Extension Systems (ACES), two secure access control systems, one mission crew training system and one ground data processing system. CASG was also to arrange for four ACES crews, training and standardisation staff, maintenance crews, operational test and equipment, accredited main operating base and forward operating bases, achieve airworthiness requirements and establish a System Program Office (SPO).
The Smart Buyer Process was introduced to Defence during 2016 and became a mandatory requirement for Defence projects during 2017 and onwards. As Defence's approach to market activity had commenced in 2016 the project did not undergo a Smart Buyer risk assessment or review.
Uniqueness
AIR555 Phase 1 is a FMS acquisition program from the USAF however, it is not a traditional FMS program. AIR555 Phase 1 will deliver a first-of-type, complex, developmental program integrating new ISR systems, antennae, power system modifications, communications systems and extensive modifications to a commercial GAC G550 outer mold line.
The program will incorporate multiple phases of the major modification at the aircraft manufacturer (GAC), followed by a comprehensive mission system integration and test program at L3Harris Technologies, Inc. Both of these activities will require Federal Aviation Authority airworthiness certification (Supplemental Type Certification). In addition, there will be a military certification process to follow for specialist military equipment installed during the modification program.
AIR555 Phase 1 design changes to the outer mold line will require significant engineering to be compliant with the AIR555 Phase 1 design requirements (size, weight, weight distribution and power). These extensive modifications include additional power within the aircraft and a modification of the Rolls Royce engine, cooling and an increase of maximum zero fuel weight for the airframe.
Major Risks and Issues
The project is a developmental program with significant engineering, integration and flight test activities yet to be completed. These High risk activities have the potential to result in schedule delays to initial product delivery, with a high likelihood that additional contingency will be required.
The major program risks and issues are associated with:
• Phase modifications and flight test schedule; • Communications and Ground Mission System (GMS); • Platform aerodynamic stability and structural life; • Certification and accreditation; • Hazardous substances being delivered within FMS items; • The Flight Test Program identifying issues that require additional non-recurring engineering and testing; • The pilot training program; • Maturity of the in-service support program; and, • Delivery delays due to COVID and workforce issues.
Other Current Related Projects/Phases
Nil.

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

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			
Aug 14	Original Approved (Government Interim Approval)	3.2	
Apr 15	Real Variation – Real Cost Increase	3.4	1
Jan 16	Government First Pass Approval	102.1	2
Jan 16	Real Variation – Real Cost Increase	149.7	2
Feb 18	Government Second Pass Approval	1,907.9	
	Total at Second Pass Approval	2,166.3	
May 19	Real Variation – Budgetary Adjustment	(2.9)	3
Aug 21	Real Variation – Transfer	0.4	4
Sep 21	Real Variation – Transfer	2.0	5
Sep 22	Real Variation – Transfer	43.7	6
Jun 23	Exchange Variation	150.8	
Jun 23	Total Budget	2,360.2	
Project Expenditure			
Prior to Jul 22	Contract Expenditure – FMS Case AT-D-QCS	(911.1)	
	Contract Expenditure – FMS Case AT-D-SAB	(347.3)	
	Contract Expenditure – FMS Case AT-D-SAA	(132.9)	
	Contract Expenditure – FMS Case AT-D-GCA	(78.7)	
	Contract Expenditure – Rolls Royce Australia Services Pty Ltd	(8.1)	
	Other Contract Payments / Internal Expenses	(20.4)	7
		(1,498.4)	
FY to Jun 23	Contract Expenditure – FMS Case AT-D-SAB	(103.1)	
	Contract Expenditure – FMS Case AT-D-QCS	(73.9)	
	Contract Expenditure – Rolls Royce Australia Services Pty Ltd	(10.9)	
	Contract Expenditure – FMS Case AT-D-GCA	0.4	
	Other Contract Payments / Internal Expenses	(5.0)	8
		(192.5)	
Jun 23	Total Expenditure	(1,690.9)	
Jun 23	Remaining Budget	669.3	
Notes			
1	Update to Pre First Pass Project Development Fund to progress the project through continued engagement with stakeholders.		
2	Post First Pass guidance transfer to procure two aircraft and conduct RRAs to inform Second Pass. This amount is inclusive of the First Pass approval amount.		
3	Budgetary adjustment correction to re-profile journal.		
4	Transfer of Air Force Head Quarters (AFHQ) project administrative contingency budget to CASG to manage.		
5	Transfer of AFHQ project administrative budget to CASG to manage.		
6	Transfer of SEG budget to CASG to manage.		
7	Other Contract Payments / Internal Expenses: Includes above the line contractor support (\$13.2m), ad hoc expenditure (\$3.7m), travel (\$2.2m), and project administration activities (\$1.3m).		
8	Other Contract Payments / Internal Expenses: Includes above the line contractor support (\$4.2m), and travel (\$0.7m).		

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.

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
308.8	181.0	212.0	<u>Portfolio Budget Statement (PBS) to Portfolio Additional Estimates Statement (PAES)</u> : The increase in estimate from PBS to PAES is primarily due to the acceleration of Prime Contractor forecasts associated with FMS. <u>PAES to Final Plan</u> : The increase in estimate from PAES to Estimate Final Plan is due to exchange fluctuations change.
Variance \$m	(127.7)	30.9	Total Variance (\$m): (96.8)
Variance %	(41.4)	17.1	Total Variance (%): (31.4)

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		-	Australian Industry	FY 2022-23 expenditure was \$192.5m against the budget of \$212.0m. The variation is associated with slippage to Prime Contract effort on FMS.
		(19.4)	Foreign Industry	
		-	Early Processes	
		-	Defence Processes	
		-	Foreign Government Negotiations/Payments	
		-	Cost Saving	
		-	Effort in Support of Operations	
		-	Additional Government Approvals	
212.0	192.5	(19.4)	Total Variance	
		(9.2)	% Variance	

2.3A Details of Project Major Contracts – Price

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 23 \$m			
FMS Case – AT-D-GCA	Dec 15	81.8	79.5	Reimbursement (for FMS)	FMS	1
FMS Case – AT-D-SAA	Dec 15	134.4	133.0	Reimbursement (for FMS)	FMS	1
FMS Case – AT-D-QCS	Aug 17	0.4	1,109.1	Reimbursement (for FMS)	FMS	1, 2
FMS Case – AT-D-SAB	Jan 18	546.5	730.2	Reimbursement (for FMS)	FMS	1, 3
Rolls Royce Australia Services Pty Ltd – Spare Engine	Aug 21	18.3	21.1	Firm or Fixed	Standard Defence Contract	1, 4
Notes						
1	Variations due to exchange rate fluctuations.					
2	Original FMS Case 0.4m to engage USAF contractors to commence contractual documentation in anticipation of executable contract at AIR555 Phase 1 Second Pass Approval. Amendment 1 \$1,032.0m update included modification and delivery of the first two MC-55A aircraft, associated ground systems, long lead items and period of performance extensions. Amendments 2 and 3 were administrative changes to the contract with nil increase in value. Amendment 4 \$41.4m was to account for a Flight Simulator Training Device (FSTD), however \$40.8m of this was funded from sustainment.					
3	Original FMS Case \$546.5m to procure, modify and deliver remaining two MC-55A aircraft, also delivery of remaining ground systems and integrated logistics support (ILS) to meet FOC requirements. Amendment 1 \$222.1m for spares, support and test equipment, fly away kits and initial training for airborne and ground based operator crews, however ~\$87.5m of this was funded from sustainment. Amendment 2 \$84.0m for spares and workforce elements, however \$76.1m of this was funded from sustainment.					
4	Direct Commercial Sale for the procurement of a Rolls Royce BR710 spare engine.					

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

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 23		
FMS Case - AT-D-GCA	N/A	N/A	To provide First to Second Pass program management, technical and engineering services to support AIR555 Phase 1 schedule and technical risk reduction activities.	-
FMS Case - AT-D-SAA	2	2	Procure two green unmodified GAC G550 aircraft.	-
FMS Case - AT-D-QCS	2	2	Modification of two aircraft and associated support equipment, associated ground systems, long lead items period of performance extensions, a FSTD, and	-

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

			administrative changes.	
FMS Case - AT-D-SAB	2	2	Procure, modify & deliver two green unmodified GAC G550 aircraft including remaining GMS, ILS to support FOC. Amendments to initial contract increased contract scope to include spares, support and test equipment, fly away kits, initial training for airborne and ground based operator crews, and workforce elements.	1
Rolls Royce Australia Services Pty Ltd	1	1	Procurement of Spare Engine.	-
Major equipment accepted and quantities to 30 Jun 23				
Nil				
Notes				
1	A FSTD is procured under this FMS Case but funded and accounted for within the Sustainment Budget and therefore is not included in this table.			

2.4 Australian Industry Capability

Summary	
The project has no contracted Australian Industry Capability (AIC) targets or an AIC Plan for its United States (US) Government FMS acquisition as the US Foreign Government arrangement does not include the contractual provision or obligations for Australian Industry Content.	
The project has no contracted AIC targets or an AIC Plan for Rolls Royce Australia Services Pty Ltd as this was a direct sole source procurement from Rolls Royce (Australia) sourced from Rolls Royce (Germany) as the Original Equipment Manufacturer.	
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	Aircraft Phase 1	N/A	N/A	Oct 16	N/A	1
	Aircraft Phase 2	N/A	N/A	Dec 16	N/A	1
Preliminary Design	Aircraft Phase 1	N/A	N/A	Jun 17	N/A	1
	Aircraft Phase 2	N/A	N/A	Jun 19	N/A	1
Critical Design	Aircraft Phase 1	N/A	N/A	Nov 17	N/A	1
	Aircraft Phase 2	N/A	N/A	Sep 20	N/A	1
Notes						
1	The Commonwealth of Australia (CoA) is not in contract for the above major reviews, nor similar reviews with the USAF due to being a FMS Case arrangement. The USAF (Prime) and L3Harris Technologies, Inc. (USAF Prime Contractor) have contractual arrangements in place with each other that does include similar major reviews. However, the CoA is not privy to these contractual arrangements.					

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	Completion of Ground System #2 ICT Integration in Australia	Not For Publication (NFP)	N/A	NFP	NFP	1, 3, 4, 5
	Completion of Ground System #1A ICT Integration in Australia	NFP	N/A	NFP	NFP	1, 3, 4, 5
	Completion of Ground System #3 ICT Integration in Australia	NFP	N/A	NFP	NFP	1, 4, 5
	Completion of Ground System #1B ICT Integration in Australia	NFP	N/A	NFP	NFP	1, 4
Acceptance	Completion of CIOG Acceptance Test & Evaluation (AT&E)	NFP	N/A	NFP	NFP	1, 2, 5
Notes						
1	Dates associated with capability realisation are not for public release.					
2	AT&E acceptance by CIOG is an internal Defence milestone, with no associated contract.					
3	Delays associated with Phase 1 engineering and COVID-19 workforce have also impacted forecast completion milestones.					
4	N/A - The CoA does not have a commercial relationship with contractors under the FMS acquisition arrangement.					

5	Notifications were received from USAF in October 2022 and June 2023 of additional delays to aircraft delivery (with the project moderating the forecasted delays), impacting flight test and certification requirements. Completion of ICT Integration is also impacted by delays to aircraft delivery.
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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)	NFP	NFP	NFP	1, 2, 4, 5
Initial Operational Capability (IOC)	NFP	NFP	NFP	2, 4, 5
Final Materiel Release (FMR)	NFP	NFP	NFP	3, 4, 5
Final Operational Capability (FOC)	NFP	NFP	NFP	4, 5

Notes	
1	IMR definition was expanded from only being arrival of Aircraft #1, to include initial operating ground systems and a Forward Operating Base (FOB), which resulted in a forecast variance required to achieve the milestone.
2	IMR & IOC have been re-baselined due to Phase 1 engineering and COVID-19 workforce issues. An updated MAA was approved by the Capability Sponsor in April 2022.
3	FMR definition was expanded from only being arrival of Aircraft #4, to include operating ground systems, three forward operating bases, one deployable system and completion of Operational Test & Evaluation (OT&E), which resulted in a forecast variance required to achieve the milestone.
4	Dates associated with capability realisation are not for public release.
5	Notification was received from USAF in October 2022 and June 2023 of additional delays to aircraft delivery and impacting flight test and certification requirements.



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 AIR555 Phase 1 Project Office (PO) expects to provide all deliverables and capability requirements as per agreement with Government.
	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)	- One MC-55A Peregrine aircraft available for training and operations; - Ground Systems installed, integrated, and available to support one MC-55A; and - One FOB sufficient to support operations.	Not yet Achieved
Initial Operational Capability (IOC)	- Two MC-55A crews; - One ground based mission crew; - Two maintenance Crews; - In-service support available to support operation of one MC-55A; - Established PO; and - One MC-55A FSTD 'Stage 1' Available for Training.	Not yet Achieved
Final Materiel Release (FMR)	- Total of four MC-55A Peregrine aircraft available for training and operations; - Ground Systems installed, integrated, and available to support one MC-55A; - Accredited FOB facilities; - One Modular Processing System available to deploy from the Main Operating Base; and - Completion of OT&E.	Not yet Achieved
Final Operational Capability (FOC)	- MC-55A crews available to support operation of four MC-55A; - ACES crews available to support operation of one MC-55A; - Maintenance crews available to support operation of four MC-55A; - Training and standardisation staff; - Achievement of all airworthiness requirements to support scope of intended operations; - Establishment of all initial operational support, logistics & commercial maintenance arrangements to support the scope of intended operations; - Established SPO to support the full capability; and, - MC-55A FSTD upgrade to 'Stage 2' available for training.	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 the MC-55A Phase 2 modification will be impacted by unforeseen design and integration complications, leading to an impact on cost and schedule.	The AIR555 Phase 1 Resident Project Team (RPT) will conduct a review of the L3Harris Technologies, Inc. design against the AIR555 Phase 1 Functional Performance Specification (FPS) and will monitor system performance through insight into laboratory test activities.
2	There is a risk that MC-55A Beyond Forward Operations Base (BFOB) capability may be limited at FOC, leading to additional expenditure in order to achieve the required capability.	The AIR555 Phase 1 PO will continue to investigate existing ADF deployable solutions and work through issues to develop a suitable BFOB capability. The PO will also maintain engagement with Australian Signals Directorate (ASD) regarding deployable secure facilities.
3	There is a risk that the communications design will not meet operational needs, leading to an impact on sustainment costs in order to achieve the capability.	The AIR555 Phase 1 RPT is engaging with USAF to understand current system design limitations, with a design review to be completed to inform future decisions. The RPT will review Phase 2 flight test data to understand any additional CIOG support requirements.
4	There is a risk the Australian airworthiness authorities will require additional information to satisfy Australian Defence Aviation Safety Regulations, requiring rectification that impacts on schedule and cost.	The AIR555 Phase 1 PO has regular engagement with the regulator and USAF certification authorities to understand where issues might present. The PO will provide a dedicated workforce to cover the high intensity review period between flight testing and certification.
5	There is a risk that the AIR555 Phase 1 Work Health and Safety (WHS) compliance will be affected by a misalignment between Australian and American safety standards, culture and programs, leading to an impact on system compliance and safety.	FPS requirements reflect Australian WHS requirements. AIR555 Phase 1 has also provided additional guidance to L3Harris Technologies, Inc. on Australian WHS requirements. AIR555 Phase 1 PO participates in quarterly US Government led System Safety meetings to ensure key stakeholders understand the full scope of effort required to identify all hazardous material in the delivered system. Australian reviews of deliverables will ensure requirements have been met across the entire modified aircraft and ground systems.

6	There is a risk that the AIR555 Phase 1 ICT integration will be affected by differences between the US and Australian Certification and Accreditation (C&A) standards, leading to schedule delays in approvals.	The AIR555 Phase 1 PO has initiated a Certification and Accreditation Working Group with L3Harris Technologies, Inc. / Military Platform Integration (MPI)/CASG/ASD to work through the differences. Also, CIOG-MPI are developing C&A timelines and resourcing requirements. CIOG-MPI are also engaging with certification agencies at senior levels to improve engagement and response.
7	There is a risk that the AIR555 Phase 1 GMS operation will be affected by inadequate design information, leading to delayed integration with Australian networks.	The AIR555 Phase 1 PO has re-established Technical Interchange Meetings to increase data exchange between the US Government and CIOG to ensure CoA has access to the required design information.
8	There is a risk that the MC55 publications manuals and technical data will contain some deficiencies during initial in-service, leading to an impact on capability and aircraft delivery.	The AIR555 Phase 1 RPT is working with L3Harris Technologies, Inc. on the content, look and feel of the Aircraft's Flight Manuals to ensure an adequate solution is delivered. The RPT is also working to ensure that any L3Harris Technologies, Inc. Publication Management System meet CoA requirements. During the training period in 2023, Australian staff will review the manuals and procedures to ensure they are fit for purpose.
9	There is a risk that the MC-55A Simulator C&A may not meet Air Force requirements leading to an impact on Tactics, Training and Procedures.	The AIR555 Phase 1 RPT to continue liaising with USAF/ L3Harris Technologies, Inc. to ensure CoA C&A requirements are included in the USAF contracts to meet the CoA MC-55A Simulator C&A requirements. This Risk was rated High but has been downgraded to Medium due to reduction of likelihood.
Emergent Risks (risk not previously identified but has emerged during 2022–23)		
Ref#	Description	Remedial Action
1	There is a risk that the MC55 Pilot Proficiency will be affected by insufficient/reduced/compressed Aircraft #1 flying program leading to an impact on OT&E and IOC.	A second airframe and flying window will be utilised to conduct dedicated pilot training in order to achieve the required competencies and proficiencies needed. Generating additional opportunities for more flying hours will reduced the risks to schedule leading up to IOC. By achieving both pilot proficiency requirements and crew training requirements prior to in-service delivery, the risk to the OT&E program schedule will be reduced, which further minimises risk to IOC.
2	There is a risk that a delay in delivery of spares and support and test equipment lists will affect the ability for the PO to set up appropriate procurement actions and support arrangements, leading to an impact on in-service aircraft availability.	ILS team is proactively reviewing all available data, including draft publications delivered to RPT to identify items to be checked on extant Logistics Information Management System (LIMS). Where items of supply are identified as a possible Cross SPO candidates, investigate North Atlantic Treaty Organisation (NATO) Master Catalogue of References for Logistics to confirm if item is codified. If item is FMS, search LIMS to confirm items requested (NATO Stock Number and Part Numbers).
3	There is a risk that CIOG development/delivery of ICT support systems will be affected by later transfer of tech data, leading to a schedule or performance impact on OT&E program.	To avoid this risk from materialising the engineering team reverted to a mixture of FMS-procured ICT devices and some CIOG procured devices. This Risk was rated High but has been downgraded to Medium due to reduction of likelihood.

5.2 Major Project Issues

Ref#	Description	Remedial Action
1	The MC-55A Ph1 design has been affected by unforeseen complications, with the CoA unique design requirements requiring additional non-recurring engineering, leading to an impact on cost and schedule.	The project applied contingency in the FY 2020-21 for the treatment of technical performance issues. The AIR555 Phase 1 RPT will maintain engagement with the USAF/ L3Harris Technologies, Inc. / GAC during testing to understand the impacts of any design shortfalls and how to minimise the cost and schedule impacts. The RPT has sought additional structural substantiation data in order to support risk characterisation and understand potential impacts for the in-service structural life limits (ongoing airworthiness).
2	The MC-55A design has been impacted by airframe structural exceedances, which required additional structural analysis and aircraft modifications leading to an impact on cost and schedule.	The project applied contingency in the FY 2020-21 for the treatment of technical performance issues. GAC has conducted analysis and is incorporating design changes where necessary.

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

3	American Government and/or contractors' deliverables have been affected by the COVID-19 pandemic leading to the delayed delivery of Aircraft #1 and # 2 and therefore delayed achievement of IOC. (Note - The risk pertains primarily to USAF Contractors L3Harris Technologies, Inc., GAC and sub-contractors).	Due to being an FMS acquisition, there is little the CoA can do to mitigate this issue. Though a detailed review of schedule to IOC has been conducted, minimal mitigation actions have been determined. IOC has been delayed from the original date. Note that analysis of the schedule identified delays only impacting IOC and FOC is not impacted at this stage due to AIR555 Phase 1 being an FMS acquisition.
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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
The project is in the process of implementing a lessons approach that achieves compliance with Defence instruction and CASG Lessons policy. The project has captured four lessons related to Resourcing and Governance. 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. Have a well-established Workforce Plan (based on the resourced schedule scope) in place for current and future demands depending on the stage of the Capability Life Cycle and project requirements. Allow for contingencies in your plan in the event that the specified resources are unavailable within the Australian Public Service or ADF. These contingencies can include reservists, contractors, shared resources with similar organisations, etc. Additional funding within the budget should be factored in for some of these contingencies, such as contractors.	Resourcing and Governance
Lesson Type – Observation. Ensure the project scope is represented by a well maintained Work Breakdown Structure. Improving the maturity of project management artefacts (Work Breakdown Structure, schedule, risk register), and maintaining consistent tracking and reporting against these. Layers of analysis of the schedule and risk register has allowed a consistent forecasting and reporting framework.	Governance
Lesson Type – Observation. Maintain a robust, consistent configuration management system to ensure project activities remain within project scope, including cost and schedule.	Governance

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2023

Unit	Name
Division	Aerospace Systems Division
Branch	Airlift and Tanker Systems Branch

Project Data Summary Sheet¹

Project Number	AIR2025 Phase 6
Project Name	JINDALEE OPERATIONAL RADAR NETWORK (JORN) MID-LIFE UPGRADE
First Year Reported in the MPR	2020-21
Capability Type	Upgrade
Capability Manager	Chief of Air Force
Government 1st Pass Approval	Dec 15
Government 2nd Pass Approval	Dec 17
Budget at 2nd Pass Approval	\$1,117.9m
Total Approved Budget (Current)	\$1,288.0m
2022–23 Budget	\$105.4m
Complexity	ACAT II



Section 1 – Project Summary

1.1 Project Description

The Jindalee Operational Radar Network (JORN) is a long-range over-the-horizon radar that supports the Australian Defence Force's (ADF) air and maritime operations, strategic surveillance and search and rescue operations. Project AIR2025 Phase 6 delivers a major mid-life redesign and upgrade by modernising JORN, including the command and control system operated from the Battlespace Surveillance Centre at Royal Australian Air Force (RAAF) Base Edinburgh and the three radar sites located at Longreach in Queensland, Laverton in Western Australia and Alice Springs in the Northern Territory. Other vital supporting infrastructure including the extensive Ionospheric sounder network will also be upgraded.

The project addresses obsolescence, improves system performance, provides a more contemporary system architecture and will reduce the total cost of ownership. The tranches in execution are systems engineering and design including the upgrade of the first radar and delivery of a new command and control system (Initial Operational Capability (IOC) Tranche, formally Tranche 2); and serial upgrade of the remaining two radars (Tranches 3 and 4).

1.2 Current Status

Cost Performance

In-year

As at 30 June 2023, Financial Year (FY) 2022-23 expenditure is \$103.5m against the forecast planned expenditure of \$105.4m. The variation was due to the transfer of High Power Amplifiers (HPA) funding and a number of minor factors totalling \$1.9m.

Project Financial Assurance Statement

As at 30 June 2023, AIR2025 Phase 6 has reviewed the 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 including contingency remaining for the project to complete against the agreed scope.

Contingency Statement

The project has not applied contingency in FY 2022-23.

Schedule Performance

Since implementing an Alternate Delivery Strategy (ADS) in late 2021, the project has been delivering ahead of contracted dates within the revised schedule to IOC and retains project float against major contracted milestones to IOC. Key achievements over FY 2022-23 include:

- Information Technology installations to support Phase 6 upgrades at the JORN Operations Centre and all three radar sites;
- Successfully demonstrating a minimum viable receive and transmit capability;
- Completion of the new Operations Centre software build to support delivery of a new demonstrator Operations Centre to RAAF;
- Completion of a second Integrated Baseline Review (IBR), confirming validity of the new schedule to IOC; and,
- Development of a collaborative governance framework to escalate issues to promote prompt resolution and implementation of any required remedial action.

BAE Systems Australia Pty Ltd and Defence continue to work collaboratively to improve the delivery performance of the JORN Phase 6 program. This includes evaluating opportunities to improve the efficiency of delivery through tailoring of the Australian Standard for Defence Contracting, contract to better align to a 'continuous capability delivery' model.

Challenges in the resource market are expected to continue to impact the JORN program. Impacts in the supply chain (particularly

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.

with electronic components and as a result of COVID-19) have also impacted costs and lead times. These issues collectively have the potential to impact on schedule performance (in particular on IOC and Final Operational Capability (FOC) milestones); however these are known risks that Defence and BAE Systems Australia Pty Ltd continue to work collaboratively to mitigate.
Material Capability/Scope Delivery Performance This project has not delivered any materiel capability to date. The current JORN capability remains fully operational while the project is progressing. As part of the ADS, elements of the system will be introduced incrementally, designed to accelerate the delivery of upgraded capability to Air Force. The strategy will see the JORN Battlespace Surveillance Centre located at RAAF Base Edinburgh upgraded first, and a series of prototype receiver systems progressively delivered culminating in the upgrade of all radar receiver systems. Government approval may be sought in the future to establish new projects that seek to enhance the JORN capability. The current scope is expected to be delivered with the exception of one capability enhancement delivered by the Commonwealth as Government Furnished Data that has not achieved an appropriate level of technical maturity.
Note
Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.

1.3 Project Context

Background AIR2025 Phase 6 is a complex sovereign development program leveraging Defence Science and Technology Group (DSTG) developed technology. A collaborative relationship between Defence and the prime contractor, BAE Systems Australia Pty Ltd, has been critical to success. Despite the ongoing positive client-supplier relationship, the project has experienced significant schedule challenges during the initial three years of the project, particularly within the systems engineering program (other key streams of activity including hardware and software development remain on track). As a result of the persistent delays, AIR2025 Phase 6 became a Project of Interest in September 2019. Following completion of a bottom-up re-baseline of the schedule in late 2019 which indicated a potential significant delay to IOC, Defence and BAE Systems Australia Pty Ltd agreed to collaboratively undertake an analysis to understand the cause of additional effort estimates and identify a new approach to deliver the project. This resulted in developing an ADS, which utilised the mature and proven product development completed to date with the intent of rolling out elements of the system as they were developed to progressively retire risk. In April 2021, BAE Systems Australia Pty Ltd delivered a costed Contract Change Proposal (CCP) to incorporate the ADS as the new program performance measurement baseline into the contract. Defence conducted a detailed evaluation and negotiation that resulted in BAE Systems Australia Pty Ltd submitting a revised CCP in September 2021, which was assessed by Defence and executed in December 2021. Since execution of the CCP in December 2021, BAE Systems Australia Pty Ltd has implemented the ADS (now termed the Iterative Delivery Strategy) against the contracted deliverables, with a view to delivering hardware and software ahead of schedule. A second IBR was conducted in June 2022 (completed in early July 2023) against the revised contracted performance baseline and has demonstrated the project schedule is achievable.
Uniqueness With initial experimentation and development commencing over 50 years ago within the DSTG, a world-leading Over The Horizon Radar capability has been established in collaboration with Australian Industry, providing significant Defence capability and economic value to the nation. Project AIR2025 Phase 6 relies on a highly skilled and specialised workforce to design and develop High Frequency Radar technology. The ability to attract and retain a skilled Industry and Defence workforce is a key enabler to successful project delivery. Defence, rather than BAE Systems Australia Pty Ltd, retains responsibility for key aspects of the JORN system-level performance under the project arrangement due to Defence providing to BAE Systems Australia Pty Ltd specific software elements as mandated Government Furnished Material that directly impact the performance of the JORN System, such as signal processing software.
Major Risks and Issues The current major project risks and issues subject to remedial action are: • There is a risk that human resources required to execute the program cannot be sourced or retained impacting on program timelines. • There is a risk of schedule delays to the program impacting the delivery of capability against agreed milestones. • There is a risk of cost increases associated with the upgrade of the second and third radars post IOC. • There is a risk that poorly defined transition points between acquisition and support impact the overall delivery of the AIR2025 Phase 6 project. • There is an emergent risk that the budget for the upgrade of HPA is insufficient. • There is an emergent risk that other project factors (e.g. scope changes, inexperienced resources, supply chain issues etc.) will result in cost increases to the project. • A project issue is that the project budget might be insufficient due to the impact of inflation as the budget at project approval was outturned against a fixed inflation rate.
Other Current Related Projects/Phases N/A
Note
Major risks and issues are excluded from the scope of the Auditor-General's Independent Assurance Report.

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

Section 2 – Financial Performance²

2.1 Project Budget (out-turned) and Expenditure History

Date	Description	\$m	Notes
	Project Budget		
Jan 16	Original Approved (Government First Pass Approval)	49.4	1
Dec 17	Government Second Pass Approval	1,068.5	
	Total at Second Pass Approval	1,117.9	
Apr 20	Real Variation – Transfer from Security & Estate Group (SEG)	2.5	2
Jun 20	Real Variation – Scope JORN Enhancement	8.2	3
Sep 21	Real Variation – Budgetary Adjustment	9.5	4
Nov 21	Real Variation – Budgetary Adjustment (Contingency)	2.0	4
Apr 22	Real Variation – Budgetary Adjustment	6.1	3
Apr 23	Real Variation – Budgetary Adjustment (HPA)	141.9	5
Jun 23	Exchange Variation	0.0	6
Jun 23	Total Budget	1,288.0	
	Project Expenditure		
Prior to Jul 22	Contract Expenditure – BAE Systems Australia Pty Ltd (Prime)	(184.7)	
	Contract Expenditure – Jacobs Australia Pty Ltd (Integrated Work Package (IWP))	(35.7)	
	Contract Expenditure – Lockheed Martin Australia Pty Ltd Engineering Services Contract (ESC)	(20.3)	
	Other Contract Payments	(10.7)	7
		(251.4)	
FY to Jun 23	Contract Expenditure – BAE Systems Australia Pty Ltd (Prime)	(76.6)	
	Contract Expenditure – Jacobs Australia Pty Ltd (IWP)	(10.6)	
	Contract Expenditure – Lockheed Martin Australia Pty Ltd (ESC)	(8.8)	
	Other Contract Payments	(7.5)	8
		(103.5)	
Jun 23	Total Expenditure	(354.9)	
Jun 23	Remaining Budget	933.1	
Notes			
1	Government Second Pass Approval includes an \$18.3m adjustment to be funded from the unspent portion of the previously approved First Pass funding.		
2	SEG received funding to support AIR2025 Phase 6, which included replacing a facility at Radar 3 Transmit site. It was agreed that the replacement facility is best delivered by the JORN Prime Contractor, as it involves specialist fit-out and coordinated delivery within JORN operational constraints.		
3	Early access to funding to enable early capability planning and de-risking activities for the JORN Enhancement scope.		
4	In FY 2021-22, Air Force transferred all related project operating budgets into the respective Capability Acquisition and Sustainment Group (CASG)-controlled project budget.		
5	HPA replacement project funding transfer from Chief of Air Force 13 to AIR2025 Phase 6.		
6	The zero value is due to rounding of exchange variation as the majority of the contracts are in Australian Dollars (AUD).		
7	Other Contract Payments/Internal Expenses comprises of: \$5.0m for AIR2025 Phase 6A, \$2.5m for the JORN Priority Industry Capability Support Program, \$1.9m for Commonwealth management costs and \$1.3m for other operating expenditure including minor contract expenditure.		
8	Other Contract Payments/Internal Expenses comprises of: \$6.3m for AIR2025 Phase 6A, and \$1.2m for other operating expenditure, minor contract expenditure and 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
92.1	92.0	105.4	Portfolio Budget Statement (PBS) to Portfolio Additional Estimates Statement (PAES): Variation primarily due to an increase in BAE Systems Australia Pty Ltd Direct Costs (material spend). PAES to Final Plan: Variation due to HPA Budget Transfer, additional Contract Survey & Quote and milestone payments, an underspend for

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.

			engineering services due to reallocation of resources and other minor variations over the period.
Variance \$m	(0.1)	13.4	Total Variance (\$m): 13.3
Variance %	(0.2)	14.6	Total Variance (%): 14.4

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(1.9)	Australian Industry	The project has an end of FY variance due to a combination of the following factors: - Late budget transfer of HPA funding. - Other minor variations during the period relating to project support and Commonwealth management costs.
		-	Foreign Industry	
		-	Early Processes	
		-	Defence Processes	
		-	Foreign Government Negotiations/Payments	
		-	Cost Saving	
		-	Effort in Support of Operations	
		-	Additional Government Approvals	
105.4	103.5	(1.9)	Total Variance	
		(1.8)	% Variance	

2.3A Details of Project Major Contracts – Price

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 23 \$m			
Lockheed Australia Pty Ltd	Martin Mar 18	15.1	56.1	Variable	Standard Defence Contract	1
BAE Systems Australia Pty Ltd	Mar 18	455.9	651.9	Variable	Standard Defence Contract	2, 3
Jacobs Australia Pty Ltd – IWP	Dec 18	25.0	58.2	Variable	Standard Defence Contract	2, 4
Notes						
1	The price at 30 June 2023 has increased from the initial contract price of \$15.1m to \$56.1m. This change is due to an increase in required contractor personnel to support the program, an increase to the contract term from three years to seven years and the application of an annual price adjustment to the contract.					
2	Contract value as at 30 June 2023 is based on actual expenditure to 30 June 2023 and remaining commitment at current budgeted exchange rates and includes adjustments for indexation (where applicable).					
3	The Contract Price at signature of \$455.9m (base date July 2016) has increased by \$68.3m due to projected price escalation to an estimated Contract Price of \$524.2m at signature date, plus an increase of \$118.8m resulting from the JORN Re-plan and other minor CCPs totaling \$8.9m.					
4	Contract value is the estimated project share of the Branch IWP contract and is based on the estimate of project expenditure to the end of December 2024. This contract is expected to increase as further work packages are agreed.					

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

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 23		
Lockheed Australia Pty Ltd	N/A	N/A	Provide specialist engineering resources to facilitate Defence's execution of AIR2025 Phase 6.	-
BAE Systems Australia Pty Ltd	N/A	N/A	AIR2025 Phase 6 Prime Contractor that includes (but not limited to) the replacement of obsolescent systems, a new human-machine interface and new diagnosis and management systems.	-
Jacobs Australia Pty Ltd – IWP	N/A	N/A	Service based IWP.	-
Major equipment accepted and quantities to 30 Jun 23				
Nil				

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

2.4 Australian Industry Capability

Summary
The project has contracted Australian Industry Capability (AIC) targets based on opportunities to maximise internationally competitive Australian industry involvement which is captured in Lockheed Martin Australia Pty Ltd's AIC Plan in support of engineering services.
The project has contracted AIC targets based on opportunities to maximise internationally competitive Australian industry involvement which is captured in BAE Systems Australia Pty Ltd's AIC Plan in the support of their design, manufacturing, and integration, activities.
The project has no contracted AIC targets or AIC Plan for Jacobs 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.
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	JORN Mission and Support System	Jan 19	N/A	Sep 19	8	1, 2
System Definition	JORN Mission and Support System	Jan 19	N/A	Jun 20	17	1, 2
Preliminary Design	JORN Mission and Support System	Oct 19	Not For Publication (NFP)	NFP	NFP	3
Detailed Design	JORN Mission and Support System	Jun 20	NFP	NFP	NFP	3
Support System Detailed Design	JORN Mission and Support System	Dec 20	NFP	NFP	NFP	3
Notes						
1	The original schedule included a Combined System Requirements Review and System Definition Review scheduled for January 2019. These were agreed to be de-coupled in December 2018 and finalised through a CCP. The original contracted date of January 2019 did not change.					
2	The project experienced persistent lag in execution of the systems engineering program. Key drivers for the delays are predominantly attributed to the underestimation of JORN systems engineering complexity and required design effort.					
3	A CCP to reflect the ADS was executed in December 2021 reflecting revised schedule dates. Forecast dates for capability realisation are NFP.					

3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/ Forecast	Variance (Months)	Notes
Modification Readiness Review 1	Radar 1 & Operations Centre	Sep 21	NFP	NFP	NFP	1
System Acceptance	Radar 1 & Operations Centre	Jan 24	NFP	NFP	NFP	1
Modification Readiness Review 2	Radar 2	May 24	NFP	NFP	NFP	1
System Acceptance	Radar 2	Mar 26	NFP	NFP	NFP	1
Modification Readiness Review 3	Radar 3	May 26	NFP	NFP	NFP	1
System Acceptance	Radar 3	Jun 28	NFP	NFP	NFP	1
Notes						
1	A CCP to reflect the ADS was executed in December 2021 reflecting revised schedule dates. Forecast dates for capability realisation are NFP.					

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Jan 24	NFP	NFP	1
Initial Operational Capability (IOC)	Apr 24	NFP	NFP	1
Materiel Release 2 (MR2)	Mar 26	NFP	NFP	1
Operational Capability 2 (OC2)	May 26	NFP	NFP	1
Final Materiel Release (FMR)	Jun 28	NFP	NFP	1
Final Operational Capability (FOC)	Jan 29	NFP	NFP	1
Notes				
1	A CCP to reflect the ADS was executed in December 2021 reflecting revised schedule dates. Forecast dates for capability realisation are NFP.			
Schedule Status at 30 June 2023 Original Planned Achieved / Forecast Approval Approval IMR IOC FMR FOC Dec-17 Jun-18 Dec-18 Jun-19 Dec-19 Jun-20 Dec-20 Jun-21 Dec-21 Jun-22 Dec-22 Jun-23 Dec-23 Jun-24 Dec-24 Jun-25 Dec-25 Jun-26 Dec-26 Jun-27 Dec-27 Jun-28 Dec-28 Jun-29				

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 team expects to meet capability requirements as expressed in the Materiel Acquisition Agreement with the exception of one capability enhancement.
	Amber: N/A
	Red: The project has received government approval for the removal of a Commonwealth developed Optional Capability Enhancement from the scope of the project that has not achieved an appropriate level of technical maturity.
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)	The first JORN radar and supporting systems upgraded with new hardware and software; New Operations Centre that supports operation of the upgraded Radar and legacy systems.	Not yet Achieved
Initial Operational Capability (IOC)	The first JORN radar and supporting systems upgraded with new hardware and software; New Operations Centre that supports operation of the upgraded Radar and legacy systems; Training to enable sufficient personnel to conduct operations has been provided; Sufficient sparing and support arrangements are in place to sustain operations;	Not yet Achieved

	Support contracts are established for all upgraded and existing JORN systems, radar sites and the JORN Coordination Centre.	
Materiel Release 2 (MR2)	The second JORN radar and supporting systems upgraded with the new hardware and software.	Not yet Achieved
Operational Capability 2 (OC2)	The second JORN radar and supporting systems upgraded with new hardware and software; Training to enable sufficient personnel to conduct operations has been provided; Sufficient sparing and support arrangements; Support contracts are established for all upgraded and existing JORN systems, radar sites and the JORN Coordination Centre.	Not yet Achieved
Final Materiel Release (FMR)	The third JORN radar and supporting systems upgraded with new hardware and software; Ionospheric sounder network is upgraded.	Not yet Achieved
Final Operational Capability (FOC)	The third JORN radar and supporting systems upgraded; Achievement of all Capability Enhancement Elements; Achievement of the operational parameters as defined in the Operational Concept Document; Training to enable sufficient personnel to conduct operations in accordance with the defined level of capability and preparedness requirements is provided; Sufficient sparing and support arrangements are in place to sustain operations in accordance with the defined level of capability and preparedness requirements; Support contracts are established for all upgraded and existing JORN systems, radar sites and the JORN Coordination Centre.	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 human resources required to execute the program cannot be sourced or retained impacting on program timelines.	Defence and BAE Systems Australia Pty Ltd have been collaboratively working together to better understand the resourcing challenges in the defence market, particularly in South Australia. The challenge with resourcing comes from both internal and external sources including other key defence projects as many of the skills required to resource these projects are similar.
2	There is a risk of schedule delays to the program impacting the delivery of capability against agreed milestones.	The new performance measurement baseline is informed by a number of critical lessons learned from the original program. A newly established, collaborative-based governance framework will ensure early visibility and elevation of performance issues to enable pro-active remediation.
3	There is a risk of cost increases associated with the upgrade of the second and third radars post IOC.	A technical contingency allocation has been identified for mitigation strategies that relate to design to cost and manufacture. Effective use of a competitive supply chain approach.
4	There is a risk that poorly defined transition points between acquisition and support impact the overall delivery of the AIR2025 Phase 6 project.	Development of an integrated master schedule will underpin effective cost and risk planning. This risk has now been combined with other project risks and has been downgraded to Low risk.
Emergent Risks (risk not previously identified but has emerged during 2022–23)		
Ref#	Description	Remedial Action
1	There is a risk that the budget for the upgrade of HPA is insufficient.	Current HPA funding was based on early estimates and may not be sufficient to deliver the replacement HPA. The project proposes to use project contingency for any shortfalls and has included estimates in the project contingency allocation.
2	There is a risk that other project factors (e.g. scope changes, inexperienced resources, supply chain issues etc.) will result in cost increases to the project.	Defence has implemented a tiered approach to project governance to ensure that changes to project costs are managed and potential opportunities to offset cost are explored including changes to delivery and assurance activities.

5.2 Major Project Issues

Ref#	Description	Remedial Action
1	The project budget might be insufficient due to the impact of inflation as the budget at project approval was outturned against a fixed inflation rate.	The project may need to access contingency funding if current funds prove to be insufficient to deliver project outcomes.

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 six lessons related to First of Type Equipment, Schedule Management and Governance. 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. Maintaining collaboration, transparent communication and disciplined engagement with all stakeholders is critical for managing technical requirements and effective risk management.	First of Type Equipment
Lesson Type – Lesson Identified. Adopting a holistic 'enterprise' approach to sustaining existing capability, delivering approved projects, approving future projects, and export opportunities, ensures that allocation of limited 'enterprise' resources across Defence and industry are optimised to minimise risks to delivery.	Governance
Lesson Type – Observation. Traditional waterfall approaches rely on a single 'big bang' integration event close to the IMR milestone which is difficult to mitigate using sequential top-down design phase analysis. More agile approaches to program delivery allow the parties to learn together, adjust to overcome emergent technical issues within schedule and cost parameters, and deliver capability faster to the warfighter.	Schedule Management

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2023

Unit	Name
Division	Air Defence & Space Systems Division
Branch	Air and Space Surveillance and Control Branch

Project Data Summary Sheet¹

Project Number	AIR5349 Phase 6
Project Name	ADVANCED GROWLER – AIRBORNE ELECTRONIC ATTACK UPGRADE
First Year Reported in the MPR	2022-23
Capability Type	Upgrade
Capability Manager	Chief of Air Force
Government 1st Pass Approval	Dec 16
Government 2nd Pass Approval	Dec 16, Dec 22
Budget at 2nd Pass Approval	\$3,221.9m
Total Approved Budget (Current)	\$3,200.1m
2022–23 Budget	\$50.9m
Complexity	ACAT II



Section 1 – Project Summary

1.1 Project Description

Project AIR5349 Bridging Air Combat Capability was initiated to maintain an air combat capability during transition from F/A-18A/B and F-111 to F-35A. Phases 1 and 2 led to introduction of 24 F/A-18F aircraft and related weapons respectively. AIR5349 Phase 3 acquired an Airborne Electronic Attack Capability (AEAC), including 12 EA-18G Growler and related mission and support systems such as the Mobile Threat Training Emitter System (MTTES). Project AIR5349 Phase 6 was initiated to support the next series of major Royal Australian Air Force (RAAF) EA-18G Growler upgrades and associated Fundamental Inputs to Capability (FIC) elements, required to ensure AEAC remains effective through to the Planned Withdrawal Date.

AIR5349 Phase 6 comprises the following:

- Next Generation Jammers (NGJ), and associated aircraft integration – NGJ is being developed and acquired by the United States Navy (USN) in three increments, namely; NGJ Mid Band (NGJ-MB), NGJ Low Band (NGJ-LB) and NGJ High Band (NGJ-HB).
- Aircraft modifications including sensor upgrades.
- Anti-Radiation Missile (ARM) variants.
- Electronic Warfare (EW) training range upgrades.
- Other Jammers.
- FIC elements including personnel, facilities, spares, support and training devices.

The project will be executed via a tranche approach (nominally three tranches) to Government, with scope of each tranche aligned against USN NGJ Program (i.e. Low, Mid and High Band).

1.2 Current Status

Cost Performance

In-year

As at 30 June 2023, Financial Year (FY) 2022-23 expenditure is \$90.1m against a budget of \$50.9m. The end of FY overspend is due to MTTES and NGJ-MB activity occurring ahead of plan.

Project Financial Assurance Statement

As at 30 June 2023, project AIR5349 Phase 6 has reviewed the approved scope and budget for those elements required to be delivered. Having reviewed the current financial and 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 including contingency remaining for the project to complete against the agreed scope.

Contingency Statement

The project has not applied for contingency in FY 2022-23.

Schedule Performance

The project has successfully achieved Materiel Release 1 (MR1) milestone and Government Second Pass Approval for Tranche 1 in accordance with the current Materiel Acquisition Agreement (MAA).

The project is on track to deliver against the capability milestones as per the current MAA.

Materiel Capability/Scope Delivery Performance

The project has successfully achieved MR1 milestone in December 2022.

AIR5349 Phase 6 Tranche 1 scope includes:

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.

- Acquisition and sustainment of NGJ-MB Jammers. - Acquisition and sustainment of AGM-88G Advanced Anti-Radiation Guided Missile – Extended Range. - Acquisition and sustainment of EW training range upgrades, including upgrades to the MTTES and acquisition of Mobile Electronic Warfare Training Emitter Systems (MEWTES). - Cooperative development of NGJ-LB and NGJ-HB. - Aircraft development and sensor upgrades. - FIC elements associated with Tranche 1 acquisition. The project is on track to deliver against the agreed: - EA-18G aircraft centric capability outcomes through Tranche 1 Initial Operational Capability (IOC) and Tranche 1 Operational Capability 2 (OC2). - EW ranges centric capability outcomes through Ready For Training (RFT) 1 through 4.
Note
Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.

1.3 Project Context

Background AIR5349 Phase 6 will introduce a number of enhancements to the AEAC, centred on the EA-18G Growler. Enhancements to the aircraft will follow the USN upgrade pathway ('flight plan') to maintain commonality between the Australian and USN EA-18G Growler. This meets the intent of the Defence White Paper 2016, enabling the Australian Growler to remain fully capable and fully interoperable, at all security levels, ensuring ongoing operational relevance and the successful conduct of combined Airborne Electronic Attack (AEA) operations. In 2014, United States (US) invited Australia to participate in the Cooperative Program (CP) for the development of the NGJ Weapon System. In December 2016, the Government through First Pass Approval agreed for Australia to enter into CP with the USN through Engineering, Manufacture and Development (EMD) Memorandum of Understanding (MoU) for NGJ-MB capability development, and Second Pass Approval for the procurement of the operational ARM variants via a Foreign Military Sales (FMS) arrangement. In 2017, the project performed Smart Buyer profiling that supported the Phase 6 project to build on existing Growler FIC and remain USN-common. This was considered to refine the project scope and associated execution strategy. In August 2019, the Government through Interim Pass Approval agreed for Australia to continue further participation future cooperative efforts for NGJ-MB with the USN through Production, Sustainment and Follow-on Development (PSFD) MoU, and NGJ-LB capability development through a subordinate Project Arrangement (PA). In 2021, an additional Smart Buyer activity was undertaken to revalidate the project's execution strategy. As a result of the Smart Buyer considerations, the project will approach Government on three separate occasions as a minimum, for approval of each of the major tranches aligned against USN NGJ Program (i.e. Low, Mid and High Band). Such an approach will provide the flexibility necessary to respond to changes in the threat environment and US programs and maintain commonality with the USN aircraft. The Government Second Pass Approval for Tranche 1 was received in December 2022.
Uniqueness AIR5349 Phase 6 is unique as Australia entered into a bilateral arrangement with the United States for co-development of NGJ. Acquiring NGJ-MB through a CP enables Defence to gain insights on design and development that reduces risks associated with transition into service, and promotes interoperability with the USN.
Major Risks and Issues The project is currently managing four major risks associated with schedule, which are related to the potential delay to Materiel Release (MR) and RFT milestones. The project is currently not tracking any major issues.
Other Current Related Projects/Phases AIR5349 Phase 3 - Growler Airborne Electronic Attack Capability. Project AIR5349 Phase 3 acquired 12 EA-18G Growler AEA aircraft, ALQ-99 Tactical Jamming System and associated weapons, training system, and through-life aircraft upgrades and support. JP2093 Guided Weapons and Explosive Ordnance Storage Program. Undertake the required scope of work associated with the weapons storage facilities, with AIR5349 Phase 6 contributing towards informing weapons storage requirements and associated funding.
Note
Major risks and issues are excluded from the scope of the Auditor-General's Independent Assurance Report.

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

Section 2 – Financial Performance²

2.1 Project Budget (out-turned) and Expenditure History

Date	Description	\$m	Notes
Project Budget			
Sep 17	Original Approved (Government First Pass Approval)	271.1	1
Aug 19	Government Interim Pass Approval	279.2	2
Mar 23	Government Second Pass Approval	2,671.7	3
	Total at Second Pass Approval	3,221.9	
Aug 21	Transfers	0.8	4
Sep 21	Transfers	2.4	4
Apr 22	Transfers	(6.6)	4
Jun 23	Exchange Variation	(18.4)	
Jun 23	Total Budget	3,200.1	
Project Expenditure			
Prior to Jul 22	US Government (NGJ Increment One Development MoU)	(191.4)	5
	US Government (NGJ PSFD MoU)	(97.1)	
	US Government (NGJ-LB Capability PA)	(72.1)	
	US Government (FMS Case AT-P-AQP)	(16.8)	
	Other Contract Payments / Internal Expenses	(14.2)	
		(391.6)	
FY to Jun 23	US Government (NGJ-MB Prime Contract)	(38.1)	6
	US Government (NGJ PSFD MoU)	(23.1)	
	CEA Technologies Pty Ltd	(11.7)	
	US Government (NGJ Increment One Development MoU)	(11.7)	
	Other Contract Payments / Internal Expenses	(5.4)	
		(90.1)	
Jun 23	Total Expenditure	(481.7)	
Jun 23	Remaining Budget	2,718.4	
Notes			
1	Government First Pass Approval to initiate the project, enter NGJ Increment One Development MoU with the USN and Government Second Pass Approval to progress FMS Case AT-P-AQP. Allocation of funding occurred in September 2017, following Government First Pass in December 2016.		
2	Government Interim Pass Approval, to enter into the NGJ PSFD MoU, NGJ-LB Capability PA and continue development of the NGJ capability.		
3	Government Second Pass Approval of Tranche 1 funding. Tranche 1 approval to fund NGJ-MB shipsets and associated spares and support equipment; AGM-88G acquisition; EW Ranges upgrades, including upgrades to the MTES and acquisition of MEWTES; development of aircraft upgrades, cooperative development of the NGJ-LB and NGJ-HB with the USN; and FIC element upgrades and sustainment associated with Tranche 1 acquisition. Allocation of funding occurred in March 2023, following Government Second Pass in December 2022.		
4	Transfer of funds due to RAAF contingency and unallocated budget movements and transfer of funds to Security and Estate Group (SEG) as well as transfer of Air Force Headquarters managed funds to Capability Acquisition and Sustainment Group (CASG).		
5	Other contract payments/internal expenses to 30 June 2022 were comprised of contractor support, travel and project management expenses.		
6	Other contract payments/internal expenses to 30 June 2023 were comprised of contractor support, travel, project management expenses, and FMS Case AT-P-AQP.		

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
63.7	48.5	50.9	Portfolio Budget Statement (PBS) to Portfolio Additional Estimates Statement (PAES): Variation is due to funds transfer to SEG, allocated budget and foreign currency exchange adjustments. PAES to Final Plan: Variation is due to allocated budget and foreign currency exchange variations.

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.

Variance \$m	(15.2)	2.4	Total Variance (\$m): (12.8)
Variance %	(23.9)	5.0	Total Variance (%): (20.1)

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		10.6	Australian Industry	The variance in spending was primarily due to: (Australian Industry) CEA Technologies Pty Ltd – earlier than planned expenditure of payments. (Foreign Government) Exchange Of Letters (EOL) – advanced payment of shared contribution to development costs. (Foreign Government) NGJ-MB Prime Contract – earlier than planned expenditure of payments. (Cost Saving) FMS and Project Office Support – FMS disbursements received not as high as planned, contractor and travel underachieved against budget.
		-	Foreign Industry	
		-	Early Processes	
		-	Defence Processes	
		37.9	Foreign Government Negotiations/Payments	
		(9.2)	Cost Saving	
		-	Effort in Support of Operations	
		-	Additional Government Approvals	
50.9	90.1	39.2	Total Variance	
		77.1	% Variance	

2.3A Details of Project Major Contracts – Price

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 23 \$m			
US Government (FMS Case AT-P-AQP)	20 Sep 17	19.4	21.9	Reimbursement (for FMS)	FMS	-
US Government (NGJ Increment One Development MoU)	18 Oct 17	199.4	203.1	Cost Ceiling (Capped)	MoU	1, 2
US Government (NGJ PSFD MoU)	17 May 20	109.1	120.3	Cost Ceiling (Capped)	MoU	1, 3, 4
US Government (NGJ-LB Capability PA)	13 Jul 20	80.7	72.1	Cost Ceiling (Capped)	MoU	1, 5
CEA Technologies Pty Ltd	22 Dec 22	252.4	275.0	Firm or Fixed	Standard Defence Contract	6
US Government (NGJ-MB Prime Contract)	13 Mar 23	284.4	288.8	Variable	MoU	7
Notes						
1	This agreement has fully expended all funding to the US Government.					
2	An agreement to enable shared contributions to EMD of NGJ-MB with some discussion of follow-on developments. Funding is limited to a cost ceiling, which can only be changed upon mutual written consent of the Participants. Australia is responsible for paying a proportion of the total costs.					
3	An 'umbrella' agreement to enable shared contributions to PSFD of the NGJ Weapon System (including Production and Sustainment of NGJ-MB), with subordinate PAs for additional AEA capabilities. The PSFD MoU provides scope for production, sustainment, and follow-on development of AEA capabilities. Funding is limited to a cost ceiling, which can only be changed upon mutual written consent of the Participants. Australia is responsible for paying a proportion of the total costs.					
4	The EOL agreed an increase to the price ceiling of the PSFD MoU for the follow-on development of the NGJ-MB capability.					
5	PA under the PSFD MoU to design, develop, test and integrate NGJ-LB capability into the EA-18G Growler. Australia is responsible for paying a proportion of the total costs.					
6	The scope of the contract includes eight x MEWTES, four x Advanced MTES (ADVM) and associated support system elements.					
7	The scope of the contract includes initial quantity of NGJ-MB shipsets, spares, support equipment and training system.					

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

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 23		
US Government (FMS Case AT-P-AQP)	Classified	Classified	AGM-88 variants and support.	-
US Government (NGJ Increment One Development MoU)	N/A	N/A	Australia's contribution to shared costs from FY 2017-18 to FY 2022-23, and includes contribution to project overhead and administration costs, as well as EMD common efforts for NGJ-MB, including associated science and technology activities; and the development of mission systems, training,	1

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

			production plans and support equipment and technologies.	
US Government (NGJ PSFD MoU)	N/A	N/A	Australia's contribution to shared costs from FY 2020-21 to FY 2022-23, and includes contribution to PSFD common efforts of NGJ-MB, and project overhead and administration costs.	1
US Government (NGJ-LB Capability PA)	N/A	N/A	Australia's contribution to shared costs from FY 2021-22, and includes contribution to project overhead and administration costs, as well as EMD common efforts, including associated science and technology activities; and the development of mission systems, training, production plans and support equipment and technologies.	1
CEA Technologies Pty Ltd	Various	Various	Eight x MEWTES, four x ADVDM, publications, manuals, training, transition, integration and support services.	2
US Government (NGJ-MB Prime Contract)	Various	Various	Initial quantity of NGJ-MB shipsets, spares, training system and support equipment.	-
Major equipment accepted and quantities to 30 Jun 23				
All contracted supplies under FMS Case AT-P-AQP have been delivered.				
Notes				
1	No equipment delivered as part of the MoUs or PA.			
2	This Contract is an Official Order under the Active Electronically Scanned Array Head Deed for additional emitter systems.			

2.4 Australian Industry Capability

Summary
The project has contracted Australian Industry Capability (AIC) targets based on opportunities to maximise internationally competitive Australian Industry involvement which is captured in the CEA Technologies Pty Ltd AIC Plan in support of applicable Sovereign Industrial Capability Priorities.
The project has no contracted AIC targets for its US Government FMS acquisition as the US Foreign Government arrangement does not include the contractual provision or obligations for Australian Industry Content.
The project has no contracted AIC targets for its US Government CP, however has provisions to encourage competitive participation of Australian Industry without the contractual 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	ADVM7	N/A	N/A	N/A	N/A	1
	ADVM8	N/A	N/A	N/A	N/A	1
	ADVM9	N/A	N/A	N/A	N/A	1
	ADVM11	N/A	N/A	N/A	N/A	1
	MEWTES	Dec 23	N/A	Dec 23	0	2, 3
Preliminary Design	ADVM7	N/A	N/A	N/A	N/A	1
	ADVM8	N/A	N/A	N/A	N/A	1
	ADVM9	N/A	N/A	N/A	N/A	1
	ADVM11	N/A	N/A	N/A	N/A	1
	MEWTES	N/A	N/A	N/A	N/A	2
Critical Design	NGJ-MB	N/A	N/A	Apr 17	N/A	4
	AGM-88G	N/A	N/A	Feb 20	N/A	5
	ADVM7	N/A	N/A	N/A	N/A	1
	ADVM8	N/A	N/A	N/A	N/A	1
	ADVM9	N/A	N/A	N/A	N/A	1
	ADVM11	N/A	N/A	N/A	N/A	1
	MEWTES	Jan 24	N/A	Jan 24	0	2, 6
Notes						
1	ADVM7, ADVM8, ADVM9 and ADVM11 systems are off-the-shelf CEA Technologies Pty Ltd products without any development required.					

2	The CEA Technologies Pty Ltd Contract does not use System Requirements, Preliminary Design or Critical Design Mandated System Reviews. Rather, CEA Technologies Pty Ltd approach is to use Technical Progress Reviews (TPR) to progressively iterate the design through-out the design phase then monitor production throughout the contract.
3	MEWTES is a developmental system requires design within scope of the contract. The equivalent date of MEWTES System Requirements Review is the date that the final version of the MEWTES System Performance Specification (SPS) describing the MEWTES 'Functional Baseline' is delivered to the Commonwealth of Australia (CoA). Prior to this time, CoA and CEA Technologies Pty Ltd will use TPR to refine the draft MEWTES SPS to a final version due in December 2023.
4	Per the US Department of Defence (DoD) Acquisition Life Cycle, Critical Design Review for NGJ-MB was achieved April 2017.
5	Per the US DoD Acquisition Life Cycle, Critical Design Review for AGM-88G was achieved in February 2020.
6	There is no contracted date for the MEWTES Critical Design Review. However, post-TPR #4 occurring in January 2024, the MEWTES design is expected to be refined to an equivalent Critical Design Review level in order to commence orders for bespoke MEWTES components. January 2024 is the date that TPR #4 is issued to the CoA.

3.2 Contractor Test and Evaluation Progress

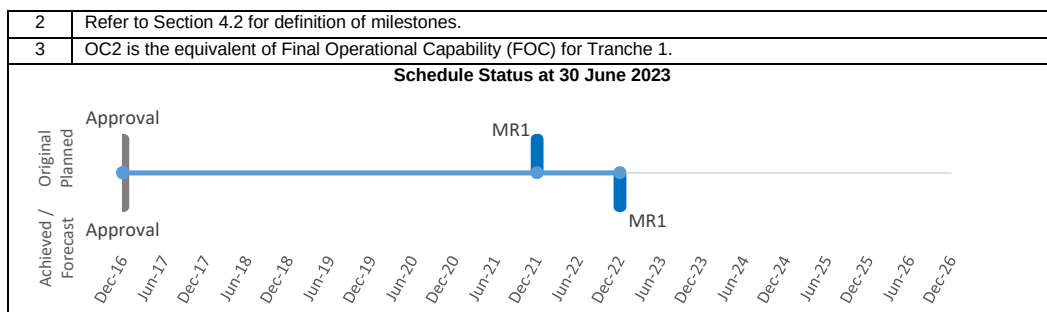
Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
System Integration	AGM-88G USN IOC	N/A	N/A	Sep 23	N/A	1
	NGJ-MB USN IOC	N/A	N/A	Sep 23	N/A	2
	ADVM11	Oct 25	N/A	Sep 25	(1)	3
	ADVM8	Nov 25	N/A	Nov 25	0	3
	MEWTES #1	Aug 26	N/A	Mar 26	(5)	3
	MEWTES #2	Aug 26	N/A	Jun 26	(2)	3
	ADVM7	Jun 26	N/A	May 26	(1)	3
	ADVM9	Jul 26	N/A	May 26	(2)	3
	MEWTES #3	Oct 26	N/A	Sep 26	(1)	3
	MEWTES #4	Oct 26	N/A	Sep 26	(1)	3
	MEWTES #5	Oct 26	N/A	Sep 26	(1)	3
	MEWTES #6	Oct 26	N/A	Sep 26	(1)	3
	MEWTES #7 and #8	Jan 27	N/A	Dec 26	(1)	3
Acceptance	Acceptance of MEWTES #1	Sep 26	N/A	Sep 26	0	4
	Acceptance of MEWTES #2	Nov 26	N/A	Nov 26	0	4
	Acceptance of MEWTES #3	Mar 27	N/A	Mar 27	0	4
	Acceptance of MEWTES #4	Mar 27	N/A	Mar 27	0	4
	Acceptance of ADVM7	Sep 26	N/A	Sep 26	0	4
	Acceptance of ADVM8	Feb 26	N/A	Mar 26	1	4, 5
	Acceptance of ADVM9	Jan 27	N/A	Jan 27	0	4
	Acceptance of ADVM11	Sep 26	N/A	Sep 26	0	4
	Acceptance of MEWTES #5	Mar 27	N/A	Mar 27	0	4
	Acceptance of MEWTES #6	Mar 27	N/A	Mar 27	0	4
	Acceptance of MEWTES #7	May 27	N/A	May 27	0	4
	Acceptance of MEWTES #8	May 27	N/A	May 27	0	4
Notes						
1	USN key milestone for AGM-88G system under the US DoD Acquisition Life Cycle.					
2	USN key milestone for NGJ-MB system under the US DoD Acquisition Life Cycle.					
3	Dates align with the delivery of systems to the CoA on completion of Range Acceptance Testing.					
4	Dates align with the Supplies Acceptance milestone in the Contract Master Schedule.					
5	Variance due to revised forecast within the Contract Master Schedule.					

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Materiel Release 1 (MR1)	Oct – Dec 21	Dec 22	12	1
MTTES RFT1	Not For Publication (NFP)	NFP	0	2
Tranche 1 Initial Operational Capability (IOC)	NFP	NFP	0	2
MTTES RFT2	NFP	NFP	0	2
MTTES RFT3	NFP	NFP	0	2
MTTES RFT4	NFP	NFP	0	2
Tranche 1 Operational Capability 2 (OC2)	NFP	NFP	0	3
Notes				
1	Variance due to additional time required for due diligence activities to confirm materiel delivery in support of the milestone.			

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report



Note
Forecast dates in Section 3 are excluded from the scope of the Auditor-General's Independent Assurance Report.
The approval date in this graph refers to Government Second Pass Approval received in December 2016 to enter in a FMS arrangement. Government Second Pass Approval for Tranche 1 was received in December 2022.

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 the current capability requirements as expressed in the MAA.
	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
Materiel Release 1 (MR1)	Delivery of AGM-88 variants war stock into Australian Defence Force inventory.	Achieved
MTTES RFT1	Capable of conducting MTES operations in an additional single training area and having achieved increased MTES training capability and capacity. MTES RFT1 achievement is reliant on the successful delivery of MR2.	Not yet Achieved
Tranche 1 Initial Operational Capability (IOC)	IOC of NGJ-MB and AGM-88G integrated on RAAF EA-18G Growler, having completed the required level of test and evaluation and trained the necessary workforce. Achievement of Tranche 1 IOC achievement is reliant on the successful delivery of MR3, MR4 and MR5.	Not yet Achieved
MTTES RFT2	Initial MEWTES capability, and capable of conducting MTES operations in additional training areas, having completed the required level of test and evaluation and achieved increased MEWTES training capability and capacity. MTES RFT2 achievement is reliant on the successful delivery of MR6.	Not yet Achieved
MTTES RFT3	ADVM7, ADV8, ADV9 and ADV11 capability and associated through-life support, upgraded Mission Control Centre, having completed the required level of test and evaluation and achieved increased MTES training capability and capacity. MTES RFT3 achievement is reliant on the successful delivery of MR7.	Not yet Achieved

MTTES RFT4	Mature MEWTES capability and associated through-life support, having completed the required level of test and evaluation. MTTES RFT4 achievement is reliant on the successful delivery of MR8.	Not yet Achieved
Tranche 1 Operational Capability 2 (OC2)	Mature NGJ-MB and AGM-88G capability integrated on RAAF EA-18G Growler, including associated through-life support. Tranche 1 OC2 achievement is reliant on the successful delivery of MR9.	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	N/A	N/A
Emergent Risks (risk not previously identified but has emerged during 2022–23)		
Ref#	Description	Remedial Action
1	Four schedule risks have been identified relating to potential delay to MR milestones due to late delivery of multiple materiel system elements.	The project continues to work closely with the materiel system providers to refine design and production timelines in support of the applicable MR milestones.

5.2 Major Project Issues

Ref#	Description	Remedial Action
1	N/A	N/A

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 three lessons in total, relating to Contract Management, Resourcing and Governance, and Governance. These project lessons are provided below:	The project has not categorised any of its lessons information as a whole-of-Defence Lesson Learned.
Lesson Type – Observation. Funding for CP set-up costs. A FMS case is required to be in place as a foreign disclosure vehicle to allow information exchange and to provide funding for setup costs associated with establishing a CP.	Contract Management
Lesson Type – Observation. One Defence Strategic Risk Management (SRM) Framework. A One Defence SRM framework should be developed and aligned with the Defence harmonised risk management framework that is prescribed in Defence policy. This would improve visibility and communication of risks across Defence and Government.	Resourcing & Governance
Lesson Type – Observation. Promotion of effective and efficient communication of risks across multiple organisations. The project management plan should be utilised to promote effective and efficient communication of risks across multiple organisations to ensure compliance with Work Health and Safety legislations and Defence's safety management frameworks.	Governance

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2023

Unit	Name
Division	Aerospace Systems Division
Branch	Aerospace Combat Systems

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

Project Data Summary Sheet¹

Project Number	AIR5431 Phase 3
Project Name	CIVIL MILITARY AIR TRAFFIC MANAGEMENT SYSTEM (CMATS)
First Year Reported	2016-17
Capability Type	Replacement
Capability Manager	Chief of Air Force
Government 1st Pass Approval	Nov 11
Government 2nd Pass Approval	Dec 14
Budget at 2nd Pass Approval	\$731.4m
Total Approved Budget (Current)	\$1,010.0m
2022–23 Budget	\$127.9m
Complexity	ACAT I



Section 1 – Project Summary

1.1 Project Description

AIR5431 Phase 3 will replace the current Australian Defence Air Traffic System at twelve fixed base Defence locations. The Defence component of the joint project includes; eight Civil Military Air Traffic Management System (CMATS) sites and four Airservices Defence OneSKY Tower (ADOT) sites. The ab-initio training simulator at the Royal Australian Air Force (RAAF) School of Air Traffic Control (SATC) and the Operational Maintenance Trainer at RAAF Amberley will be delivered through the On Supply Agreement (OSA) contract between AIR5431 Phase 3 and the Airservices Australia Pty Ltd OneSKY program.

To meet this OSA obligation, in addition to providing direct services using internal work packages, Airservices Australia Pty Ltd holds the contracts with Thales Australia Ltd, as prime contractor for the CMATS deliveries, and with Saab Australia Pty Ltd, and Frequentis Australasia Pty Ltd for subsystems of the ADOT solution.

In addition to the deliverables under the OSA with Airservices Australia Pty Ltd, AIR5431 Phase 3 will also deliver radio transition and business continuity projects, as well as the management of site works and the provision of Customer Furnished Services (CFS).

1.2 Current Status

Cost Performance

In-year

As at 30 June 2023, Financial Year (FY) 2022-23 expenditure was \$92.3m against FY 2022-23 budget of \$127.9m. The variation is due to a combination of:

- Contract Change Proposal (CCP) amendments to the Air-Ground-Air (AGA) contract milestone delivery dates.
- Payment pause of OSA payments to Airservices Australia Pty Ltd to align with Airservices' suspension of payments to Thales Australia Ltd until the agreed Cost Checkpoint Milestone is achieved.
- Removal of a previous year accrual identified by Airservices Australia Pty Ltd that originally anticipated work outside the payment schedule to be performed by Thales Australia Ltd by 30 June 2023. As this did not occur, the accrual was not required.
- Delay in legacy system costs (procurement of Autotrac II) due to new information on how that amount was reported.
- CFS delivery work execution and start-up has been more difficult than originally anticipated by the project.
- Contractor delay on site preparation and support costs.
- Less than anticipated requirement for contracted workforce due to delays in the prime contract.
- Less than anticipated operating expenses due to lower project management and Air Force operating costs.

Project Financial Assurance Statement

As at 30 June 2023, project AIR5431 Phase 3 has reviewed the projects 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, that there is insufficient budget remaining, including contingency, for the project to complete taking into account changes that may result from the Project of Concern (POC) remediation plan.

Contingency Statement

The project has applied for contingency in the FY 2022-23, and received \$12.5m to fund the initial additional scope associated with the Life Of Type Extension (LOTE) of the legacy air traffic system, due to delays in the delivery of the project.

In November 2022, once greater detail was provided, the project requested further contingency of \$112.8m for the full scope of LOTE, potential contributions to contract changes related to CMATS, and future extensions to the Jacobs Australia Pty Ltd services

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.

contract up to FY 2027-28.
Schedule Performance On the 27 October 2022, the Minister of Defence Industry declared AIR5431 Phase 3 would be relisted as a POC due to ongoing cost, schedule and technical challenges with the CMATS aspects of the program. The Minister of Defence Industry has facilitated POC summits in December 2022 and March 2023 between Thales Australia Ltd, Airservices Australia Pty Ltd and Defence leadership to review options to remediate the issues. In December 2022, Airservices Australia Pty Ltd contracted an external company to conduct a third Independent Baseline Review (IBR) of the CMATS Contract Master Schedule (CMS). The IBR found the Thales Australia Ltd schedule was not credible and their schedule methodology presented a risk to the successful delivery of the program. Accordingly, the POC summit required Thales Australia Ltd, as part of the remediation plan, to address 13 major Corrective Action Requests (CARs) identified by the IBR. At the reporting date, the majority of the CARs were recommended for closure, based on Customer agreement to undertake an independent risk assessment on the final schedule offered for approval. In order to mitigate potential inefficiencies and cost impacts associated with POC remediation planning and negotiation, a Standstill Deed was prepared to clearly identify low-risk work within the current contract that could continue, and what should be paused awaiting outcomes from POC remediation. The Standstill Deed was at final draft stage at 30 June 2023, and planned for execution during July 2023. Since the March 2023 POC Summit, Defence and Airservices Australia Pty Ltd (the Customer) and Thales Australia Ltd have worked to implement the agreed remediation plan for the project. Thales Australia Ltd has proposed a change in CMATS site rollout and engineering strategy that combines the Release Zero (RZ) and Release 1 (R1) design scope, and shifts capability delivery to Defence sites after commissioning of Civil sites. This approach also introduces the concept of Minimum Viable Product, which has the effect of modifying the existing software release strategy to focus on essential capabilities to conduct safe and secure air traffic operations. Completion of the remediation plan actions will trigger a change to the Initial Operational Capability (IOC) criteria for Defence. As at 30 June 2023, Thales Australia Ltd have provided a draft schedule to support their POC remediation plan, however as an interim version, it was not fully resourced and relied on planning assumptions that are yet to be negotiated and agreed. The CMS had not been assured against the customer defined Monte Carlo risk appetite, required to ensure a high-level of credibility to enable accurate management of LOTE activities associated with the legacy Air Traffic Management (ATM) system, and site and services planning and preparation at Defence bases. In June 2023 Saab, Inc. acquired the intellectual property rights from NAV CANADA for the Integrated Tower Automation Suite (INTAS) software product, following NAV CANADA's announcement in June 2022 of their intent to withdraw software support for the product. The change in Original Equipment Manufacturer for INTAS, coupled with a CCP to incorporate the Defence-specific scope for ADOT, and schedule performance challenges experienced in the 12 months prior to July 2022, will result in delays to the delivery of ADOT against the original planned dates, to be validated once Saab, Inc. and Frequentis Australasia Pty Ltd each deliver a formal CMS and Airservices Australia Pty Ltd incorporate these into an Integrated Master Schedule (IMS). Materiel Capability/Scope Delivery Performance The project has not delivered any materiel capability to date through the OSA. Related Materiel Capability is also being managed by the project outside the OSA including: - Air-Ground-Air Transition (AGAT) solution delivered by BAE Systems Australia (hardware installed at six sites but cannot be commissioned/activated until the CMATS systems are installed), - An Australian Defence Air Traffic System (ADATS) LOTE contract with Raytheon Australia Pty Ltd to mitigate realised schedule delays with CMATS and ADOT. Contingency funding has been released to extend the Life Of Type (LOT) for the legacy air traffic system and voice communications switch, but no contracts have yet been entered into, and - Defence site preparation and support, to support the design requirements of the contractor. Recognising the lack of capability delivered to date against the original plan agreed to in the OSA, and changes that may result from POC remediation, Defence paused OSA payments to Airservices Australia Pty Ltd and have identified a need to negotiate a new payment schedule that more appropriately links payments to delivery. Note Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.

1.3 Project Context

Background Defence and Airservices Australia Pty Ltd sought in 2011 to replace their legacy Air Traffic Control (ATC) systems through the acquisition of a harmonised Australian CMATS that will deliver improvements in safety, efficiency, flexibility, economy and business continuity. A joint solicitation was conducted in June 2013. AIR5431 Phase 3 received Government Second Pass approval in December 2014 on the basis of tendered agnostic capability, schedule and cost data provisioned by Airservices Australia Pty Ltd in the form of a not-to-exceed price for the Defence contribution for the common and Defence unique elements delivered under the OSA. On 18 August 2017, due to concerns over an inability to finalise negotiations within acceptable cost and schedule parameters, AIR5431 Phase 3 was listed as a POC. In February 2018, AIR5431 Phase 3 was granted a Real Cost Increase (RCI) of \$243.0m (including contingency) to cover Defence's contribution for the agreed collaboration options, a transition radio solution (AGAT), ADATS LOTE and facilities preparation costs related to CMATS installation. This RCI allowed Defence to agree to a fixed price contribution for the Defence deliveries under the OSA, which allowed Airservices Australia Pty Ltd to sign contracts with Thales Australia Ltd, and other contractors subsequently, for the joint supplies. AIR5431 Phase 3 was removed from the POC list on 8 May 2018 as a result of the contract with Airservices Australia Pty Ltd being

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

established, but remained as a Project of Interest with bi-annual updates to Government. On the 27 October 2022, the Minister of Defence Industry declared AIR5431 Phase 3 would be relisted as a POC due to ongoing cost, schedule and technical challenges. During December 2022, a POC summit was led by the Minister for Defence Industry, to initiate senior level discussions on approach to identify high-level remediation goals. A further summit was held in March 2023, to review progress and provide updated direction.
Uniqueness AIR5431 Phase 3 represents the first time that a Defence project is contributing to a major national infrastructure project. The December 2009 National Aviation White Paper identified the need to implement a harmonised national civil and military ATM system. The activities identified in the National Aviation White Paper for the implementation of a comprehensive, collaborative approach to nation-wide ATM included the procurement of a single solution ATM platform between Civil and Military agencies. At the time of decision to enter into the joint project arrangement, there was no history of a similar governance structure in operation that aligned with the scope of this project. As a consequence, Airservices Australia Pty Ltd and Defence have established and continued to refine the joint delivery structure without the benefit of adapting from proven existing models.
Major Risks and Issues Airservices Australia Pty Ltd and Defence manage risks separately in accordance with their respective risk management frameworks. The CMATS and ADOT joint program risk and issues register is maintained by Airservices Australia Pty Ltd using the Airservices Australia Pty Ltd risk matrix, and considers risks that collectively impact Defence and Airservices Australia Pty Ltd. AIR5431 Phase 3 operates a risk register for Defence specific/unique risks and issues. All major risks that have an impact on AIR5431 Phase 3 delivery have been recorded, regardless of where they are managed. During the reporting period, the risks identified for AIR5431 Phase 3, the CMATS joint program and ADOT continue to relate to the categories of contractor performance, schedule, resourcing, customer furnished (materials, supplies, services, data) and program delivery, as follows: - Contractor performance covering system design processes, engineering approaches, Human Factors, baseline management, quality assurance of technical activities/documentation, compliance with customer constraints, achievement of milestones, governance and resource composition to deliver the capability. - Scheduling of activities in an IMS, informed by credible CMS to enable the management of resources, obligations, critical path priorities and constraints. - Resourcing sufficiency and suitability across the OneSKY program, including adequate support to key contractor-led activities such as major design reviews, testing activities and site integration and verification, which may include onerous and ongoing travel obligations. - Customer Furnished Materials, Supplies and Services including provision, delivery, non-compliance, delays to, deficiencies in, or unavailability of Defence third-party systems, Chief Information Officer Group and Security and Estate Group (SEG) infrastructure and networks. - Program delivery risks associated with the delivery of the collaboration options and supplies and services in accordance with the OSA, design, delivery and through-life support of ADOT. Overall increase in risk since the previous report is emerging, due to the increasing cost and schedule impact of addressing critical system design aspects later than planned in the design cycle and issues associated with the future of INTAS as a technology solution for ADOT. Some of the Defence obligations have reduced, in part due to their relationship to milestones in the Thales Australia Ltd schedule, which has experienced high levels of delay. The key issues impacting Defence and requiring active management include: - Fitness for purpose of the OSA to manage the on-supply of sustainment services from Airservices Australia Pty Ltd. - The increased cost of the project Major Service Provider (MSP) resources as a result of contractor delays. - Premature exit of the Critical Design Review (CDR) with major deficiencies in the design that require addressing prior to exiting system verification. - Through-life supportability of the INTAS product for ADOT may not be viable following NAV CANADA's announcement that they are ceasing system development of the INTAS product.
Other Current Related Projects/Phases AIR5431 Phase 1. Deployable Defence ATM Capability will introduce Deployable ATM command and control systems into the Australian Defence Force inventory. This phase has no impact on the ability of AIR5431 Phase 3 to deliver its outcomes. AIR5431 Phase 2. Fixed Defence ATC Surveillance System will replace the existing fixed base Defence ATC surveillance radars. AIR5431 Phase 3 is highly reliant on AIR5431 Phase 2 to deliver ATC surveillance data at some sites, prior to the commissioning of those sites.
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 14	Original Approved (Government Second Pass Approval)	731.4	1
	Total at Second Pass Approval	731.4	
Dec 17	Real Variation – Budgetary Adjustment	(6.8)	2
Feb 18	Real Variation – Real Cost Increase	247.5	3
Nov 21	Real Variation – Transfer	1.7	4
Dec 21	Real Variation – Transfer	15.5	4
Feb 22	Real Variation – Transfer	17.6	4
Mar 23	Real Variation – Transfer	(0.6)	5
Jun 23	Exchange Variation	3.6	
Jun 23	Total Budget	1,010.0	6
	Project Expenditure		
Prior to Jul 22	Contract Expenditure – Airservices Australia Pty Ltd	(356.6)	
	Contract Expenditure – Jacobs Australia Pty Ltd – Integrated Work Package (IWP)	(68.4)	
	Contract Expenditure – BAE Systems Australia Pty Ltd	(42.8)	
	Other Contract Payments / Internal Expenses	(51.1)	
		(518.9)	
FY to Jun 23	Contract Expenditure – Airservices Australia Pty Ltd	(61.6)	8
	Contract Expenditure – Jacobs Australia Pty Ltd – IWP	(14.4)	
	Contract Expenditure – BAE Systems Australia Pty Ltd	(13.1)	
	Other Contract Payments / Internal Expenses	(3.2)	7
		(92.3)	
Jun 23	Total Expenditure	(611.2)	
Jun 23	Remaining Budget	(398.8)	
Notes			
1	In addition to direct project costs, Defence received approximately \$175.0m for Major Capital Facility costs and enabling Information and Communications Technology costs.		
2	This variation is due to administrative decisions to temporarily harvest funds from the project. These funds were returned to the project as part of the RCI approved in February 2018. These funds were part of the original Second Pass approval budget.		
3	An RCI of \$249.7m was approved by Government in February 2018 to cover additional costs related to the acquisition. This includes \$2.2m for Air Force to relocate the current Tindal Australian Military Airspace Control Communications System (AMACCS) ATC radio equipment site, leaving \$247.5m for Capability Acquisition and Sustainment Group (CASG) related costs (additional CMATS costs, AGAT radio solution, ADATS LOTE and facilities preparation costs related to CMATS installation). This figure includes the \$6.8m returned to the project to correct the budgetary adjustment which occurred in December 2017. Given this, the total approved RCI above Second Pass approval is \$242.9m including the \$2.2m for Air Force.		
4	Air Force Group Project Budget transferred to CASG as part of FY 2021-22 Additional Estimates for financial management purposes. Subsequent transfers include an adjustment for FY 2020-21 underspend and a transfer from SEG to Air Force Group for funding related to existing tower demolition.		
5	Air Force Group Project Budget (part of CASG budget) transferred to SEG for funding related to ATC Communications Facilities Study.		
6	The total budget included planned expenditure for the AGAT solution, ADATS LOTE and Defence site preparation and support. These procurements have been incorporated into Section 2.3 as each agreement was reached.		
7	Other Contract Payments in FY 2022-23 include (\$2.0m) expenditure on site preparation, (\$0.6m) on legacy ATC automation system Autotrac II update procurement and the remaining (\$0.6m) being other contract payments/internal expenses.		
8	Payment pause of OSA payments to Airservices Australia Pty Ltd took effect March 2023, to align with Airservices' suspension of payments to Thales Australia Ltd, until the agreed Cost Checkpoint Milestone is achieved.		

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.

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
122.8	130.6	127.9	<u>Portfolio Budget Statement (PBS) to Portfolio Additional Estimate Statement (PAES):</u> Variation is primarily due to a reduced number of transition radio site rollouts. <u>PAES to Final Plan:</u> Variance was due to exchange rate changes.
Variance \$m	7.8	(2.7)	Total Variance (\$m): 5.1
Variance %	6.4	(2.1)	Total Variance (%): 4.2

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(35.2)	Australian Industry	The variation is due to: • CCP amendments to the AGA contract milestone delivery dates (\$2.9m); • Payment pause of OSA payments to Airservices Australia Pty Ltd and removal of June 2023 Accrual (\$31.5m); • Delay in legacy system costs (procurement of Autotrac II) (\$2.3m); • Slower than expected CFS delivery work execution and start-up (\$1.7m); • Less than anticipated requirement for contracted workforce due to delays in the prime contract (\$1.8m); and • Less than anticipated operating expenses due to lower project management and Air Force operating costs (\$1.2m).
		-	Foreign Industry	
		-	Early Processes	
		(0.4)	Defence Processes	
		-	Foreign Government Negotiations/Payments	
		-	Cost Saving	
		-	Effort in Support of Operations	
		-	Additional Government Approvals	
		(35.6)	Total Variance	
127.9	92.3	(27.9)	% Variance	

2.3A Details of Project Major Contracts – Price

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 23 \$m			
Jacobs Australia Pty Ltd – Integrated Support Contract (ISC)	Dec 14	107.7	27.0	Variable	Modified Standard Defence Contract	1, 2
Airservices Australia Pty Ltd	Feb 18	521.0	547.8	Firm or Fixed	On Supply Agreement	1, 3
Jacobs Australia Pty Ltd – IWP	Dec 18	47.0	86.2	Variable	Integrated Work Package	1, 4
BAE Systems Australia Pty Ltd – AGA Transition System	Nov 19	67.4	70.6	Firm or Fixed	Support Contract Survey & Quote	1
Notes						
1	Contract value as at 30 June 2023 is based on actual expenditure to 30 June 2023 and remaining commitment at current budgeted exchange rates, and includes adjustments for indexation (where applicable).					
2	The Jacobs ISC contract was closed following the transition to a Branch wide Jacobs IWP contract.					
3	CMATS will be procured via the contracts (Acquisition) and (Support) between Airservices Australia Pty Ltd and Thales Australia Ltd. Airservices Australia Pty Ltd manages both contracts with Thales Australia Ltd on behalf of Defence through the OSA. Due to exchange rate variance, the addition of Defence approved scope and the inclusion of contract (Support), the price of the OSA will increase over time.					
4	The project workforce structure is based on the CASG First Principles Review with 80% of the project staff being delivered under the IWP contract. Contract value is the estimated project share of the Branch IWP contract and is based on the current Purchase Order commitment of the estimate of project expenditure for work packages to the end of December 2024. However, some of the requested contingency is to fund extended project office and contractor costs caused by the delays. Further costs may result from agreed POC remediation plan, but are not yet accounted for due to a lack of data.					

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

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 23		
Jacobs Australia Pty Ltd – ISC	N/A	N/A	Service based integrated support.	1

Airservices Australia Pty Ltd	N/A	N/A	Through the OSA Airservices Australia Pty Ltd will deliver: CMATS combined control tower and approach centres at Amberley (including Oakey approach), East Sale, Williamtown, Tindal and Nowra; consolidated Darwin and Townsville approach services at Airservices Australia Pty Ltd Brisbane approach centre; CMATS control tower systems at Darwin, Townsville and Pearce; ADOT systems at Richmond, Oakey, Edinburgh and Gingin; a simulator system at SATC and an Operational Maintenance Trainer at Amberley.	2
Jacobs Australia Pty Ltd – IWP	N/A	N/A	Service based integrated support.	-
BAE Systems Australia Pty Ltd	N/A	N/A	Procurement, design, integration and installation of an AGAT system across the 12 Defence sites. This includes the procurement and integration of radio communications equipment that will supplement the existing AMACCS (currently sustained by BAE Systems Australia Pty Ltd) to enable transition of CMATS.	-
Major equipment accepted and quantities to 30 Jun 23				
Nil				
Notes				
1	This Jacobs ISC contract was closed following the transition to a Branch wide Jacobs IWP contract.			
2	This was a result of agreeing alternate control tower systems for Oakey, Gingin, Richmond and Edinburgh (previously referred to as the Four Alternate Tower Solution and now referred to as the ADOT system will be delivered within the agreed fixed-price cap of \$521.0m. The obligation for Airservices Australia Pty Ltd to provide ADOT was established through the OSA signed 22 February 2018. The ADOT Statement of Work and Functional Performance Specification are the subject of negotiations between Defence and Airservices Australia Pty Ltd.			

2.4 Australian Industry Capability

Summary
The project has no contracted Australian Industry Capability (AIC) targets or AIC Plan in place for Airservices Australia Pty Ltd. Thales Australia Ltd, as the prime systems integrator for the CMATS system, was required to establish an Australian Industry Participation Plan using the model developed by Department of Industry, Science and Resources. The project has an AIC plan in place for BAE Systems Australia Pty Ltd with contracted AIC commitments. BAE Systems Australia Pty Ltd are required to identify Local Industry Capability in the support of their procurement, design, integration and installation activities. The project has no contracted AIC targets or AIC plan in place for Jacobs Australia Pty Ltd. The project sources Jacobs Australia Pty Ltd - IWP services via the Air and Space Surveillance and Control Branch MSP contract through 12-monthly work packages funded by AIR5431 Phase 3 for relevant scope of work.
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	CMATS System Requirements Analysis	Aug 17	N/A	Jan 18	5	1
Preliminary Design RZ	CMATS	Oct 19	N/A	Dec 19	2	2, 4
Critical Design RZ	CMATS	Apr 20	Sep 20	Dec 20	8	2, 5
Design Release Baseline Review (DRBR) RZ (Block 1)	CMATS	Apr 21	Jun 21	Jun 21	2	7, 5
Support System CDR RZ	CMATS	Apr 20	Jun 21	Nov 21	19	8
Preliminary Design Review R1 Final	CMATS	Jan 22	Oct 24	To Be Announced (TBA)	N/A	3

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

CDR R1	CMATS	Sep 22	Aug 24	TBA	N/A	3
Preliminary Design Review R2	CMATS	Jun 23	Apr 25	TBA	N/A	3
CDR R2	CMATS	Feb 24	Dec 25	TBA	N/A	3
System Requirements	Alternate Towers Via Airservices Australia Pty Ltd	Not yet agreed	N/A	N/A	N/A	6
Notes						
1	Airservices Australia Pty Ltd entered into contact with Thales Australia Ltd for the acquisition of the CMATS in February 2018. System Requirements Analysis was achieved later than expected due to an underestimation of the effort required to develop the Functional Baseline.					
2	RZ is the initial Defence system build for the first five Defence sites and represents the minimum software functionality for safe air traffic services at Defence sites. R1 is a software release that represents the minimum functionality required for Airservices Australia Pty Ltd to operate Brisbane and Melbourne Air Traffic Centres. Release 2 (R2) is a software release that represents the full CMATS functionality.					
3	Thales Australia Ltd is undertaking a schedule re-plan of the CMATS contract to support their POC remediation strategy. This may affect the timing of ADOT sites, due to the Frequentis Australasia Pty Ltd Voice Communication System dependency between the CMATS and ADOT. Once the project accepts the revised CMS from Thales Australia Ltd as part of POC remediation, the dates in the table will be updated.					
4	Although the design review was exited in December 2019, a number of technical issues were not resolved but were planned for completion by August 2020. This was not achieved and the issues rolled into CDR activities.					
5	CMATS CDR was exited with a number of significant deficiencies. These are being managed through a new process called a DRBR. DRBR was completed in June 2021 but the specifications at DRBR still require updating to meet the entry criteria for the formal RZ system verification activity. Thales Australia Ltd now expects these deliverables to be provided Quarter 3, 2023.					
6	Airservices Australia Pty Ltd signed contracts with Saab, Inc. and Frequentis Australasia Pty Ltd in December 2020. While these contractors have provided some schedules to Airservices Australia Pty Ltd, they are yet to be baselined and assessed in concert with an IMS developed by Airservices Australia Pty Ltd, to align the design, integration and site rollout activities across ADOT and CMATS.					
7	This milestone is not part of the original contract milestones and is specific to the Deed negotiated with Thales Australia Ltd to complete the significant number of outstanding actions arising from CDR RZ. However, the DRBR in June 2021 was for an interim specification and did not meet the entry criteria for entry into Test Readiness Review RZ.					
8	The variance is due to a combination of impacts of schedule delay to previous design milestones, and for the period June 2021 to November 2021, due to late delivery of the Contractor Data Requirements List artefacts to the customer prior to entering the review.					

3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/ Forecast	Variance (Months)	Notes
RZ System Verification	CMATS	N/A	Mar 22	TBA	N/A	4
System Acceptance	SATC – CMATS	Jan 22	Jun 23	TBA	N/A	3
	RAAF Base East Sale - CMATS	May 22	Sep 23	TBA	N/A	3
	RAAF Base Amberley - CMATS	Jun 22	Oct 23	TBA	N/A	3
	RAAF Base Edinburgh - ADOT	Jun 22	TBA	TBA	N/A	1, 3
	RAAF Base Pearce - CMATS	Oct 22	Mar 24	TBA	N/A	3
	RAAF Base Gingin - ADOT	Oct 22	TBA	TBA	N/A	1
	RAAF Base Tindal - CMATS	Nov 22	Mar 24	TBA	N/A	3
	Army Aviation Centre Oakey - ADOT	Nov 22	TBA	TBA	N/A	1, 3
	RAAF Base Townsville - CMATS	Nov 23	Sep 26	TBA	N/A	3
	Naval Air Station Nowra - CMATS	Mar 24	Oct 26	TBA	N/A	3
	RAAF Base Williamtown - CMATS	Apr 24	Oct 26	TBA	N/A	3
	RAAF Base Darwin - CMATS	Apr 24	Sep 26	TBA	N/A	3
	RAAF Base Richmond - ADOT	May 24	TBA	TBA	N/A	1
RZ System Acceptance	CMATS	Aug 22	Nov 23	TBA	N/A	2
Release 1 (R1) System Acceptance	CMATS	Jul 24	Jan 27	TBA	N/A	3
Release 2 (R2) System Acceptance	CMATS	Feb 25	Jun 27	TBA	N/A	3
Final Acceptance	CMATS	Aug 25	Sep 27	TBA	N/A	3

Notes	
1	The planned date was based on the original contract before these sites were de-scoped from the Thales Australia Ltd contract. Forecast dates are expected to be updated once the ADOT schedules have been agreed.
2	RZ System Acceptance includes East Sale Tower and Approach (including the SATC), Amberley Tower and Approach including consolidated Oakey Approach and Edinburgh ADOT. The selected sites constitute the AIR5431 Phase 3 IOC, as the combination of these sites demonstrates all possible system variants for Defence's portion of the CMATS system.
3	An IBR was completed in Quarter 4, 2022 which has prompted a schedule re-plan by Thales Australia Ltd of the CMATS deliverables. This planning is not completed.
4	Thales Australia Ltd is undertaking a schedule re-plan of the CMATS contract to support their POC remediation strategy. Once the project accepts the revised CMS from Thales Australia Ltd as part of POC remediation, the dates in the table will be updated.

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Aug 22	Quarter 2, 2025	33	1, 2, 5
Initial Operational Capability (IOC)	Jun 20	Quarter 4, 2025	65	2, 3, 4, 5
Final Materiel Release (FMR)	Aug 25	Quarter 4, 2027	27	1, 2, 5
Final Operational Capability (FOC)	Jun 23	Quarter 1, 2028	56	2, 4, 5
Notes				
1	The IMR and FMR milestones reflect the advice provided to Government in December 2019 and are included in Materiel Acquisition Agreement (MAA) V3. The timing between IMR to IOC and FMR to FOC are constant. The apparent differences in variance between IMR/IOC and FMR/FOC is the result of using a different basis for the original date. The original date for IOC/FOC is the tender documentation whereas the original date used for IMR/FMR is the February 2018 Thales Australia Ltd contract date for those milestones. The IMR/FMR dates are only for the Thales Australia Ltd contract.			
2	The variances in the identified milestones are the result of a number of cumulative factors including: a protracted negotiation period; schedule delays resulting from the inclusion of scope post contract, incorporated through CCPs; and persistent schedule performance issues due to design and technical issues. The reported forecast dates for IOC and FOC are representative of the last formal CMS delivery from Thales Australia Ltd prior to POC status. Thales Australia Ltd participated in an IBR during Quarter 4, 2022 that resulted in corrective actions that, despite the remediation plan, are likely to increase the forecast delay to the IOC and FOC.			
3	IOC also includes RAAF Base Edinburgh ADOT. There is no firm date for RAAF Base Edinburgh delivery.			
4	The POC remediation plan proposed by Thales Australia Ltd is likely to change the definition of Defence IOC and FOC.			
5	Achieved/ Forecast Capability Milestone dates reported against Quarters are conveyed in Calendar Year.			
Schedule Status at 30 June 2023 Original Planned Approval IOC IMR FOC FMR Achieved / Forecast Approval IMR IOC FMR FOC Dec-14 Jun-15 Dec-15 Jun-16 Dec-16 Jun-17 Dec-17 Jun-18 Dec-18 Jun-19 Dec-19 Jun-20 Dec-20 Jun-21 Dec-21 Jun-22 Dec-22 Jun-23 Dec-23 Jun-24 Dec-24 Jun-25 Dec-25 Jun-26 Dec-26 Jun-27 Dec-27 Jun-28				

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 the capability requirements as expressed in the Joint Project Directive, MAA and relevant Technical Regulatory Authority. While a number of changes in the way Defence scope is to be delivered through the collaboration options initiated by Airservices Australia Pty Ltd, these will not impact on the safe delivery of Defence air traffic services.
	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)	Amberley, East Sale (including SATC) and Edinburgh transitioned from ADATS.	Not yet Achieved
Initial Operational Capability (IOC)	Amberley, East Sale, SATC and Edinburgh have been accepted into operational service.	Not yet Achieved
Final Materiel Release (FMR)	Delivery of all materiel system elements configured to the final system build for both ADOT and CMATS mission systems.	Not yet Achieved
Final Operational Capability (FOC)	All Defence sites have been accepted into operational service.	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	Poor provision of, or delays to Customer Furnished Materials, Supplies and Services including non-compliance of, deficiencies in, or functional availability third-party systems and infrastructure, or a misalignment of network availability targets, may impact achievement of certification, and result in the customer impacting the schedule.	Treatment involves close coordination with the Sponsor, Systems Program Office, Airservices Australia Pty Ltd Integration team and the contractor to actively manage timely provision of fit for purpose Customer Furnished Material.
2	Dependency complexity from the collaboration options may lead to divergent goals, reduced control, exposure of cost, scope and schedule thresholds and a breach of OSA obligations resulting in a failure to satisfy customer capability expectations.	Ensure that the OSA remains relevant and that no rights and protections are reduced through variations to the OSA, and that the Defence team understand how the OSA applies.
3	ADOT system fitness for purpose may be affected by a lack of documented scope, management of ambiguity, allocation of scope between contractors, and poor integration, governance and resourcing, leading to a delayed ADOT that doesn't meet ATM service needs.	Defence staff embedded in the Joint Project Team ensure Defence requirements for ADOT are achieved in accordance with the ADOT Functional Performance Requirements Specification and OSA.
4	Implementation of CMATS may be impacted by the availability of other third-party delivered systems.	This risk is now being managed within the "provision of or delays to Customer Furnished Materials, Supplies and Services" risk and will not appear in this current form in next year's Major Projects Report.
5	Thales Australia Ltd's design processes do not recognise Defence facilities constraints, this may lead to schedule delay and increased costs to the customer.	Resolution of outstanding technical issues and through appropriate systems engineering approaches is the subject of POC remediation.
6	The Joint Software Support Facility may not be available or operationally effective in time for demonstrating systems readiness, this may cause delays to commissioning at sites.	Resolution of outstanding technical issues and through appropriate systems engineering approaches is the subject of POC remediation.
7	Insufficient Defence and Airservices Australia Pty Ltd project resources, with adequate skills/experience across functional streams, may result in quality and schedule impacts to key activities and milestones.	Timely sourcing of resources with relevant skills/experience, aligned to CMS, is achieved through the MSP.
8	CMATS system and software verification may be impacted by a failure to resolve outstanding technical issues supported by evidence, leading to an inadequate basis upon which to achieve mandated baselines and milestones, exacerbating delays to schedule and project cost.	Resolution of outstanding technical issues and through appropriate systems engineering approaches is the subject of POC remediation. The project made a successful call on contingency to minimise the project's exposure to this risk, specifically costs associated with contract changes.
9	The systems engineering approach adopted by Thales Australia Ltd does not align with the contracted software design model, this increases the complexity of baseline management, assurance activities and complicates delivery of a systems solution.	The systems engineering approach adopted by Thales Australia Ltd is the subject of POC remediation strategies.
10	Thales Australia Ltd's resource profile lacks flexibility, composition of skills and resilience to staff turnover to deliver the requirements for mandated system reviews, cater for Engineering Change Proposals / CCPs, along with emergent scope.	Monitoring of Thales Australia Ltd's approach to resourcing composition is conducted through the Program Review Board. Separately Thales Australia Ltd continue recruitment and retention activities to address the staff turnover and shortages.

11	Site acceptance activities may be impacted by a requirement to support long-term and ongoing travel obligations.	Recruitment of resources within proximity of each site remains a key strategy available to the project via the MSP.
12	Thales Australia Ltd's prioritisation of schedule over quality results in additional work for the Joint Project Team to ensure contract deliverables are fit for purpose, leading to an increase to customer workforce demand.	Continue to enforce Thales Australia Ltd's obligation to undertake quality control and design analysis in accordance with the contract, as well as limiting the number of incremental reviews being conducted.
13	Lack of a credible IMS for OneSKY program, as a result of poor quality CMS, may impact timely and accurate provision of Customer Furnished Material, ineffective use of Defence resources and business continuity of existing ATM systems.	Continue to leverage existing program governance and controls to articulate the impacts of continuing to proceed with a non-credible schedule. The project made a successful call on contingency to treat the business continuity risk of the existing ATM systems, by extending the LOT of ADATS.
14	Thales Australia Ltd's Human Factors approach may not support CMATS outcomes, including improved fitness for purpose based on user-centred design and optimised effectiveness of user performance.	Management involves participation of operational experts and end user representatives in working groups, with clear escalation paths. The Joint Project Team is driving Thales Australia Ltd's progress.
Emergent Risks (risk not previously identified but has emerged during 2022–23)		
Ref#	Description	Remedial Action
1	Capability fitness for purpose may be impacted by ambiguity and known issues, a failure of the contractors to deliver the system requirements within the contract terms or budget, limitation of the technology solution to meet ATM service needs and failure to integrate with interfaces and services.	Remediation of the CMATS program is the subject of POC, strategies targeting resolution of risk associated with technical complexity, cost and schedule.
2	Support system readiness for ADOT commissioning may be impacted by delays to progressing the development of the support system.	Defence is working with Airservices Australia Pty Ltd to define the support system for ADOT through development of a support concept and inclusion of requirements into the specification.

5.2 Major Project Issues

Ref#	Description	Remedial Action
1	Early exit of the CDR with major deficiencies in the RZ Design still to be addressed.	Resolution of outstanding technical issues and through appropriate systems engineering approaches is the subject of POC remediation.
2	The increased cost of the project's MSP arrangement as a result of delays to the contractor's delivery schedules.	The project manages resources in accordance with contractor schedules to minimise inefficiencies. The project made a successful call on contingency to treat this issue and extend the workforce to FY 2027-28.
3	The OSA is not fit for purpose to manage the on-supply of sustainment supplies and services from Airservices Australia Pty Ltd.	Work with Airservices Australia Pty Ltd to update the OSA to incorporate an appropriate cost-sharing regime and governance arrangements for on-supply of sustainment supplies and services.
4	Through-life supportability of the INTAS product for ADOT may not be viable following NAV CANADA's announcement that they are ceasing system development of the INTAS product.	Re-validate the ADOT LOT with Airservices Australia Pty Ltd, supported by evidence from Saab, Inc. on the future INTAS product development path.

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 seven lessons related to Contract Management, First of Type Equipment, Schedule Management, Governance, and Requirements Management. 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. A lack of resources at the initiation stage of the project, and during the preparation of the Request For Tender, can create a significant technical and stakeholder management debt that will affect the ability to agree on requirements, forecast a realistic schedule and determine future workforce requirements.	Resourcing

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

Lesson Type – Observation. As a result of long-running schedule maturity issues, it is recommended that long-term planning beyond the nearest major milestone is essential to reducing program risk and sub-optimal short-term planning, and furthermore schedule logic applied to the CMS must reflect the logic identified in the contract to ensure activities are sequenced according to precedence and priority.	Schedule Management
Lesson Type – Observation. Aggressive timeframes to meet schedule milestones often results in compressed timeframes to engage stakeholders (operational, engineering/technical and strategic), leading to compromises to proper requirements management. Consequently, a schedule needs to be developed to include opportunities for specified periods of stakeholder consultation and alignment during the capability delivery life-cycle.	Schedule Management / Governance

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2023

Unit	Name
Division	Air Defence and Space Systems Division
Branch	Air and Space Surveillance and Control

Project Data Summary Sheet¹

Project Number	AIR6000 Phase 2A/2B
Project Name	NEW AIR COMBAT CAPABILITY
First Year Reported in the MPR	2010-11
Capability Type	Replacement
Capability Manager	Chief of Air Force
Government 1st Pass Approval	Nov 06
Government 2nd Pass Approval	Nov 09 - Stage 1 Apr 14 - Stage 2
Budget at 2nd Pass Approval	\$13,264.1m
Total Approved Budget (Current)	\$16,424.6m
2022–23 Budget	\$933.4m
Complexity	ACAT I



Section 1 – Project Summary

1.1 Project Description

The AIR6000 Phase 2A/2B project is introducing the F-35A Joint Strike Fighter (JSF) capability that will meet Australia's air combat needs out to 2030 and beyond. The project is approved to acquire 72 Conventional Take Off and Landing (CTOL) F-35A JSF aircraft to establish three operational squadrons, a training squadron and necessary supporting/enabling elements to replace the F/A-18A/B Hornet capability.

Lockheed Martin Corporation is contracted to the United States (US) Government for the development and production of the F-35A JSF. The aircraft and associated support systems are being procured through a government to government co-operative agreement with the US and JSF partner nations, comprised of the United Kingdom, Canada, Italy, Denmark, Norway and the Netherlands. Additional nations are procuring the F-35 JSF via US Foreign Military Sales (FMS).

Note

In July 2019 the US Government made a unilateral decision to suspend Turkey from the F-35 Program. Turkey is no longer a member of the F-35 partnership.

1.2 Current Status

Cost Performance

In-year

As at 30 June 2023, the year-end cost variance was 16.8% or \$156.4m (overspend) against 2022-23 Budget Estimates. The project net variation was primarily driven by earlier than expected Air Vehicle and Propulsion activity.

Project Financial Assurance Statement

As at 30 June 2023, project AIR6000 Phase 2A/2B 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 Financial Year (FY) 2022-23.

Schedule Performance

In the FY 2022-23, Australia accepted 10 aircraft bringing the total Australian fleet to 63. Australia Canada United Kingdom Reprogramming Laboratory (ACURL) Reprogramming Capability achieved a key operational milestone with the successful production of a 30P07 Mission Data File in August 2022. ACURL Phase 2 facility construction is six months behind schedule due to construction delays attributed to poor weather and workforce shortages. The delay will not impact capability, as the current ACURL infrastructure is sufficient to support F-35 reprogramming requirements in the medium term.

The Deployable Information and Communication Technology Facility and Deployable Duty Facility Mission System transitioned to sustainment under Air Training and Aviation Commons System Program Office in August 2022. Management of Support Equipment (Joint Program Office (JPO) Supplies) transitioned to Air Combat Systems Program Office (ACSPO) and 81 Wing in November 2022. Weapons were delivered to support Verification and Validation (V&V) activities in October 2022. Delivery of Alternate Mission Equipment, Pilot Flight Equipment and Aircraft Life Support Equipment to support Operational Capability Three was finalised in January 2023.

Sustainment of the global F-35 fleet is provided through the Global Support Solution (GSS), which is still maturing as the global fleet grows. The Asia-Pacific F-35 Propulsion Initial Depot Capability was conditionally confirmed by Pratt & Whitney on 5 April 2022.

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.

Materiel Capability/Scope Delivery Performance
Most of the capability requirements of Final Operational Capability (FOC) are delivered by the extant integrated F-35A Air System and new developments are on track for incorporation in Air Vehicle production Lot 13-15. The V&V Program has progressed well, mitigating risks to FOC, despite minor COVID-19 impacts.
Note
Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.

1.3 Project Context

Background
AIR6000 was established in 1999 to replace the air combat capabilities provided by the F/A-18A/B and F-111 fleets. In 2002, Government identified the Lockheed Martin Corporation F-35A JSF as the preferred option and joined the System Development and Demonstration (SDD) phase of the JSF Program as one of nine partner nations. The decision by Government to acquire the F-35A JSF has been taken progressively, including: - In November 2006, First Pass Approval was achieved that included agreement to join the next phase of the JSF Program and funded project AIR6000 Phase 1B to conduct detailed definition and analysis activities to support Government Second Pass Approval for AIR6000 Phase 2A/2B. - In December 2006, the Multilateral Production, Sustainment and Follow-on Development (PSFD) Memorandum of Understanding (MoU) was signed, this facilitated entry into the next stage of the JSF Program. - In November 2009, AIR6000 Phase 2A/2B Stage 1 was approved to acquire 14 CTOL F-35A JSF aircraft, including support and enabling elements, commencing in 2014, and allowed commencement of Operational Test in the US and Australia. - In April 2014, AIR6000 Phase 2A/2B Stage 2 was approved by Government to acquire an additional 58 CTOL F-35A JSF aircraft and enabling elements. The combined acquisition of 72 aircraft will achieve FOC in 2023 comprising of threeoperational squadrons of fifth generation F-35A JSF to replace the F/A-18A/B Hornet capability. - In 2017, Defence advised Government of emerging issues associated with AIR6000 Phase 2A/2B affordability. In 2018 and 2019, Government agreed to Defence proposals to defer elements of project scope to later unapproved AIR6000 program phases. The majority of these scope items were no longer needed, as FOC requirements will be met without major upgrades.
Uniqueness
The JSF Program was established by the US Government as the first international collaborative development program for a US military aircraft. The program includes initial design, production, follow-on development and through life support of the JSF global fleet. The JSF Program is expected to deliver over 3,000 aircraft to the MoU Partners (with the US to acquire approximately 75 per cent of the total) with the potential for significant additional aircraft procurements by FMS customers. Due to strict US export restrictions imposed on the JSF Air System, direct commercial sale is not permitted. JSF aircraft and associated supporting systems will be acquired by Australia under the PSFD MoU arrangements. Key factors are: - The US Government has contracted with Lockheed Martin Corporation and Pratt & Whitney on Australia's behalf in accordance with US contracting laws, regulations and procedures. - The F-35 JPO acquisition strategy commenced with 11 annual Low Rate Initial Production (LRIP) contracts transitioning from a Fixed Price Incentive Fee to a Firm-Fixed Price at the appropriate time. - The Australian F-35A JSF capability will be supported via an F-35 GSS that is progressively being implemented and a range of Australian sovereign sustainment contracts, with all arrangements planned to be performance-based.
Major Risks and Issues
Delivery of Air Force's capability requirements may be affected by technical deficiencies, delay in delivery schedule, funding or programming issues, or delays in delivery of an effective training system. As a partner nation, Australia is reliant on the International Cooperative Program through the JPO to develop and sustain the F-35 system and to develop the GSS. Australia's F-35A capability and standing in the Cooperative Program may be compromised by security or cyber breaches. Both are mitigated through active procedural controls and data gateway technologies. Delays to software integration and flight testing of the Technical Refresh 3 (TR3) software are expected delay acceptance of Australia's final nine Air Vehicles. The US JPO is applying additional personnel and Air Vehicles to accelerate the test program schedule. The Capability Manager has confirmed delivery delays won't materially affect F-35A combat capability realisation in the medium term. AIR06000 Phase 3 and Phase 5 may not delivery sufficient weapons inventory for FOC. The impact is being managed by Air Force and the risk was retired in March 2023. Potential shortfalls in funding for the PSFD MoU payment in FY 2024-25, and Production Autonomic Logistics Support forecasts were addressed through project risk budget allocations in the May 2023 Financial Estimates activity. A cost risk for development of the Common Reprogramming Tool (CRT) (Increment 1) was remediated by allocation of additional funding by US F-35 JPO. The issue of Air Force maintenance personnel needing practice fitting Alternate Mission Equipment and loading dummy rounds using Air Vehicles instead of a training aid has been resolved. Delivery of the Weapons Loading Trainer and Gun Module upgrades in Quarter 4, 2021 enabled Australian personnel to be trained using the Weapons Loading Trainer and Gun Module from Quarter 2, 2022. Australia's ability to organically manage non-standard Low Observables maintenance from a zonal verification and validation perspective has been delayed. The impact is mitigated via the use of Lockheed Martin Corporation personnel and a policy waiver, while current actions to establish a permanent process are expected to conclude before FOC.
Other Current Related Projects/Phases
AIR JSF System Development and Demonstration. Participation in the JSF SDD Program. In November 2018, Australia closed the Materiel Acquisition Agreement (MAA) for AIR JSF SDD – Participation in the JSF SDD Program, as all AIR JSF SDD financial milestones were completed. The US expects to formally complete the F-35 program SDD phase, following Operational Test and Evaluation and a US Department of Defense decision to go into full-rate aircraft production.

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

AIR6000 Phase 2C – New Air Combat Capability (NACC) Enablers. This project is subject to Government consideration and seeks to provide support elements to ensure the air combat capability remains lethal, survivable, deployable and available throughout its Life of Type. AIR6000 Phase 5 – Air Combat Capability Air-to-Air Weapons. This project was approved by Government in March 2016 and will acquire reserve stocks of air-to-air Within-Visual-Range and Beyond-Visual-Range missiles for the air combat capability including the F-35A JSF. AIR6000 Phase 3 – Air Combat Capability Air-to-Surface Weapons. This project was approved by Government in May 2018 and will acquire the reserve stocks of air to ground weapons, new countermeasures and ammunition for the F-35A JSF. AIR6000 Phase 6 – F-35A Follow-On Modernisation. This project was approved by Government in December 2021. This project will ensure that the Australian F-35A fleet will continue to be modernised through to its life of type.
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			
Nov 09	Original Approved (Government Second Pass Approval – Stage 1)	2,751.6	
May 12	Real Cost Decrease	(204.4)	1
Sep 12	Real Cost Increase	201.5	1
Jun 14	Government Second Pass Approval – Stage 2	10,515.4	2
	Total at Second Pass Approval	13,264.1	
Jun 18	Real Variation – Transfer	(8.4)	3
Jun 23	Real Variation – Transfer	(31.0)	3
Jul 10	Price Indexation	351.0	4
Jun 23	Exchange Variation	2,848.9	
Jun 23	Total Budget	16,424.6	
Project Expenditure			
Prior to Jul 22	Contract Expenditure – US Government (Block Buy Contract Production)	(3,892.6)	5, 6
	Contract Expenditure – US Government (LRIP11 Production)	(883.8)	5
	Contract Expenditure – US Government (Block Buy Contract Propulsion)	(846.0)	5, 6
	Contract Expenditure – US Government (LRIP10 Propulsion)	(795.4)	5
	Contract Expenditure – US Government (PSFD MoU (FY 2014-15 – 2022-23))	(656.7)	5
	Contract Expenditure – US Government (LRIP10 Production)	(230.7)	5
	Contract Expenditure – US Government (LRIP10 Non-Annualised (NA) Sustainment)	(211.5)	5
	Contract Expenditure – US Government (FMS Cases AT-D-YAF, AT-P-AMN (Weapons))	(159.8)	5
	Contract Expenditure – US Government (LRIP11 Propulsion)	(148.4)	5
	Contract Expenditure – US Government (LRIP11 NA Sustainment)	(141.5)	5
	Contract Expenditure – US Government (Reprogramming Laboratory)	(121.1)	5
	Contract Expenditure – US Government (Lot 12-14 Indefinite Delivery Indefinite Quality (IDIQ))	(116.9)	5
	Contract Expenditure – US Government (Lot 15 Production)	(103.8)	5
	Contract Expenditure – US Government (LRIP8 Production and NA Sustainment)	(98.8)	5
	Contract Expenditure – US Government (Lot 15 Propulsion)	(11.9)	5

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.

FY to Jun 23	Other Contract Payments/Internal Expenses	(2,324.2)	7
		(10,743.1)	
	Contract Expenditure – US Government (Lot 15 Production)	(298.6)	5
	Contract Expenditure – US Government (Block Buy Contract Production)	(283.0)	5, 6
	Contract Expenditure – US Government (Lot 15 Propulsion)	(135.0)	5
	Contract Expenditure – US Government (PSFD MoU (FY 2014-15 – 2022-23))	(130.4)	5
	Contract Expenditure – US Government (Lot 12-14 IDIQ)	(22.7)	5
	Contract Expenditure - US Government (LRIP11 Propulsion)	(16.6)	5
	Contract Expenditure – US Government (LRIP8 Production and NA Sustainment)	(11.5)	5
	Contract Expenditure – US Government (LRIP10 NA Sustainment)	(10.9)	5
	Contract Expenditure – US Government (LRIP10 Propulsion)	(4.5)	5
	Contract Expenditure – US Government (LRIP11 NA Sustainment)	(3.6)	5
	Contract Expenditure – US Government (LRIP10 Production)	(3.3)	5
	Contract Expenditure – US Government (FMS Cases AT-D-YAF, AT-P-AMN (Weapons))	(1.2)	5
	Contract Expenditure – US Government (LRIP11 Production)	(0.1)	5
	Contract Expenditure – US Government (Block Buy Contract Propulsion)	15.0	5, 6
	Other Contract Payments/Internal Expenses	(183.4)	8
		(1,089.8)	
		(11,833.0)	
Jun 23	Total Expenditure		
Jun 23	Remaining Budget	4,591.6	
Notes			
1	A May 2012 budget adjustment (\$204.4m) was applied to AIR6000 Phase 2A/2B based on an incorrect interpretation of the Government's decision to vary the NACC Program. In September 2012, a budget adjustment correction was applied (\$201.5m), using an updated exchange rate. As a result, the project's total approved budget has remained the same as intended by Government.		
2	Government approved AIR6000 Phase 2A/2B Stage 2 in April 2014 for an additional 58 CTOL F-35A JSF aircraft. Allocation of funding occurred in June 2014, following Government Second Pass Approval – Stage 2 in April 2014.		
3	Transfer to Security and Estate Group following request for funding scope changes for Royal Australian Air Force (RAAF) Base Tindal JSF facilities and transfer of scope to AIR6000 Phase 6.		
4	Up until July 2010, indexation was applied to project budgets on a periodic basis. The cumulative impact of this approach was \$70.2m. In addition to this amount, the impact on the project budget as a result of out-turning was a further \$280.8m having been applied to the remaining life of the project.		
5	The scope of this contract is explained further in Section 2.3 – Details of Project Major Contracts.		
6	Previously reported as a single Block Buy Contract that combined the expenditure of the Production and Propulsion.		
7	Other expenditure for the period prior to July 2022 is associated with Mission Systems (\$615.8m), Support Systems (\$556.6m), LRIP Production (\$264.5m), PSFD MoU (FY 2009-10 – 2013-14) (\$180.9m), Project Office Services (\$136.1m), FMS Other (\$125.6m), Chief Information Officer Group (\$92.2m), Lot 12 Air Vehicle Initial Spares (\$89.7m), NACC Operating Expenditure (\$88.5m), FY 2017 Air Vehicle Initial Spares (\$86.9m), LRIP6 Propulsion (\$50.0m), Industry Grants (\$29.3m) and Non-Standard Mission Systems (\$8.0m).		
8	Other expenditure for the period July 2022 to June 2023 is associated with Support Systems (\$109.3m), Mission Systems (\$26.4m) and FMS Other (\$24.1m), Project Office Services (\$9.8m), FY 2017 Air Vehicle Initial Spares (\$9.8m), Industry Grants (\$3.3m), Non-Standard Mission Systems (\$2.2m), LRIP6 Production (\$0.3m), LRIP6 Propulsion (\$0.1m), NACC Operating Expenditure (\$0.6m) and Lot 12 Air Vehicle Initial Spares (\$1.1m).		

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
1,261.4	976.4	933.4	<u>Portfolio Budget Statement (PBS) to Portfolio Additional Estimates Statement (PAES):</u> Lot 15 Air Vehicle main contract phasings were reduced/deferred due to the delay in contract signature. Deliveries and invoicing of F-35A Spares and Depot Support Equipment experienced a general slowdown. Weapons production was also delayed.

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

			PAES to Final Plan: The ACURL CRT was accepted by the US F-35 JPO as being a common development effort, which resulted in a real cost reduction for Australia. This saving was partially redirected to support ACURL Phase 2 cost increases and the JSF Australian Industry Program.
Variance \$m	(285.0)	(43.0)	Total Variance (\$m): (328.0)
Variance %	(22.6)	(4.4)	Total Variance (%): (26.0)

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(2.5)	Australian Industry	30 June 2023 – The variation was driven by earlier than expected Air Vehicle and Propulsion invoicing and progression of reconciled historical invoices.
		158.9	Foreign Industry	
		-	Early Processes	
		-	Defence Processes	
		-	Foreign Government Negotiations/Payments	
		-	Cost Saving	
		-	Effort in Support of Operations	
		-	Additional Government Approvals	
933.4	1089.8	156.4	Total Variance	
		16.8	% Variance	

2.3A Details of Project Major Contracts – Price

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 23 \$m			
US Government (PSFD MoU (FY 2014-15 – 2022-23))	Dec 06	180.3	791.4	Variable	MoU	1, 8, 9
US Government (LRIP10 Production)	Dec 14	79.2	1,013.1	Firm or Fixed	US Government Contract	2, 8, 9
US Government (LRIP10 Propulsion)	Mar 15	13.4	164.1	Firm or Fixed	US Government Contract	3, 8, 9
US Government (Reprogramming Laboratory)	Mar 15	119.0	136.5	Firm or Fixed	US Government Contract	4, 8, 9
US Government (LRIP8 Production and NA Sustainment)	Jun 15	99.9	116.2	Firm or Fixed	US Government Contract	5, 8, 9
US Government (LRIP11 Production)	Dec 15	88.2	926.1	Firm or Fixed	US Government Contract	6, 8, 9
US Government (AT-D-YAF)	Jun 16	111.9	116.6	Reimbursement (for FMS)	FMS	8, 9
US Government (LRIP10 NA Sustainment)	Jun 16	31.8	304.2	Variable	US Government Contract	8, 9, 11
US Government (AT-P-AMN)	Jul 16	132.3	147.1	Reimbursement (for FMS)	FMS	8, 9
US Government (LRIP11 Propulsion)	Jul 16	14.2	163.5	Firm or Fixed	US Government Contract	8, 9, 10
US Government (Block Buy Contract Production)	Feb 17	236.3	4,494.3	Variable	US Government Contract	7, 8, 9
US Government (Block Buy Contract Propulsion)	Aug 17	39.6	910.3	Variable	US Government Contract	7, 8, 9
US Government (LRIP11 NA Sustainment)	May 18	57.5	201.5	Variable	US Government Contract	8, 9, 11
US Government (Lot 12-14 IDIQ)	Jan 19	52.8	169.5	Variable	US Government Contract	8, 9, 11
US Government (Lot 15 Propulsion)	Dec 19	16.6	177.5	Variable	US Government Contract	9, 10, 13
US Government (Lot 15 Production)	Jan 20	125.3	957.2	Firm or Fixed	US Government Contract	8, 9, 12

Notes	
1	Contribution to PSFD MoU shared costs based on proportionality principle: i.e. number of aircraft foreshadowed for purchase as a percentage of entire partner fleet. Commitment via MoU signature in December 2006 and again in March 2021 with price re-baselined from 2002 to 2012 per US Government update. Covers period from 2014–15 to 2022–23 as approved by Government in April 2014. The PSFD MoU contract is a Variable Priced contract in that it is updated annually to reflect both estimated shared costs and escalation. Contract Price increase since signature due to increased tooling replacement cost not previously included; inclusion of scope previously considered country unique; and updated estimates for shared sustainment, follow-on development and F-35 JPO administration.
2	LRIP10 Production contract for Australia's next tranche of eight F-35A aircraft for initial Long Lead items. This contract is progressively modified with approved work scope and forms the basis of the Air System contract for the complete system – per Section 1.3 'Uniqueness'.
3	LRIP10 Propulsion contract for eight engines for installation on Australia's next tranche of eight F-35A aircraft. This contract is progressively modified with approved work scope and forms the basis of the propulsion contract for the complete system – per Section 1.3 'Uniqueness'. Subsequent to full funding being awarded for this contract further modifications (contract changes) have occurred. These include: (1) Long Lead funding for Lot 12 (15 aircraft); (2) initial sparring for operating units, maintenance depots and the Global Spares Pool; and, (3) the migration of Autonomic Logistics Information System (ALIS) propulsion data.
4	Contract for Reprogramming Laboratory hardware and software tools.
5	LRIP8 Production and NA Sustainment contract for the provision of training devices, support equipment, non-aircraft spares and an aircrew fitting service.
6	LRIP11 Production contract for Australia's next tranche of eight F-35A aircraft. This contract includes Long Lead items and is progressively modified, forming the basis of the Air System contract for the complete system – per Section 1.3 'Uniqueness'. This contract has met full funding award with the increase in contract value a result of the staged procurement and provision of funding for the F-35 production line to build the aircraft.
7	Lot 12-14 Production and Propulsion are procured under separate Block Buy Contracts, Air Vehicle Production via Lockheed Martin Corporation and Propulsion via Pratt & Whitney. Both contracts encompass Long Lead items for the procurement of aircraft under Lot 12-14 and Economic Order Quantities for the production contract only. Both production and propulsion are also contracted under Undefined Contract Action (UCA) for Lot 12. These contracts were previously combined and reported as a single Block Buy Contract. Australia will commit to aircraft purchases on an annual basis via these two contracts, subject to annual approvals by Government.
8	Contract value as at 30 June 2023 is based on actual expenditure to 30 June 2023 and remaining commitment at current exchange rates. This includes adjustments for indexation (where applicable).
9	LRIP11 Propulsion contract for eight engines for installation on Australia's tranche of eight F-35A aircraft being procured through the LRIP11 Production Lot. This contract is progressively modified with approved work scope and forms the basis of the propulsion contract for the complete system – per Section 1.3 'Uniqueness'.
10	LRIP10 and 11 NA Sustainment contracts consist of one-time tasks and infrastructure stand up activities. The contracts undergo discrete modifications for each individual good and/or service being procured which in turn dictates the 'type' of contract. The majority of each discrete procurement is acquisition related, examples being initial non-aircraft spares, site activation, depot stand-up, hardware procurement and delivery, training systems, support equipment and ALIS.
11	FY 2019-20 Air Vehicle Initial Spares, Lot 12 - 14 Generation III Heavy Helmet Mounted Display Systems (HMDS) and Lot 13-14 Ancillary Mission Equipment (AME) and Pilot Fit Equipment (PFE) have been placed on the Lockheed Martin Corporation IDIQ contract. The IDIQ contract allows flexibility in both quantities and delivery scheduling and allow the ordering of supplies and goods to be delayed until after requirements materialise. The JPO have stated that placing spares, AME and PFE requirements on the IDIQ contract allows for more agile procurement for F-35 Enterprise, aligning delivery schedule with aircraft deliveries.
12	Lot 15 Production contract for Long Lead and Economic Order Quantity (EOQ) funding associated with the procurement of nine F-35A aircraft. The purpose of EOQ funding is to allow for the procurement of extra-long lead components that will reduce the procurement cost of the aircraft by taking advantage of economy of scale orders. Allocated funding was advanced in May 2022 to shore up continued production of Lot 15 aircraft ahead of the definitised Lot 15 Air Vehicle Production Full Funding Contract, which occurred in December 2022.
13	Lot 15 Propulsion Contract for the procurement of nine F135 engines for installation on Australia's nine F-35A Aircraft procured through the Lot 15 Production Contract. This contract commenced with Long Lead funding and was later modified as an UCA to include the remaining production funding (full funding). As the total price for Australia's Lot 15 F135 Propulsion Production was known, commitment approval was sought for the full estimate 100% not-to-exceed value minus previous Long Lead commitments. Definitisation of the Lot 15 Propulsion contract occurred on 26 January 2023.

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

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 23		
US Government (PSFD MoU)	N/A	N/A	Australia's contribution to shared costs from 2010 to 2023 based on the purchase of 100 aircraft. Includes contribution to production tooling, US overhead cost of running program, follow on development and shared sustainment activities.	1
US Government (LRIP10 Production)	8	8	Procurement of Advanced Acquisition items associated with the next eight F-35A aircraft procurement.	-
US Government (LRIP10 Propulsion)	8	8	Procurement of Advanced Acquisition items and spares associated with propulsion systems for the next eight F-35A aircraft procurement. This contract has also been modified to include Long Lead items to support Lot 12 aircraft.	-

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

US Government (Reprogramming Laboratory)	N/A	N/A	Reprogramming Laboratory Hardware and Software tools.	-
US Government (LRIP8 Production and NA Sustainment)	N/A	N/A	Training devices, support equipment and non-aircraft spares.	-
US Government (LRIP11 Production)	8	8	Procurement of Advanced Acquisition items associated with the next eight F-35A aircraft procurement.	-
US Government (AT-D-YAF)	N/A	N/A	Procurement of Small Diameter Bombs and associated racks.	-
US Government (AT-P-AMN)	N/A	N/A	Procurement of Radio Frequency Counter measures.	-
US Government (Block Buy Contract Production)	N/A	45	Procurement of Long Lead items and Economic Order Quantities for Lot 12-14, with full funding contract awarded in Quarter 4, 2019, for procurement of 45 F-35A aircraft.	2
US Government (FY 2017 Air Vehicle Initial Spares & ACURL Spares)	N/A	N/A	F-35 Global Spares Pool, Deployable Spares Pack and spares for the Reprogramming Lab.	-
US Government (Block Buy Contract Propulsion)	N/A	45	Procurement of Long Lead items for Lot 12-14, with full funding contract awarded in Quarter 4, 2019 for procurement of 45 F135 propulsion systems.	2
US Government (LRIP11 Propulsion)	8	8	Procurement of propulsion systems required for the eight F-35A aircraft being procured through the LRIP11 Production Lot.	-
US Government (LRIP10 NA Sustainment Contract)	N/A	N/A	Procurement of initial non-aircraft spares, site activation, depot stand-up, hardware procurement and delivery, training systems, support equipment and ALIS.	-
US Government (LRIP11 NA Sustainment)	N/A	N/A	Procurement of initial non-aircraft spares, site activation, depot stand-up, hardware procurement and delivery, training systems, support equipment and ALIS.	-
US Government (Lot 12-14 IDIQ)	N/A	N/A	Procurement of Lot 13-14 AME and PFE and HMDS Spares, Lot 12-14 HMDS, and FY 2019-20 Air Vehicle Spares.	-
US Government (Lot 15 Production)	9	9	Procurement of Advanced Acquisition items associated with the next nine F-35A aircraft procurement.	-
US Government (Lot 15 Propulsion)	9	9	Procurement of Advance Acquisition items and full funding production costs for nine F135 engines associated with Lot 15 F-35A Production.	-
Major equipment accepted and quantities to 30 Jun 23				
63 F-35A aircraft have been received by Australia.				
Notes				
1	No equipment delivered as part of this contract.			
2	These contracts were previously reported as Lot 12 Long Lead and EOQ.			

2.4 Australian Industry Capability

Summary
The project has no contracted Australian Industry Capability (AIC) targets or an AIC Plan for its US Government acquisition due to the F-35 Program being a US Department of Defense collaborative program contracted under the Federal Acquisition Regulations and Defense Federal Acquisition Regulation Supplement framework.
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
Preliminary Design	JSF Air System (CTOL Variant)	Mar 03	N/A	Jul 03	4	1
Critical Design	JSF Air System (CTOL Variant)	Apr 04	Feb 06	Feb 06	22	2

Notes	
1	Aircraft weight was the major issue that delayed the closure of the Preliminary Design Review (PDR) by four months.
2	Additional design effort was required to achieve the weight savings expected after PDR. The CTOL Critical Design Review was delayed as a result from April 2004 to February 2006 until the re-design was complete and included the 'roll up' of many lower-tiered reviews.

3.2 Contractor Test and Evaluation Progress

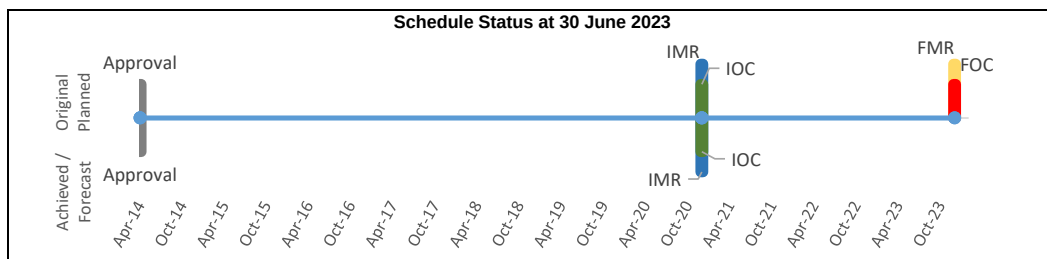
Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
System Integration	Block 2B Fleet Release (against Integrated Master Schedule (IMS) 7 Baseline)	Jun 15	Jun 15	Jul 15	1	1
	Block 3i Initial Release to support LRIP6 (against IMS 7 Baseline)	Mar 14	Nov 14	Sep 14	6	2
	Block 3F Fleet Release (against IMS 7 Baseline) – for F-35A (full envelope with weapons)	Aug 17	Oct 17	Aug 17	0	3, 4, 5
Acceptance	Accept and deliver two (LRIP6) aircraft to US Pilot Training Centre	Mar 14	Nov 14	Nov 14	8	6
	Accept and deliver aircraft 3-14	Dec 16	Jun 19	Jun 19	30	7
	Accept and deliver aircraft 15-72	Dec 23	Sep 23	Not For Publication (NFP)	NFP	8
Notes						
1	Block 2B supported the US Marine Corps IOC declaration which occurred on 31 July 2015.					
2	Block 3i Initial Release software provides initial pilot training capability for the LRIP6 aircraft configuration. The six month variance was due to delays in earlier software deliveries and compounded by integration into the updated computer architecture delivered in LRIP6 aircraft.					
3	F-35 aircraft software is developed and released in capability blocks. Block 3F software is the final release under the SDD phase of the program and is the requirement for Australian IOC declaration. It is noteworthy; all Block 3F software is developed to support full Australian weapons requirements, where Australia's weapons approval is dependent on US and Australian clearances.					
4	Block 3F software was fleet released August/October 2017 onto late LRIP9 US and Partner aircraft. Fleet release dates indicate software has finished development, while the release of partner nation specific loads follows with minor adjustments to meet sovereign requirements. The priority for the release of partner specific loads is driven by a nation's aircraft delivery schedules.					
5	Australia accepted its first three Block 3F aircraft March 2018. Acceptance, initially planned February 2018 as contracted Bed Down Plan, was delayed to remediate non-software related production issues. All new aircraft are to be accepted in Block 3F (or later) configuration.					
6	The March 2014 original delivery date was based on Australian IOC in December 2018. The November 2014 delivery date reflects a deferral in production to align with the US re-baselining of JSF production, and verification of a new software load for LRIP6 aircraft to assure an appropriate training capability.					
7	The final remaining 12 Stage 1 aircraft were originally scheduled for delivery by December 2016 leading to Australian IOC in 2018. In March 2010, the JSF Program experienced a Nunn-McCurdy breach of the critical cost growth statutory threshold. Based on subsequent delays to SDD completion and the US aircraft buy profile, the Australian Government initiated a two year deferral in production and IOC, with Aircraft 14 accepted in June 2019. This will achieve a revised Australian IOC by December 2020.					
8	Air Vehicle COVID-19 re-baselined deliveries were delayed by approximately six weeks due to temporarily suspended factory acceptance flight operations following the US F-35B crash in December 2022. Deliveries resumed in March 2023 and all Australian Lot 12-14 contracted aircraft have now been accepted. Delays to software integration and flight testing of the TR3 software are expected to delay acceptance of Australia's final nine Air Vehicles.					

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Oct – Dec 20	Dec 20	0	1
Initial Operational Capability (IOC)	Dec 20	Dec 20	0	1
Final Materiel Release (FMR)	Oct - Dec 23	NFP	NFP	1
Final Operational Capability (FOC)	Dec 23	NFP	NFP	1, 2
Notes				
1	The Capability Manager declared IOC on schedule acknowledging a number of known acceptable deficiencies with the aircraft and support systems. This is not unusual for capabilities being introduced into service. Delivery of aircraft remains largely in line with the Capability Manager's expectation, noting the expected delay to Australia's final nine Air Vehicles due to delays in TR3 software integration testing. Air Force monitoring closely, including consequential impacts to FOC.			
2	While this milestone represents the completion of Phase 2A/2B requirements, the aircraft will continue to develop under the Continuous Capability Development and Delivery (C2D2) program through future phases of the AIR6000 program managed by ACSPO.			

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

**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 the majority of capability requirements as expressed in the MAA and supporting suite of Capability Definition Documentation with delivery in accordance with requirements of the relevant Technical Regulatory Authorities.
	Amber: N/A
	Red: On 5 April 2023 Government approved the transfer of the completion of limited capability from AIR6000 Phase 2A/2B to AIR6000 Phase 6.

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)	Acceptance and delivery of 33 aircraft to RAAF Base Williamtown between 2018 and 2020 to support Australian V&V and stand-up of No.3 Squadron (SQN) and No.2 Operational Conversion Unit; No.3 SQN facilities fully fitted, accredited, staffed and ready to support flying operations. Materiel delivery, V&V, training, support and transition activities required for IOC completed. IMR was achieved in December 2020.	Achieved
Initial Operational Capability (IOC)	The JSF system shall be capable of performing and sustaining one squadron capable of Defensive Counter Air, and Offensive Counter Air roles (though not concurrently) for a 30 day period. The JSF system shall be deployable to Forward Operating Bases within Australia and Overseas. Aircraft are available to support the start of pilot training in Australia. IOC was achieved in December 2020.	Achieved
Final Materiel Release (FMR)	Delivery of final aircraft between 2021 and 2023, resulting in all 72 F-35A aircraft in Australia. All aircraft will be upgraded in accordance with the C2D2 plan (noting that this is an ongoing program of capability enhancement). Delivery and acceptance, commissioning or contracting in Australia of the aircraft, spares, support systems, and personnel, training, weapons, equipment, contracts and facilities necessary for ongoing operations of three Operational Squadrons and one Training Squadron at FOC. Materiel delivery, V&V, training, support and transition activities required for FOC completion.	Not yet Achieved
Final Operational Capability (FOC)	The JSF system shall be capable of performing and sustaining three operational squadrons and one training squadron, as per strategic and capability guidance.	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	The F-35A capability may be impacted: - by failure to deliver air system elements to meet the capability requirements of Air Force as a result of a technical deficiency or a delay in delivery schedule. - by overall funding or programming issues arising from internal cost growth/forecasting inaccuracies, production cost increases, future development of the common reprogramming laboratory and COVID-19 induced workforce and supply chain effects. - due to security or cyber breaches leading to potential disclosure of sensitive information to potential adversaries.	AIR6000 Phase 2A/2B has established a risk management framework to ensure that any risks to establishing a credible air combat capability are identified and resources can be allocated to mitigate these risks to ensure they do not impact the system which is being delivered. The inclusion of Cooperative Project Personnel positions within the JPO gives Australia early insight into emergent potential issues. AIR6000 Phase 2A/2B project office will conduct on-going engagement with the F-35 JPO and major project suppliers to facilitate improved cost data to allow the F-35 Program to meet budgeting and programming expectations. The Capability Manager is a key informed stakeholder in this process, who will ensure the systems being delivered will meet Air Forces evolving capability needs and assist in prioritising requirements to deliver project capability within the approved project budget. AIR6000 Phase 2A/2B continue to train, practice and promote efficient application of security policy, practices and procedures across the physical, information and personnel security domains and ensure that effective and appropriate sovereign data mitigations are maintained to address identified issues. In addition to the promotion and enforcement of the Defence Industry Security Program, engagement continues with Defence and Government cyber security agencies to develop an Information and Communications Technology Protection Program which would assist our industry partners. This risk will be managed by Aerospace Combat Systems Branch from July 2023.
2	AIR6000 Phase 3 and Phase 5 may not deliver sufficient weapon inventory for FOC.	Consequential impact to FOC is being actively managed by Aerospace Explosive Ordnance Systems Program Office and Air Force. This risk was retired on 29 March 2023.
3	The Australian F-35A sustainment solution may be impacted by the JPO ongoing development and evolution to a mature and effective GSS, leading to an impact on Australia's sustainment performance.	The F-35 Program has not yet reached Full Rate Production but is simultaneously executing Development, Production and Sustainment lines. The F-35 GSS performance is currently lower than anticipated but is still maturing and developing. AIR6000 Phase 2A/2B and ACSPO will continue to provide feedback on the GSS performance at F-35 JPO governance fora to make it effective for the Australian F-35A capability. This risk was retired as a sustainment risk managed by ACSPO.
4	The capability requirements for an integrated fifth generation Air Force may be impacted due to delays in delivery of an effective training system. This may include service release of training devices and equipment, workforce provisioning and contractual arrangements resulting in possible delays to capability outcome declarations.	The JSF training system is evolving and work continues with the key stakeholders on understanding the capabilities and aligning expectations. Additional personnel have been engaged to deliver the Australian training system and the associated support contracts. Influential representation by Defence at critical and essential F-35 JPO meetings and periodic technical interchange meetings with Lockheed Martin Corporation will burn-down the risk through persistent and consistent education. This risk was closed due to establishment of domestic F-35A training capability.
Emergent Risks (risk not previously identified but has emerged during 2022–23)		
Ref#	Description	Remedial Action
1	Lack of funding for Production Autonomic Logistics Support (PALS) (Annual Cost Estimate years 2023, 2024 and 2025)	The project reviewed forecast PALS procurement activities in detail with respect to the budget Work Breakdown Structure to confirm affordability. The risk was downgraded to Medium following allocation of appropriate funding from the Project Risk Budget.
2	CRT Increment 1 Development Cost Risk	The US F-35 JPO agreed to allocate funding to enable development of the CRT Increment 1, resulting in a cost saving for reallocation during November 2022 Financial Estimates activity. The risk was downgraded to Very Low.

5.2 Major Project Issues

Ref#	Description	Remedial Action
1	COVID-19 is affecting the supply chains and production efforts of the F-35 prime contractors Lockheed Martin Corporation and Pratt & Whitney, resulting in delays to delivery of aircraft and support elements.	The project has largely addressed the COVID-19 impacts to the delivery schedule. Cost was not significantly impacted. Lockheed Martin Corporation and the US F-35 JPO re-baselined the aircraft production schedule to accommodate a reduced production workforce. Australian international and domestic travel restrictions that limited the ability of specialist installation and verification personnel were overcome through close engagement with Australian Border Force to ensure compliance with all entry requirements. This issue was retired with the delivery of Lot 14 aircraft.

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

2	The upgrade of the Weapons Loading Trainer to the 3.2 and 3.2.1 configurations was affected by delays in contracting, resulting in the delivery schedule being late to need.	Delivery of the Weapons Loading Trainer and Gun Module upgrades in Quarter 4, 2021 enabled Australian personnel to be trained using the Weapons Loading Trainer and Gun Module from Quarter 2, 2022. This issue was retired with the delivery of the Weapons Loading Trainer.
3	Australia's ability to organically manage non-standard Low Observables maintenance from a zonal verification and validation perspective have been delayed.	Downgraded to Medium due to mitigations in place using a Lockheed Martin Corporation embedded Low Observable Field Service Representative and contracted field teams.
4	Delays to software integration and flight testing of the TR3 software are expected to delay acceptance of Australia's final nine Air Vehicles.	Air Force and AIR6000 Phase 2A/B Project Office executives remain engaged with embedded Australian staff continue to discuss the risk at relevant fora to ensure that the production schedule meets Australian FMR requirements. AIR6000 Phase 2A/B Project staff continue to engage at working level forums to maintain visibility of any schedule movements.
5	PSFD MoU obligation for FY 2024-25 is unfunded.	Funding for the PSFD MoU obligation in FY 2024-25 was identified and allocated during Financial Estimates activities in April to June 2023. A Medium rating was applied pending approval of the project's FY 2023-2024 Additional Estimate Budget.

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 Capability Acquisition and Sustainment Group 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 eight lessons related to Requirements Management and Governance. Three project lessons are provided below (note this does not include all project lessons):	The project has not categorized any of its lessons information as a whole-of-Defence Lesson Learned.
Lesson Type – Observation. JSF Production, Sustainment and Follow-on Development MoU is run by the Joint Program Office and it is difficult to predict cost, schedule and associated budgeting impact on Australian Defence Force processes and procurement.	Governance
Lesson Type – Observation. Allowing industry to come up with innovative solutions, without the Commonwealth being too prescriptive in requirements definition, can provide improved outcomes. Through the Turbine Engine Maintenance Facility negotiations a maintenance organisation proposed the renovation of a disused Masters Hardware facility, rather than building a new facility on a green-field site. This resulted in significant schedule reduction.	Requirements Management
Lesson Type – Observation. The ongoing sustainment costs of information and communications technology intensive projects is expensive - hardware refresh, software licensing, upgrades, personnel (administrators) - and cannot be underestimated.	Requirements Management

Section 7 – Project Structure**7.1 Project Structure as at 30 June 2023**

Unit	Name
Division	Aerospace Systems Division
Branch	Aerospace Combat Systems Branch

Project Data Summary Sheet¹

Project Number	AIR7000 Phase 1B
Project Name	MQ-4C TRITON REMOTELY PILOTED AIRCRAFT SYSTEM
First Year Reported in the MPR	2019-20
Capability Type	New
Capability Manager	Chief of Air Force
Government 1st Pass Approval	Jul 06
Government 2nd Pass Approval	Jun 18 (Tranche 1) Mar 19 (Tranche 2) May 20 (Tranche 3) Nov 20 (Tranche 4)
Budget at 2nd Pass Approval	\$2,071.4m
Total Approved Budget (Current)	\$2,403.7m
2022–23 Budget	\$226.9m
Complexity	ACAT II



Section 1 – Project Summary

1.1 Project Description

AIR7000 Phase 1B will acquire up to six MQ-4C Triton aircraft and support systems through a Cooperative Program with the United States Navy (USN). The Triton is a High Altitude Long Endurance (HALE) Remotely Piloted Aircraft System (RPAS) that will complement the P-8A Poseidon to deliver the Maritime Patrol and Response capability. Government approval for the acquisition of four MQ-4C Triton aircraft and associated support systems was provided through a series of tranche approvals from 2018 through 2023. Acquisition of further two aircraft and associated support is subject to future Government approvals.

1.2 Current Status

Cost Performance

In-year

The project spent \$265.8m against an in-year approved budget of \$226.9m. Resulting in a variance of \$38.8m. The end-of-year overspend was driven by the booking of accruals at year-end, accelerated Memorandum of Understanding (MoU) payments, and higher than expected amortisation against Triton prime contracts.

Project Financial Assurance Statement

As at 30 June 2023 project AIR7000 Phase 1B has reviewed the approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial and 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 (FY) 2022-23.

Schedule Performance

The project was declared a Project of Interest (POI) in March 2020 due to the USN announcing a two-year production funding pause, in February 2020, for its Triton program (United States (US) Fiscal Years 2021 and 2022). Production funding has now been lifted and USN has confirmed its funding commitment to Triton program. This allowed the project to be removed from the POI list in August 2022.

To balance the developmental technology risk, emerging capabilities and the needs of the joint force, the Government approved an incremental approach to acquisition, which has extended the timeline for Final Operational Capability (FOC).

The first three Air Vehicles (AV) are expected to be delivered by the planned Initial Operational Capability (IOC) date of FY 2025-26 (only two AV are required to be delivered for IOC). An additional fourth aircraft was approved by the Government in April 2023.

Defence is currently on track to achieve the revised IOC of FY 2025-26. The flow-on effect of a one-year delay was detailed in the May 2020 Cabinet Submission and accepted by Government. Post resumption of the production funding by the US, Public Works Committee (PWC) Approval was received for the construction of the Triton Facilities in November 2022.

Materiel Capability/Scope Delivery Performance

The project is expected to achieve the current approved capability scope of four AV and systems. Achievement of the full capability of six AV is subject future Government decisions.

The USN's delivery of Integrated Functional Capability (IFC-4.0) has been split into two increments. The capabilities included in IFC-4.0 Increment 1 are all required to meet Australia's IOC and will be included in the baseline configuration for Australia's first

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.

three aircraft. It is expected that IOC will be achieved with the delivery of Increment 1. Increment 2 will deliver new and upgraded capabilities to the MQ-4C Triton Intelligence (MULTI-INT) platform. Elements of the funded developmental capabilities are not expected to be progressed into the platform due to prioritising other capabilities.
Note
Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.

1.3 Project Context

Background

The AIR7000 Program replaces the Maritime Patrol and Response capability with a complementary mix of crewed P-8A Poseidon (AIR7000 Phase 2B) maritime patrol aircraft and the MQ-4C Triton RPAS (Phase 1B), designed to operate as a 'family of systems'.

In July 2006, the Government agreed to participate with the USN under a Project Agreement to develop the Broad Area Maritime Surveillance (BAMS) capability. In 2008, the Northrop Grumman Global Hawk variant (now designated the MQ-4C Triton) was selected by the USN as the winning tender for the BAMS program. In February 2009, the Government deferred AIR7000 Phase 1B due to delays in the USN BAMS program but continued to monitor Triton performance in the USN program.

In February 2014 Government agreed that Defence continue development of a single capability option for AIR7000 Phase 1B for up to seven MQ-4C Triton. The approved acquisition strategy for the MQ-4C Triton was procurement via Foreign Military Sales (FMS). However, the 2014 submission to Government advised of Defence's intent to investigate the value proposition of entering into a Cooperative Program with the USN.

In June 2018, Government provided Second Pass (Tranche 1) approval to procure the first of six AV, supporting systems and spares, and approval to enter a Triton Development, Production and Sustainment (DPS) Cooperative Program. Second Pass approval (Tranche 2) for the second AV was provided in March 2019.

In February 2020 the US Federal Defense budget proposed a pause in production funding for the USN MQ-4C Triton project for two years (US Fiscal Years 2021 and 2022). US Congressional approved budget reduced the impact of the proposed budget cuts, however uncertainty in the US Program initiated a delay in the decision to proceed with the facilities program for AIR7000 Phase 1B. As a result, an interim solution has since been developed. During 2020, Government approved a third AV (Tranche 3) and interim support services for the initial seven years of operations (Tranche 4).

In October 2022, the project updated the Materiel Acquisition Agreement (MAA) to align FOC dates with those approved by Government in 2020. In November 2021, the US Federal Budget reinstated production and development funding for the US Navy MQ-4C Triton project which has restored confidence and reduced risk associated with the acquisition strategy. In April 2023, the Government approved a fourth AV.

Uniqueness

The MQ-4C Triton is the largest RPAS to be operated by the Royal Australian Air Force (RAAF). It is a HALE-RPAS optimised for use in the maritime environment, and provides far greater on-station endurance at greater ranges when compared to conventionally piloted aircraft.

The MQ-4C Triton is a developmental platform and the IFC-4.0 configuration is still undergoing flight test activities for the USN. Full engineering and technical documentation for the IFC-4.0 configuration are becoming available and is expected to be delivered throughout 2023. The Australian engineering, verification and validation and acceptance planning will remain in development while the USN completes their developmental activities.

Acquiring Triton through a Cooperative Program enables Defence to gain insights and influence on design and development that reduces risks associated with transition into service and promotes interoperability with our major security partner. The RAAF MQ-4C RPAS will be identical to the USN MQ-4C RPAS, except for minor configuration differences due to national requirements (such as different aircraft marking schemes). Other support elements, such as training devices and spares, will also remain as common as technically possible.

The MQ-4C Triton is categorised as a Specific Type A Uncrewed Aircraft System (UAS) under the Defence Aviation Safety Regulations (DASR). Specific Type A UAS must comply with the DASR initial and continuing airworthiness regulations to an extent that is proportionate to the complexity of the operating environment and the robustness of the UAS design. Safety of design for an Australian Defence Force (ADF) UAS Operating Permit (UASOP) is based on risk characterisation and control.

Australian airspace is regulated and managed differently to the US. The MQ-4C Triton requires a unique and deliberate program of integration into Australian airspace and the surrounding international airspace zones.

Major Risks and Issues

The project is currently managing the following major risks:

- There is a risk that the current network infrastructure, combined with the level of development required to integrate the Triton system into the Defence Single Information Environment (SIE), will require design and certification effort that may not be achievable by the capability milestone dates.
- There is a risk that the complexity and novelty of a large RPAS may lead to delays in the issue of an Operating Permit and achievement of dependent capability milestones. Immature data to adequately quantify Sustainment Costs.
- There is a risk that the planned sustainment budget may be affected by insufficient data maturity leading to an impact on achieving Air Force support requirements and overall program affordability.
- Australian Triton aircraft will initially be delivered with some systems requiring further qualification to allow operation in all airspace and environmental conditions. There is a risk that the qualification and retrofitting of these systems may result in a delay to FOC.
- There is a risk that facilities design and construction management costs will affect the affordability of Triton facilities.
- Facilities schedule currently on the critical path. A number of issues have contributed to the current position, including a previous pause to the facilities program due to US Triton program uncertainties and a change of operational concept.

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

Other Current Related Projects/Phases	
AIR7000 Phase 2 - Maritime Patrol and Response Aircraft System. The acquisition of 14 P-8A Poseidon and through Life Support system. Triton and Poseidon will form part of a 'Family of Systems' to replace the AP-3C Orion Capability.	
JP2289 - Joint Information Environment.	
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			
Jul 06	Original Approval (Government First Pass Approval)	3.9	1
Feb 14	Government Intermediate Consideration	18.4	2
Mar 16	Government Interim Consideration	1.5	3
Jun 18	Government Second Pass Approval – Tranche 1	901.1	4
Jun 18	Real Variation – Transfer	1.0	5
Apr 19	Real Variation – Transfer	0.7	5
Jul 19	Government Second Pass Approval – Tranche 2	320.8	6
Jun 20	Government Second Pass Approval – Tranche 3	626.1	6
Mar 21	Government Second Pass Approval – Tranche 4	197.8	7
	Total at Second Pass Approval	2,071.4	
May 09	Price Indexation	0.2	8
Aug 09	Real Variation – Real Cost Decrease	(1.3)	9
Jun 20	Real Variation – Real Cost Decrease	(2.2)	10
Feb 22	Real Variation – Budgetary Adjustment	17.7	11
Mar 23	Exchange Variation	47.8	12
Apr 23	Subsequent Government Approval – Additional AV	270.1	13
Jun 23	Total Budget	2,403.7	
Project Expenditure			
Prior to Jul 22	Contract Expenditure – US Government (Triton Prime Contracts)	(233.6)	14
	Contract Expenditure – US Government (DPS MoU)	(181.4)	
	Contract Expenditure – US Government (PA-1 Sense and Avoid Capability)	(63.5)	
	Contract Expenditure – US Government (USN Production Engineering and Logistics Support)	(34.8)	
	Contract Expenditure – US Government (Diminishing Manufacturing Source (DMS) Items)	(27.2)	
	Other Contract Payments / Internal Expenses	(119.9)	
		(660.4)	
FY to Jun 23	Contract Expenditure – US Government (Triton Prime Contracts)	(97.1)	15
	Contract Expenditure – US Government (DPS MoU)	(29.9)	
	Contract Expenditure – US Government (USN Production Engineering and Logistics Support)	(11.3)	
	Contract Expenditure – US Government (DMS Items)	(2.5)	
	Other Contract Payments / Internal Expenses	(124.8)	
		(265.8)	
Jun 23	Total Expenditure	(926.1)	
Jun 23	Remaining Budget	(1,477.6)	
Notes			
1	Government First Pass Approval to initiate the project and enter a Project Agreement with USN for development of a BAMS capability.		

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.

2	Government Intermediate Pass Approval, to continue development of a single capability option for AIR7000 Phase 1B and establishment of a FMS Technical Services Case.
3	Government Interim Pass, to continue project development of submission, including negotiation of a Cooperative Program MoU, for Second Pass approval.
4	Government Second Pass Approval Tranche 1 Funding. Tranche 1 approval to fund one AV, three Main Operating Base (MOB) Mission Control Systems (MCS), two Forward Operating Base (FOB) MCS and associated support systems and spares.
5	Funding transfers from Defence Science and Technology Group to Capability Acquisition and Sustainment Group (CASG).
6	Government Second Pass Approval Tranche 2 and 3 to fund a total of two additional AV and associated support systems.
7	Tranche 4 approved initial sustainment funding for the first seven years.
8	Until July 2010, indexation was applied to project budgets on a periodic basis. The cumulative impact of this approach was \$0.2m, applied only to the portion of the budget approved at Government First Pass Approval.
9	Government decision to defer the project, excess funds returned to Government after the completion of First Pass approved scope.
10	Force Structure Plan amendment in June 2020.
11	Air Force Headquarters (AFHQ) budgetary adjustment made to allow for greater flexibility for reprogramming and reduce pressure on the Air Force operating budget.
12	Movements in the budget resulting from updates to the applied foreign exchange rate.
13	Government approval for an additional AV, increasing project approved budget.
14	Other contract payments/internal expenses to support the Triton capability before July 2022. Comprised of project management expenses (\$56.2m), Government Furnished Equipment (GFE) (\$24.8m), Initial Support (\$14.8m), Mission Systems Trainer (MST) (\$11.4m), Chief Information Officer Group (CIOG) (\$7.0m), US provided training (\$2.3m), Initial sparring (\$2.1m), Australian Minotaur Integration Capability (AMIC) (\$0.7m), FOB trailerisation (\$0.3m), Non-US training of (\$0.3m), and AFHQ expenses (\$0.023m).
15	Other contract payments/internal expenses to before July 2023. Comprised of AV expenses (\$60.1m), GFE (\$28.8m), project management (\$17.3m), Initial sparring of (\$5.5m), Initial Support (\$4.6m), AMIC (\$2.3m), MST (\$1.6m), US provided training (\$1.5m), AFHQ expenses of (\$1.3m), FOB trailerisation (\$1.2m), Non-US training (\$0.6m), and CIOG (\$0.1m).

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
285.5	238.2	226.9	<u>Portfolio Budget Statement (PBS) to Portfolio Additional Estimates Statement (PAES)</u> : The variation was a result of alterations in the USN spares delivery schedule and foreign exchange changes. <u>PAES to Final Plan</u> : Changes made to account for anticipated spend relating to spares.
Variance \$m	(47.2)	(11.3)	Total Variance (\$m): (58.5)
Variance %	(16.5)	(4.7)	Total Variance (%): (20.5)

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		-	Australian Industry	The project expended \$265.8m against an in-year budget of \$226.9m. Resulting in a variance of \$38.8m. The end-of-year overspend was driven by the booking of accruals at year-end, accelerated MoU payments, and higher than expected amortisation against Triton Prime contracts.
		-	Foreign Industry	
		-	Early Processes	
		-	Defence Processes	
		38.8	Foreign Government Negotiations/Payments	
		-	Cost Saving	
		-	Effort in Support of Operations	
		-	Additional Government Approvals	
226.9	265.8	38.8	Total Variance	
		17.1	% Variance	

2.3A Details of Project Major Contracts – Price

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 23 \$m			
US Government (DPS MOU)	Jun 18	200.0	221.7	Cost Ceiling (Capped)	MoU	1
US Government (DMS Items)	Nov 18	0.5	23.1	Variable	MoU	2, 3
US Government (Triton Prime Contracts)	May 19	37.5	464.6	Variable	MoU	3, 4
US Government (USN Production Engineering and Logistics Support)	May 19	0.7	76.4	Variable	MoU	3, 5

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

US Government (PA-1 Sense and Avoid Capability)	May 19	61.3	63.5	Cost Ceiling (Capped)	MoU	1, 6
Notes						
1	DPS MoU and Project Arrangement 1 (PA-1) funding is limited to a cost ceiling, which can only be changed upon mutual written consent of the Participants. Australia is responsible for paying a proportion of the total costs based on the relative number of Australian aircraft in the overall fleet.					
2	DMS Items is a US Government managed program to address availability and obsolescence of components. Additional Australian aircraft and the developmental nature of the program required an uplift to the initial funded amount.					
3	Contract value as at 30 June 2023 is based on actual expenditure to 30 June 2023 and remaining commitment at current budget exchange rates. This includes adjustments for indexation (where applicable). The incremental funding of these activities will see a progressive increase to the price.					
4	In May 2020 the scope of the contract was expanded to include three AV, one MOB MCS and one FOB MCS.					
5	Production Engineering and Logistics Support requests are made on an annual basis. The value of this contract will increase annually.					
6	PA-1 Sense and Avoid (SAA) capability has fully expended all funding to the US Government.					

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

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 23		
US Government (DPS MOU)	N/A	N/A	Australia's contribution to shared costs from FY 2017-18 to FY 2027-28 includes contribution to DPS for common efforts, and project overhead and administration costs.	1
US Government (DMS Items)	Various	Various	DMS is managed through monitor and risk mitigation efforts, life-of-type procurements, design changes to substitute new parts and other treatments. Signature allowed DMS treatments to be applied for Australian supplies within the US DMS program.	2
US Government (Triton Prime Contracts)	Various	Various	For Low Rate Initial Production 5 aircraft and ground system long-lead components. Australian elements of the awarded contract include three AV, two MOB MCS and one FOB MCS.	-
US Government (USN Production Engineering and Logistics Support)	N/A	N/A	USN labour and services including, but not limited to; Non Recurring Engineering efforts in support of aircraft and system production, logistics modelling and forecasting.	-
US Government (PA-1 Sense and Avoid Capability)	N/A	N/A	Australia's contribution to shared costs from FY 2018-19 to FY 2023-24 for the development of the SAA capability (including weather radar) to enable greater access to airspace and environmental conditions.	-
Major equipment accepted and quantities to 30 Jun 23				
Nil				
Notes				
1	No equipment delivered as part of this MoU and Project Arrangement.			
2	DMS supplies and non-recurring engineering will be incorporated into production aircraft and systems before delivery.			

2.4 Australian Industry Capability

Summary
The project has no contracted Australian Industry Capability (AIC) targets or an AIC Plan for its US Government Cooperative Program acquisition as the US Cooperative Program 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	Triton MULTI-INT System Requirements Review 2	N/A	N/A	Dec 15	N/A	1
Preliminary Design	Triton MULTI-INT Preliminary Design Review	N/A	N/A	Dec 16	N/A	1
Critical Design	Triton MULTI-INT Critical Design Review	N/A	N/A	Nov 17	N/A	1

Notes	
1	These milestones were achieved by the USN as part of the developmental program schedule prior to AIR7000 Phase 1B Second Pass approval and Australia joining the Cooperative Program.

3.2 Contractor Test and Evaluation Progress

Test and Evaluation	MWajor System/Platform Variant	Original Planned	Current Contracted	Achieved/ Forecast	Variance (Months)	Notes
System Integration	IFC-4.0 Initial Operational Test & Evaluation	N/A	N/A	N/A	N/A	1, 4
	IFC-4.0 Increment 1 Operational Assessment to Support IOC	Jun 23	N/A	Aug 23	2	2, 4
	IFC-4.0 Increment 2 Operational Assessment Post IOC	Sep 28	N/A	Sep 28	0	3, 4
Acceptance	Delivery to Australia of initial Mission Control System	Oct – Dec 21	N/A	Delayed from Nov 23	Not for Publication (NFP)	5
	Commencement of crew training with the USN	Jul – Sep 22	N/A	Dec 22	5	6
	Issue of Airworthiness Instrument (UASOP)	Mar - May 23	N/A	Sep 24	18	7
	Delivery of sixth and final MQ-4C AV [Subject to Government Approval of AV 5-6 and sequencing with USN]	To Be Announced (TBA)	TBA	TBA	N/A	8

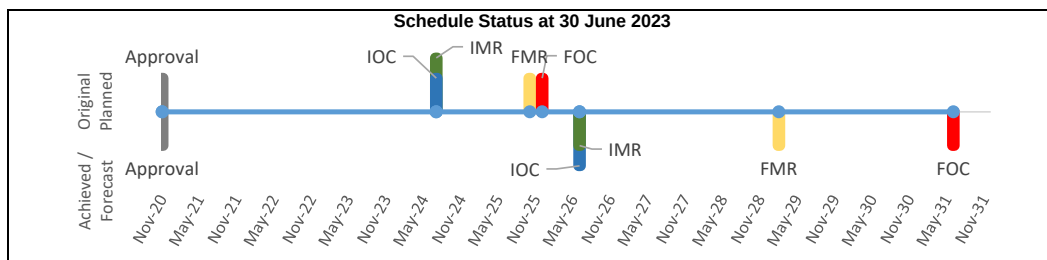
Notes	
1	This was a USN and Northrop Grumman Systems Engineering milestone, originally forecast for August 2021, for the IFC-4.0, the baseline configuration for the ADF. IFC-4.0 has now been split into two increments per the revised USN delivery schedule.
2	As a result of the Incremental approach to the delivery of IFC-4.0, the forecast date for achievement of the Operational Assessment has changed to account for the revised capability delivery.
3	Increment 2 funding has been approved by the US Government and will deliver upgraded capabilities along with a SAA functionality to meet the requirements of PA-1.
4	Due to the development nature of this capability, System Integration milestones are being further refined and are expected to be amended.
5	Production funding pause announcement delayed the original schedule preventing PWC referral in March 2020. Facilities works was paused until Government approval in November 2022. The change in basing for aircraft from Edinburgh to Tindal resulted in a redesign which has also contributed to the amendment of dates.
6	Training needs analysis in consultation with the US revealed a change to the training requirements and hence the schedule amendment.
7	At Government Second Pass Approval (Tranche 3) In Service Date (ISD) was amended by 12 months (and consequently IMR and IOC by 24 months against the Original Planned) due to the impacts of the USN production funding pause announcement in February 2020, resulting in pause of facilities progression. This had a flow-on effect on Project schedule. As the Operating Permit was required to support activities from first flight to IOC, the date required for the Operating Permit was amended, leading to the identified variance.
8	Maritime Patrol and Response submissions are subject to tranching Government approval. Following each tranche of Government approval, project milestone definitions and the project schedule will be re-baselined through an MAA update.

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
In Service Date (ISD)	Jul 23	Jul 24 - Jun 25	23	1
Initial Materiel Release (IMR)	May - Jul 24	May 25 - Apr 26	23	1
Initial Operational Capability (IOC)	Jul 24	Jul 25 - Jun 26	23	1
Final Materiel Release (FMR)	Aug - Oct 25	Aug 28 - Feb 29	42	2
Final Operational Capability (FOC)	Dec 25	Jul 30 - Jun 31	66	2
Notes				
1	At Government Second Pass Approval (Tranche 3), ISD was amended by 12 months (and consequently IMR and IOC by 24 months against the Original Planned) due to the impacts of the USN production funding pause announcement in February 2020, resulting in pause of facilities progression.			
2	With effect November 2020, FOC was changed to align with the Tranche 4 approval. An incremental approach to acquisition extended the timeline for FOC incurring a four-year delay. Delay to FOC was due to the USN prioritising other capabilities during the production pause. The MAA was updated to reflect the updated forecast dates.			

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report



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 the current capability requirements as expressed in the MAA, noting that the full capability is yet to be approved by Government.
	Amber: Elements of the funded developmental capabilities are not expected to be progressed into the platform due to prioritising other capabilities.
	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)	- Two x MQ-4C Triton AV delivered to Australia. - Two x MOB MCS Primary including a secondary MST installed and ready for use at Edinburgh. - One x FOB MCS delivered to Tindal. - Establishment of Interim Sustainment support arrangements. - Initial US trained crew (initial focus will be on Test and Evaluation and tactics development). - Support systems, equipment and spares as required. - Initial Distributed Operator functionality enabled and ready for use.	Not yet Achieved
Initial Operational Capability (IOC)	In addition to IMR deliveries: The Triton system is able to safely sustain one orbit in a maritime surveillance role, at a rate of effort to support initial operations.	Not yet Achieved
Final Materiel Release (FMR)	- All MQ-4C Triton AV delivered to Australia. - All MOB and FOB MCS installed and ready for use. - All MST installed at Edinburgh and ready for individual and collective training. - All crews trained. - Through life support arrangements are in place.	Not yet Achieved
Final Operational Capability (FOC)	In addition to FMR deliveries: The Triton system is able to safely and effectively conduct the required orbits, in all roles, at a rate of effort in accordance with strategic and capability guidance.	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 the current network infrastructure, combined with the level of development required to integrate the Triton system into the Defence SIE, will require design and certification effort that may not be achievable by the capability milestone dates.	CIOG - Military Platform Integration (CIOG-MPI) has developed a phased approach to SIE integration in line with capability milestones. This includes reliance on, and support of, other network infrastructure projects. The project and CIOG-MPI continue to leverage the USN Cooperative Program to source required technical data, subject matter expert advice and lessons learned from the USN network integration experience. Control and responsibility of the delivery of SIE allocated to CIOG-MPI allowing effective control of the relevant deliverables with clear articulation of responsibilities under a MoU between CIOG-MPI and Australian Signals Directorate.
2	There is a risk that the complexity and novelty of a large RPAS may lead to delays in the issue of an Operating Permit and achievement of dependent capability milestones.	The project established a Triton UASOP Working Group to undertake deliberate tailoring activities and facilitate engagement with the Defence Aviation Safety Authority and other stakeholders to ensure an integrated approach to technical and operational considerations, and an Operating Permit process that is aligned with DASR. This risk has been downgraded to Medium due to improved understanding of the activities required to achieve a UASOP.
3	There is a risk that the planned sustainment budget may be affected by insufficient data maturity leading to an impact on achieving Air Force support requirements and overall program affordability.	The project continues to work closely with the USN, Northrop Grumman Corporation and the Surveillance and Response System Program Office to identify sustainment cost drivers, investigate opportunities for sustainment efficiencies, validate logistics modelling assumptions, and implement lessons learned from other USN-sourced systems. Sustainment data will continue to mature as the USN Triton operational tempo increases. The project is also working with Northrop Grumman Australia to develop an affordable 'Interim Sustainment Support Contract' for Australian-based support.
4	Australian Triton aircraft will initially be delivered with some systems requiring further qualification to allow operation in all airspace and environmental conditions. There is a risk that the qualification and retrofitting of these systems may result in a delay to FOC.	The project is working with the USN to plan for an 'Alternate Means of Compliance' program to support initial operations in some airspace and environmental conditions. The Commonwealth of Australia has entered into PA-1 for the development of a SAA capability. The Cooperative Program includes activities to address flight in icing conditions. It is expected that moderate icing certification will be achieved prior to Australian operations, enabling Triton operations in moderate icing conditions. Extreme icing conditions will be risk-managed as agreed in the UASOP. The icing certification is expected to be completed prior to IOC and there is improved understanding of the activities required for airspace integration. This risk is therefore downgraded to Medium.
5	There is a risk that facilities design and construction management costs will affect the affordability of Triton facilities.	Security and Estate Group (SEG) engaged design and construction contractors to facilitate PWC expediency which was achieved in November 2022. As a result this risk is in the process of being retired.
6	Facilities schedule currently on the critical path. A number of issues have contributed to the current position, including a previous pause to the facilities program due to US Triton program uncertainties and a change of operational concept.	SEG have initiated early works utilising funding transferred to AIR555 for shared works at Edinburgh. The RAAF Tindal design contractor has now been appointed and has commenced work. PWC approval was received in November 2022. The construction works for the facilities have commenced and it is on schedule. As such, this risk has been downgraded to Medium.
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	N/A	N/A

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

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 three lessons in total, two of which are related to Governance, one of which is related to Resourcing and Governance. These project lessons are provided below:	The project has not categorised any of its lessons information as a whole-of-Defence Lesson Learned.
Lesson Type – Observation. Inclusion of resourced schedules for external organisations. Accurate resourced schedules of external organisations that are responsible for program deliverables should be integrated into the project Integrated Master Schedule (IMS) in sufficient detail to track progress against each deliverable. This should be incorporated into the IMS at the early stages of the project and managed throughout the duration of the project.	Governance
Lesson Type – Observation. Developmental programs. The resourcing and engagement required to support developmental programs with partner nations is significantly higher than traditional acquisition programs that procure mature platforms. Additionally, regular engagement is required to ensure all stakeholders are aligned on the status of the program.	Resourcing & Governance
Lesson Type – Observation. External agency engagement. When establishing a complex project that has interfaces with external agencies who provide a Fundamental Inputs to Capability (FIC), the project should ensure that clear deliverables and lines of communication for each FIC organisation is established. To enable an adequate level of oversight, a dedicated FIC coordination role should be considered for future complex development projects.	Governance

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2023

Unit	Name
Division	Aerospace Systems
Branch	Aerospace Surveillance and Response

Project Data Summary Sheet¹

Project Number	AIR9000 Phase 2, 4 and 6
Project Name	MULTI-ROLE HELICOPTER
First Year Reported in the MPR	2008-09
Capability Type	Replacement
Capability Manager	Chief of Army
Government 1st Pass Approval	Apr 06
Government 2nd Pass Approval	Aug 04 (Phase 2) Apr 06 (Phases 4 and 6)
Budget at 2nd Pass Approval	\$3,522.8m
Total Approved Budget (Current)	\$3,654.5m
2022–23 Budget	\$91.6m
Complexity	ACAT I



Section 1 – Project Summary

1.1 Project Description

The Multi-Role Helicopter (MRH) Program was a key component of the Australian Defence Force (ADF) Helicopter Strategic Master Plan that sought to rationalise the number of helicopter types in ADF service. The MRH Program consisted of three phases of AIR9000 Phase 2, Phase 4 and Phase 6. Phase 2 (12 helicopters) was the acquisition of an additional Squadron of troop lift aircraft for the Australian Army, Phase 4 (28 helicopters) was to replace Army's S-70A-9 Black Hawk helicopters in the Air Mobile and Special Operations roles, and Phase 6 (six helicopters) replaced Royal Australian Navy (RAN) SK50 Sea King helicopters in the Maritime Support Helicopter role. All three phases were grouped under the AIR9000 MRH Program.

The delivery of a 47th MRH-90 Taipan was negotiated as part of Deed 2 to allow an aircraft to be used as a Ground Training Device.

Project SEA9100 Phase 1 – Improved Embarked Logistics Support Helicopter (SEA9100 Phase 1) will acquire 12 MH-60R Seahawk aircraft that will replace the Navy's MRH-90 Taipan fleet. Navy ceased MRH-90 Taipan operations in May 2022.

On 18 January 2023, following Government Combined Pass approval, Defence announced that the LAND4507 Phase 1 – MRH Rapid Replacement Project (LAND4507 Phase 1) would acquire 40 UH-60M Black Hawk to replace the Army's MRH-90 Taipan fleet from 2023.

1.2 Current Status

Cost Performance

In-year

As at 30 June 2023, Financial Year (FY) 2022-23 expenditure was \$77.5m against FY 2022-23 budget of \$91.6m. The variance is due to delays to the Non-Prime Acquisition activities achievements and other capability deliverables, and reduction in contractor and project management office costs.

Project Financial Assurance Statement

As at 30 June 2023, project AIR9000 Phase 2, 4 and 6 has reviewed the approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial and contractual obligations of Defence, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget, including contingency remaining for the project to complete against the agreed scope.

Contingency Statement

The project has committed contingency in previous Financial Years primarily for the treatment of various supportability and performance risks such as a replacement Mission Management System including Aviation Mission System (AMS) hardware procurement and Contractor Support Services, Common Mission Management System, System Service Order Agreement and Project management support services. The commitment of contingency is directly in support of the transition of the MRH-90 Taipan into the 6th Aviation Regiment. During FY 2022-23, the project has utilised contingency funding attributed to aforementioned activities, which were drawn from previously approved contingency commitments. No additional contingency funding was sought or approved in FY 2022-23.

Schedule Performance

As a result of the Deed 2 negotiations with Airbus Australia Pacific (The Contractor), the aircraft delivery was rescheduled resulting in the final aircraft being accepted in July 2017. The first 13 aircraft required an in-service retrofit to bring them to the contracted acquisition capability baseline; the final retrofit was completed in March 2016. Both Full Flight Mission Simulators have been accepted.

Remediation configuration management issues of production aircraft slowed the acceptance of production aircraft in 2015, this in

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.

turn slowed the rate of capability growth.

Due to reliability, sustainability and design shortfalls, the Chief of Army delayed the introduction of MRH-90 Taipan into 6th Aviation Regiment by three years and delayed the withdrawal of S-70A-9 Black Hawks to mitigate the risk to capability. In September 2017 the Chief of Army agreed to continue the transition of MRH-90 Taipan into 6th Aviation Regiment. The transition commenced in January 2019 and concluded with the cessation of S-70A-9 Black Hawk operations in December 2021.

The transition of MRH-90 Taipan into 6th Aviation Regiment has been supported by the project through the funding of facilities works, procurement of support and test equipment and additional spares.

Project SEA9100 Phase 1 – Improved Embarked Logistics Support Helicopter has been granted Second Pass Approval by Government. The project will acquire 12 MH-60R Seahawk aircraft that will replace the Navy's existing MRH-90 Taipan fleet. Navy ceased MRH-90 Taipan operations in May 2022.

On 18 January 2023, following Government Combined Pass Approval, Defence announced that LAND4507 Phase 1 - MRH Rapid Replacement within the Battlefield Aviation Program would acquire 40 UH-60M Black Hawks to replace Army's MRH-90 Taipan from 2023.

Following the approval of LAND4507 Phase 1, the MRH Program Management Steering Group (PMSG) confirmed that Final Operational Capability (FOC) will not be declared for MRH-90 Taipan.

Due to ongoing capability delays and technical deficiencies, the Final Materiel Release (FMR) milestone has been delayed. FMR forecast dates have been updated to September 2023.

The following capability milestones have been declared:

- Initial Operational Capability (IOC); Army (Operational Capability Amphibious (OCA) first (OCA1)) – December 2014; Navy (Operational Capability Maritime (OCM) first (OCM1)) – February 2015.
- Operational Capability Land (OCL) first (OCL1) September 2015; second (OCL2) – March 2016; and, third (OCL3) – February 2018.
- OCA; second and third (OCA2/3) – December 2015.

Declared capability milestones have regressed due to MRH-90 Taipan system underperformance.

The following capability milestones have not been declared:

- OCM second and third (OCM2/3).
- OCA four (OCA4).
- Operational Capability Special (OCS) one and two (OCS1/2).

As previously reported, the Taipan Gun Mount (TGM) was granted incorporation approval and production batches were delivered to and accepted by the project. However, TGM will not be granted service release as it does not meet the capability requirement due to unacceptable operational and airworthiness implications for crew and passenger seating, egress and aircraft self-protection.

Project closure activities have commenced and the project will be closed as soon as possible after FMR is declared.

Materiel Capability/Scope Delivery Performance

Following the approval of LAND4507 Phase 1, the project is focused on minimising expenditure and achieving Project Closure as soon as practicable. The following outstanding capabilities will be cancelled or deliveries reduced prior to the declaration of FMR:

- TGM.
- Mission Troop Seat.
- Enhanced Cargo Hook.
- Aeromedical Evacuation – Mature and,
- C17 Tactical Loading.

All capabilities listed are subject to ongoing contractual negotiations for their cancellation or reduction in scope to support FMR and Project Closure. Materiel delivery as required under the Materiel Acquisition Agreement (MAA) will be not be fully met, as directed by the PMSG. The reduced materiel delivery is expected to be achieved by FMR.

FMR has been reviewed and is now forecast to be achieved in September 2023 as the technical and supportability issues around the outstanding reduced materiel deliveries are resolved and contracted.

The MRH-90 Taipan has not been able to meet the ADFs capability requirements and will be replaced by MH-60R Seahawk through Project SEA9100 Phase 1 Improved Embarked Logistics Support Helicopter, and UH-60M Black Hawk by LAND 4507 Phase 1 MRH Rapid Replacement Project.

Note

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

1.3 Project Context

Background

The Additional Troop Lift project was first foreshadowed in the Defence White Paper 2000. In total, the AIR9000 MRH Program under all phases has acquired 47 MRH-90 aircraft and support systems. Support capabilities include Electronic Warfare Self Protection Support System, MRH Software Support Centre, MRH Instrumentation System and a Ground Mission Management System, training systems and in-service support.

The AIR9000 Phase 2 Acquisition Contract was signed for 12 additional Troop Lift Helicopters for Army with Airbus Australia Pacific in June 2005 with the subsequent Sustainment and Program Agreement contracts signed in July 2005. First and Second Pass approval for AIR 9000 Phases 4 and 6 were granted in April 2006; AIR9000 Phase 4 provided 28 helicopters for the replacement of the Australian Army's fleet of 34 S-70A-9 Black Hawk helicopters and AIR900 Phase 6 provided six helicopters as the replacement of the RAN's fleet of SK50 Sea King helicopters, providing maritime support capability for Navy.

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

Defence's acceptance of two MRH-90 that included appropriate training, maintenance and supply support resulted in achievement of In Service Date of December 2007. The aircraft operated under a Special Flight Permit (SFP) granted by the Chief of Air Force with the Sustainment Contract coming into effect and all three contracts are now currently active. The Commonwealth suspended acceptance of aircraft from Airbus Australia Pacific in November 2010 due to a number of engineering and reliability issues. Deliveries recommenced in November 2011 after a remediation plan by Airbus Australia Pacific addressed these issues. The Minister for Defence announced on 28 November 2011 that the project would be listed as a Project of Concern (POC) citing schedule, aircraft technical deficiencies and Airbus Australia Pacific's performance. The project will remain a POC until Project Closure. The Commonwealth has conducted subsequent negotiations with The Contractor to review and settle commercial, technical and schedule issues with the Deed 2 contract signed on 9 May 2013. The Deed 2 came into effect on 1 July 2013. The project has received goods and services under the Liquidated Damages provisions of the contract.
Uniqueness The MRH-90 Taipan aircraft is based upon the German Army variant of the NH90 Troop Transport Helicopter. The MRH-90 Taipan design uses well established aerospace technologies, but has introduced new technologies into Army and Navy, primarily in the areas of composite structure, helmet mounted sight and display, and fly-by-wire control systems. The MRH Program provided a MRH-90 Taipan capability to two main users - Army and Navy. The capability delivery complexity was mitigated through an agreement between Chief of Army and Chief of Navy. This provided the project with a single interface for introduction into service issues. Navy ceased MRH-90 Taipan operations in May 2022. The MRH Program Office Design Acceptance Strategy is dependent upon the French Military Airworthiness Authority's (Direction Générale de l'Armement (DGA)) prior acceptance of the NH90 variants and certification recommendation for the MRH-90. The DGA and other National Qualification Organisations prior acceptance of European NH90s provide confidence for the ADF to leverage off common certification evidence for the MRH-90.
Major Risks and Issues All risks have been closed and the project is currently managing the following Issues: Capability related: - The current design of the protection system is not meeting capability requirements. - Spares will need to be procured to support the new role equipment and capabilities being developed. Schedule related: - A delay to FMR due to delivery of supplies not adhering to the contracted schedule. - A delay to the final solution delivery schedule due to initial solution not being suitable for high care or multiple extractions.
Other Current Related Projects/Phases AIR9000 Phase 7 – Helicopter Aircrew Training System (HATS). HATS will be an important link in the training continuum for inductees to the MRH-90 training system. AIR9000 Phase 8 – Future Naval Aviation Combat System. The acquisition of 24 helicopters to enable the Navy to deploy at least eight MH-60R Seahawks embarked at sea across the Anzac Class Frigates and the new Hobart Class Air Warfare Destroyers. AIR90 – Identification Friend or Foe (IFF). AIR90 has upgraded all MRH-90 Taipan to the Mode 5 IFF waveform to maintain interoperability with United States and North Atlantic Treaty Organisation (NATO) secure combat identification systems. The MRH related scope of AIR90 is in the project closure phase. SEA9100 Phase 1 – Improved Embarked Logistics Support Helicopter. This project expands and rationalises the support and logistics helicopter fleet consistent with the expectations for larger naval operations. The project will acquire 12 MH-60R Seahawk aircraft to replace the Navy's existing MRH-90 Taipan fleet. LAND4507 Phase 1 – MRH Rapid Replacement within the Battlefield Aviation Program. This project will acquire 40 UH-60M Black Hawk to replace Army's MRH-90 Taipan fleet from 2023.
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		
Apr 04	Original Approval	3.3	1
Aug 04	Government Second Pass Approval (Phase 2)	953.9	
Jun 06	Real Variation – Scope (Second Pass Phase 4 and 6)	2,565.6	2
	Total at Second Pass Approval	3,522.8	
Oct 06	Real Variation – Transfer	(219.0)	3

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.

Oct 08, Nov 18, Jun 20	Real Variation – Transfer	(20.3)	4
Oct 08	Real Variation – Scope	31.5	5
Sep 17	Real Variation – Budgetary Adjustment	(87.4)	6
Mar 23	Real Variation – Transfer	(117.0)	7
		(412.2)	
Jul 10	Price Indexation	679.8	8
Nov 22	Exchange Variation	(135.9)	
Jun 23	Total Budget	3,654.5	
	Project Expenditure		
Prior to Jul 22	Contract Expenditure – Airbus Australia Pacific	(2895.7)	
	Contract Expenditure – CAE Australia Pty Ltd	(193.0)	
	Contract Expenditure – NATO Helicopter Management Agency	(23.5)	
	Contract Expenditure – Leonardo Australia Pty Ltd	(16.8)	
	Other Contract Payments / Internal Expenses	(368.2)	9
		(3,497.2)	
FY to Jun 23	Contract Expenditure – Airbus Australia Pacific	(62.6)	
	Contract Expenditure – NATO Helicopter Management Agency	(0.6)	
	Other Contract Payments / Internal Expenses	(14.3)	10
		(77.5)	
Jun 23	Total Expenditure	(3,574.7)	
Jun 23	Remaining Budget	(79.8)	
Notes			
1	This project's original budget amount is that prior to achieving Government Second Pass Approval.		
2	Incorporation of AIR9000 Phase 4 (Black Hawk Upgrade/Replacement) and AIR9000 Phase 6 (Maritime Support Helicopter).		
3	The funding related to facilities elements of the project was managed by Defence Estate and Infrastructure Group (DE&IG), now known as Security and Estate Group (SEG).		
4	Transfer to DE&IG (now known as SEG) for Facilities Infrastructure (\$20.0m), temporary amenities at 6 th Aviation Regiment (\$0.2m) and for facility remediation at 5 th Aviation Regiment (\$0.05m).		
5	Real Cost Increase funding for Full Flight Mission Simulator.		
6	Real Variation for Budget Adjustment (\$87.4m). This was offset and corrected by Defence Finance Group by a subsequent Exchange Adjustment in the Finance Management Information Group Bi-Annual update.		
7	Related to the contribution of AIR9000 Phase 2 to LAND4507 Phase 1 as per the approved cost model. LAND4507 Phase 1 received Government Combined Pass Approval in late 2022. The budget journal to transfer \$117.0m from AIR9000 Phase 2 was processed in March 2023.		
8	Up until July 2010, indexation was applied to project budgets on a periodic basis. The cumulative impact of this approach was \$556.1m. In addition to this amount, the impact on the project budget as a result of out-turning was a further \$123.7m having been applied to the remaining life of the project.		
9	Other Contract Payment/Internal Expenses comprise of: Capital expenses related to purchase of Specialist Military Equipment (\$209.8m), Contractors and Consultants (\$97.5m), Operating expenditure (\$45.1m), and Other capital expenses (\$15.8m) not attributable to the aforementioned major contracts.		
10	Other Contract Payment/Internal Expenses comprise of: (\$5.9m) for Non-Prime Acquisition expenditure, (\$3.9m) for Liquidated Damages, (\$3.7m) for Contractors and Consultants and (\$0.8m) for Operating expenditure related to Resident Project Team.		

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Materiel Movements
116.0	106.3	91.6	<u>Portfolio Budget Statement (PBS) to Portfolio Additional Estimate Statement (PAES)</u> : The variance is primarily due to rescheduled activities as a result of delays in prime contract milestone achievement and other capability deliverables. <u>PAES to Final Plan</u> : The variance is primarily due supply chain issues delaying planned equipment procurements for the AMS.
Variance \$m	(9.8)	(14.7)	Total Variance (\$m): (24.4)
Variance %	(8.4)	(13.8)	Total Variance (%): (21.0)

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(14.0)	Australian Industry	As at 30 June 2023, FY 2022-23 expenditure was \$77.5m against a budget of \$91.6m. The variance is due to delays to the Non-Prime Acquisition activities achievements and other capability deliverables, and reduction in contractor and project management office costs.
		-	Foreign Industry	
		-	Early Processes	
		(0.2)	Defence Processes	
		-	Foreign Government Negotiations/Payments	
		-	Cost Saving	
		-	Effort in Support of Operations	
		-	Additional Government Approvals	
91.6	77.5	(14.2)	Total Variance	
		(15.5)	% Variance	

2.3A Details of Project Major Contracts – Price

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 23 \$m			
Airbus Australia Pacific	Jun 05	846.3	2,959.3	Variable	Standard Defence Contract	1, 2, 3, 4
CAE Australia Pty Ltd	Dec 07	180.5	193.1	Variable	Standard Defence Contract	4, 5
NATO Helicopter Management Agency	Oct 19	20.5	25.7	Variable	Non Standard Defence Contract (Multi Nation)	4, 6
Leonardo Australia Pty Ltd	Apr 18	16.3	16.8	Variable	Deed	4, 7
Notes						
1	This contract also included an Electronic Warfare Self Protection Support System, MRH Software Support System, MRH Instrumented System and 23 Ground Mission Management System (GMMS) (four Fixed GMMS, seven Deployable GMMS, one Reduced, nine Light and two interim GMMS). Contract Base date is January 2004.					
2	The MRH Instrumented System includes an airborne instrumentation pallet, some ground based instrumentation and three aircraft (from the total fleet of 47) that have provisions to have the instrumentation pallet installed.					
3	The increase from the original contract value is predominantly due to the increase in aircraft ordered and associated systems following government approved scope changes as described in Section 1.3. Since 1 July 2018, there have been key Contract Change Proposals processed for an Aeromedical Evacuation Mature System (Phase 1), replacement Cargo Hooks, Heavy Stores Carriers, TGM, Fast Roping, Rappelling and Extracting System and External Auxiliary Fuel Tanks Packaging.					
4	Contract value as at 30 June 2023 is based on actual expenditure to 30 June 2023 and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable).					
5	The Commonwealth conducted negotiations with The Contractor, to review and settle commercial and technical issues in December 2015.					
6	The Commonwealth entered into contract with the NATO Helicopter Management Agency for the NH90 Design and Development, Production and Logistics Management Organization as a Contributing Participant in this multi-nation contract for an Aircraft Maintenance Trainer (AMT).					
7	The Commonwealth entered into contract with Leonardo Australia Pty Ltd for the establishment of a helicopter transmission repair and overhaul facility.					

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

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 23		
Airbus Australia Pacific	12	47	MRH-90 Taipan aircraft.	1
CAE Australia Pty Ltd	2	2	Full Flight and Mission Simulator.	-
NATO Helicopter Management Agency	1	1	Aircraft Maintenance Trainer.	-
Leonardo Australia Pty Ltd	N/A	N/A	Repair and overhaul capability for helicopter transmission, including a repair facility, initial spares, personnel costs, and transmission pallets.	-
Major equipment accepted and quantities to 30 Jun 23				
47 MRH-90 Taipan aircraft have been accepted to date. - Both Full Flight Mission Simulators have been accepted by the Commonwealth. - AMT has been accepted.				
Notes				
1	The delivery of a 47 th MRH-90 Taipan was negotiated as part of Deed 2. This enables the use of one aircraft as a Ground Training Device without impacting the operational fleet.			

2.4 Australian Industry Capability

Summary
The project has contracted Australian Industry Capability (AIC) targets, where appropriate, to identify Local Industry Capability which is captured in CAE Australia Pty Ltd's AIC Plan in support of development of skills and techniques to provide ongoing support and adaptation of the Full Flight and Mission Simulators during the design, development, manufacturing and delivery stage activities; and, in Leonardo Australia Pty Ltd's AIC Plan supporting the establishment of the Helicopter Transmission Repair and Overhaul capability including all necessary transfer of technology, skills and intellectual property required in performing MRH-90 Main Gear Box Repair and Overhaul activities, including upgrade requirements.
The project has no contracted AIC targets for Airbus Australia Pacific as AIC obligations that were removed from the MRH Acquisition Contract and have no contracted AIC targets for NATO Helicopter Management Agency as the project was a contributing participant in a multi nation collective contract.
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	MRH aircraft - Phase 2	Aug 05	Oct 05	Sep 05	1	1
	MRH aircraft - Phase 4/6	Apr 07	Apr 07	May 07	1	1
	MRH Software Support Centre	N/A	Mar 07	Apr 07	1	-
	Electronic Warfare Self Protection Support System	N/A	N/A	Nov 05	N/A	-
	Ground based Mission Planning and Management System	Oct 05	Oct 05	Feb 07	16	2
	MRH Instrumented System	N/A	Jun 07	Jul 07	1	-
System Design	Full Flight and Mission Simulators	May 08	Nov 08	Mar 09	9	3
	Full Flight and Mission Simulators	Oct 08	Mar 09	Jun 09	8	3
Preliminary Design	MRH aircraft - Phase 2	Jan 06	Jan 06	Apr 06	3	-
	MRH aircraft - Phase 4/6	N/A	N/A	Jun 08	N/A	-
	MRH Software Support Centre	N/A	Jun 07	Jun 07	0	-
	Electronic Warfare Self Protection Support System	Mar 06	Mar 06	May 06	2	-
	Ground based Mission Planning and Management System	Jul 06	Apr 07	Jun 07	11	2
	MRH Instrumented System	N/A	Jun 07	Jul 07	1	-
Critical Design	Full Flight and Mission Simulators	Feb 09	Sep 09	Oct 09	8	3
	MRH aircraft - Phase 2	May 06	May 06	Jun 06	1	-
	MRH aircraft - Phase 4/6	Aug 08	N/A	Oct 08	2	-
	MRH Software Support Centre	N/A	Oct 07	Sep 07	(1)	-
	Electronic Warfare Self Protection Support System	Sep 06	Sep 06	Oct 06	1	-
	Ground based Mission Planning and Management System	Nov 06	Nov 07	Jul 08	20	2
	MRH Instrumented System	N/A	Jun 08	Jun 08	0	-
	Full Flight and Mission Simulators	Aug 09	Feb 10	Apr 10	6	3
Notes						
1	Delays in the Systems Engineering process have resulted from the developmental nature of the aircraft system, with the MRH-90 variant being unique.					
2	GMMS software delays are directly attributable to aircraft schedule delivery slip.					
3	Full Flight Mission Simulators design review delays stem primarily from slow contractor derivation of requirements into a suitable System and Subsystem Specification. This was compounded by delays in The Contractor establishing a vital subcontract with the aircraft manufacturer.					

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	MRH aircraft - Phase 2	Jul 06	Nov 06	Dec 06	5	-
	MRH aircraft - Phase 4/6	N/A	N/A	N/A	N/A	1
	MRH Software Support Centre	N/A	Oct 08	Nov 08	1	-
	Electronic Warfare Self Protection Support System	N/A	N/A	Nov 07	N/A	-
	Ground based Mission Planning and Management System	N/A	N/A	N/A	N/A	2
	MRH Instrumented System	Nov 08	May 09	Dec 09	13	3
	Full Flight and Mission Simulators	Jun 11	Sept 11	Sep 11	4	4
Acceptance	Type Acceptance Review SFP 1	Oct 07	N/A	Dec 07	2	5
	Australian Military Type Certificate	Dec 08	Dec 10	Apr 13	52	6
	Full Flight and Mission Simulator #1	Jul 12	Aug 13	Aug 13	13	7
	Full Flight and Mission Simulator #2	Jan 13	Oct 14	Oct 14	21	7
	Ground based Mission Planning and Management System Lot 1	Feb 09	Sep 09	Dec 09	10	8
	Ground Mission Planning and Management System Lot 2	Feb 09	Dec 09	Apr 10	14	8
	Ground Mission Planning and Management System Lot 3	Sep 10	Sep10	Mar 13	30	8
	MRH Software Support Centre	Feb 09	Feb 09	Dec 08	(2)	-
	Electronic Warfare Self Protection Support System	Dec 07	Dec 07	Dec 07	0	-
	MRH Instrumented System	Mar 10	Jun 10	Sep 11	18	9
	MRH aircraft #01 (First aircraft)	Dec 07	N/A	Dec 07	0	-
Aircraft Acceptance	MRH aircraft #05 (First Australian built aircraft)	Dec 08	N/A	Dec 08	0	-
	MRH aircraft #46	Jul 14	Jun 17	Jun 17	35	10
	MRH aircraft #47 (Final aircraft)	Jul 17	Jul 17	Jul 17	0	-
Notes						
1	AIR9000 Phases 4/6 were rolled into the MRH Program from aircraft 13 onwards, which increased the number of aircraft from 12 to 46.					
2	The acceptance and test-readiness of the GMMS was broken into six lots post contract signature. The lots comprise of GMMS deliverables that have been aligned to aircraft delivery – location and baseline. The acceptance of GMMS lots are listed in the acceptance area of this table.					
3	The 13-month delay to closure of Test Readiness Review was due to electronic compatibility test design issues not resolved until November 2009. This delay was mitigated by the development of an interim MRH Instrumentation System capability used for a test activity in October 2009.					
4	Achieved through completion of Test Readiness Review for Contractor In-Plant Test and Evaluation in September 2011.					
5	The first Airworthiness Board (for a SFP was conducted in November 2007 and a SFP was granted in December 2007. There have been a number of SFP extensions to allow flight trials of the aircraft as it further develops. The most recent SFP was granted in December 2012 and expired in April 2013.					
6	Achievement of the Australian Military Type Certificate proved problematic due to technical and reliability issues, leading to insufficient levels of the Rate of Effort. Rate of Effort was required to validate that in-service support arrangements for the fleet are sufficient to cope with current numbers of aircraft and are growing in maturity to meet fleet requirements. Australian Military Type Certificate and Service Release was achieved 17 April 2013.					
7	Refers to acceptance of Full Flight Mission Simulators in Oakey and Townsville. Delays have been incurred due to the late delivery of facilities and an underestimation of the time required to implement the design.					
8	Ground based Mission planning and Management System Lot 1, 2 and 3 have been altered to accommodate the variation in aircraft delivery date and configuration.					
9	The MRH instrumented system incurred delays due to technical and supportability issues that resulted in contractual non-conformances. These non-conformances were rectified by September 2011.					
10	The MRH-90 program stopped accepting aircraft in November 2010 due to a number of technical and reliability issues. The Commonwealth recommenced accepting aircraft in November 2011 after negotiating a remediation plan to address a number of engineering and contractual issues; however, acceptance of aircraft was again suspended in February 2012 pending resolution of another technical concern related to the aircraft's cargo hook. In May 2012 the Commonwealth agreed to accept a further four aircraft based on Airbus Australia Pacific's agreement to the commercial terms associated with the rectification of the cargo hook issue. Scheduled aircraft acceptance recommenced in June 2012 with aircraft #46 accepted in June 2017 and the final aircraft (#47) accepted in July 2017.					

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item		Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release 1 (IMR1)	Army/ Navy	Jun 10	May 13	35	1
Initial Operational Capability (IOC)	Navy	Jul 10	Feb 15	55	2
	Army	Apr 11	Dec 14	44	3
Final Materiel Release (FMR)	Army/ Navy	Oct 14	Sep 23	107	4
Final Operational Capability (FOC)	Navy	Dec 12	-	-	5
	Army	Jul 14	-	-	4, 5
Notes					
1	The MRH program stopped accepting aircraft in November 2010 due to a number of technical and reliability issues. This impacted the achievement of capability milestones. The Commonwealth recommenced accepting aircraft in November 2011 after negotiating a remediation plan to address a number of engineering and reliability issues; however, acceptance of aircraft was again suspended in February 2012 pending resolution of another technical concern related to the aircraft's cargo hook. In May 2012 the Commonwealth agreed to accept a further four aircraft based on Airbus Australia Pacific's agreement to the commercial terms associated with the rectification of the cargo hook issue. Scheduled aircraft acceptance recommenced in June 2012 with the final aircraft (#47) accepted in July 2017. IMR was declared on 13 May 2013, based on six Product Baseline 003 aircraft.				
2	Affected by delays to IMR (refer to Note 1 above).				
3	Affected by delays to IMR (refer to Note 1 above).				
4	Dates directly impacted by delay to IMR (refer to Note 1 above). The remediation of technical deficiencies and issues through replacement or re-design will draw upon significant engineering, logistic and commercial resources and will therefore form the critical path toward achieving FMR. The FMR dates have been reviewed to reflect this. Ongoing delays to deliver capabilities has resulted in FMR being rescheduled to September 2023. FOC will not be declared.				
5	FOC will not be declared. The MRH-90 Taipan has not been able to meet the ADF's capability requirements and will be replaced by MH-60R Seahawk through Project SEA9100 Phase 1 Improved Embarked Logistics Support Helicopter, and UH-60M Black Hawk by LAND4507 Phase 1 MRH Rapid Replacement Project.				
Schedule Status at 30 June 2023					

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: N/A
	Amber: N/A
	Red: FOC will not be declared. The MRH-90 Taipan has not been able to meet the ADF's capability requirements and will be replaced by MH-60R Seahawk through Project SEA9100 Phase 1 Improved Embarked Logistics Support Helicopter, and UH-60M Black Hawk by LAND4507 Phase 1 MRH Rapid Replacement Project.
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)	- Six Product Baseline 003 aircraft with associated role equipment to support IOC milestones; - Issue of Australian Military Type Certificate and Service Release; - Completion of all MRH-90 facilities at Townsville, Oakey and Nowra; - Establishment of mature planned contractor support to maintenance and logistics; and - Provision and certification of Mission Management systems necessary for IOC milestones. IMR was achieved in May 2013.	Achieved
Initial Operational Capability (IOC)	- Achievement of OCM Support 1 (OCM1) – a single flight embarked for limited daytime operations. - Achievement of OCA1 Milestones – deployment of a single troop (consists of three aircraft) in a permissive environment. IOC was achieved by Army – December 2014 and Navy – February 2015.	Achieved
Final Materiel Release (FMR)	47 aircraft configured to the contractual baseline including configuration amendments specified in Deeds 1 and 2 (one aircraft to be used as a Maintenance Training Device); - Role equipment delivered to support aircraft. Role equipment completion criteria is to include the transfer of Project funding and contract management responsibilities concerning the completion of the remaining long lead time acquisition activities for Aeromedical Evacuation Equipment to the Army Aviation System Program Office (AASPO); A mature sustainment organisation capable of discharging all in-service responsibilities; including logistic and training requirements; - Mature training system with all training devices accepted, supported by an effective, functioning training organisation. Training completion criteria to include the transfer of project funding and contract management responsibilities concerning the completion of the remaining long lead time acquisition activities for an additional AMT to AASPO; and - All facilities and support equipment, required to support the capabilities accepted. FMR is forecast to be achieved in September 2023.	Not yet Achieved
Final Operational Capability (FOC)	FOC is defined as the achievement of all Operational Capability Milestones providing the following capabilities: - OCM3 – Three embarked flights (Note: OCM3 will not be declared as a result of Navy ceasing MRH Operations). - OCL3 – Two Airmobile Squadrons. - OCA4 – One Squadron capable of supporting amphibious operations. - OCS Operations Support (OCS2) – One Special Operations Aviation Task Unit. FOC will not be declared refer Section 1.2.	Will not be Declared

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
N/A	All major project risks are closed or are being managed as issues.	N/A
Emergent Risks (risk not previously identified but has emerged during 2022–23)		
Ref#	Description	Remedial Action
N/A	N/A	N/A

5.2 Major Project Issues

Ref#	Description	Remedial Action
1	Two issues have been identified that are attributed to Schedule: - Delayed FMR due to delivery of supplies not adhering to the contracted schedule. - Delay to the final solution delivery schedule due to initial solution not being suitable for high care or multiple extractions.	The project FOC will not be declared due to the delay in the delivery of FMR supplies. Defence has approved the cancellation of these outstanding supplies with a corresponding scope reduction to reflect the capability identified in the MAA.
2	Two capability issues have been identified: - The current design of the protection system is not meeting capability requirements. - Spares will need to be procured to support the new role equipment and capabilities being developed.	The PMSG held in April 2023 endorsed that the sub-system will not be granted technical release and that production systems and spares are not to be procured. The current in service system integrated onto the platform will remain in service.

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 four lessons related to Contract Management, First of Type Equipment, Schedule Management, Governance, and Requirements Management. 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. The impact of attaining limited Intellectual Property rights has been critical to the ongoing development of the capability and achievement of value for money in further contract negotiations. It has also limited the provision of data for integration with other platforms (such as the Landing Helicopter Dock ships).	Contract Management
Lesson Type – Observation. The MRH Program was incorrectly viewed as a Military off-the-Shelf (MOTS) acquisition. Lessons associated with intended MOTS procurements include: that it is essential that the maturity of any offered product be clearly assessed and understood; and that elements of a chosen off-the-shelf solution may not meet the user requirement.	Off-The-Shelf Equipment
Lesson Type – Observation. Better arrangements should be put in place to ensure appropriate considerations of contractor performance occur before the Commonwealth enters into similar contracts.	Contract Management

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2023

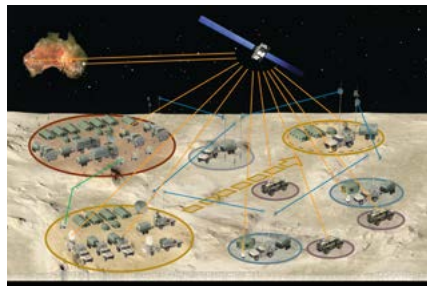
Unit	Name
Division	Joint Aviation Systems Division
Branch	Army Aviation Systems Branch

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

Project Data Summary Sheet¹

Project Number	JNT2072 Phase 2B ²
Project Name	BATTLESPACE COMMUNICATIONS SYSTEMS
First Year Reported in the MPR	2017–18
Capability Type	Replacement
Capability Manager	Chief of Army
Government 1st Pass Approval	May 11
Government 2nd Pass Approval	Stage 1 – May 15
Budget at 2nd Pass Approval	\$915.7m
Total Approved Budget (Current)	\$947.4m
2022–23 Budget	\$54.1m
Complexity	ACAT I



Section 1 – Project Summary

1.1 Project Description

JNT2072 is a multi-phased program to define the Battlespace Communication Systems - Land (BCS-L) Communications Architecture, govern the design, incremental implementation and verification of system elements across a number of projects as well as acquire systems and equipment.

JNT2072 Phase 2B will provide the BCS-L deployed wide-band backbone by replacing and enhancing the existing Battlefield Telecommunications Network (BTN) capability within Army and Air Force. The Integrated Battlespace Communications System Network (I-BTN) will provide secure communications within deployed Australian Defence Force (ADF) Headquarters, commanders and their subordinate staff, to effectively exchange voice, data and video. This capability will be further enhanced through the provision of a Headquarters On The Move (HQOTM) capability. JNT2072 Phase 2B will deliver the I-BTN in three capability Releases with Release 1 providing transit case nodes and Release 2 and Release 3 providing Vehicle Mounted Nodes (VMN) and additional capabilities. The end state will be an I-BTN that provides greater capacity; more effective switching, wireless and wired network infrastructure supporting secure voice, data and video services. The I-BTN contractor is Boeing Defence Australia Ltd. JNT2072 Phase 2B will provide end-to-end connectivity from the Mission Partner Environment, through and within the I-BTN, and to the Defence Terrestrial Communications Network (TCN) (provided by JNT2047 Phase 3). JNT2072 Phase 2B has provided supplementary funding to Joint Command, Control, Communications, Computers and Intelligence Systems Program Office (JC4ISPO) for the procurement of 259 Deployable Local Area Network (DLAN) systems for integration with I-BTN. This hardware has been provided to LAND 4125. Further, JNT2072 Phase 2B is scoped to acquire a Terrestrial Range Extension System (TRES) consisting of both ground based and tethered components to extend the range of tactical radios procured under earlier phases of JNT2072. The project scope for ground based TRES will be delivered via an acquisition activity to procure a system known as the Mobile Retransmission System (MRS). This acquisition is being conducted by Land C4 Sustainment System Program Office (LC4SPO) using project funds. The Tethered TRES project scope will not proceed following the conduct of risk reduction activities.

1.2 Current Status

Cost Performance

In-year

As at 30 June 2023, Financial Year (FY) 2022-23 expenditure was \$51.0m, against FY 2022-23 budget of \$54.1m. The variance is due to a number of factors; delays to delivery of the I-BTN Release 3 VMN as a result of ongoing effects of COVID-19 supply chain issues; a later than planned delivery of I-BTN Release 3 System Maintenance Release HQOTM vehicles, where the production of the vehicles has been delayed due to defective Government Furnished Materiel (GFM); and, the Tethered TRES procurement not proceeding as intended.

Project Financial Assurance Statement

As at 30 June 2023, JNT2072 Phase 2B 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, that there is sufficient budget including contingency remaining for the project to complete against the agreed scope.

Contingency Statement

The project did not apply for contingency in the FY 2022-23.

Schedule Performance

In FY 2022-23 Boeing Defence Australia Ltd finalised the delivery of 18 Man Portable Formation Nodes (Upgrade) and 21 Man Portable Unit Nodes (Upgrade).

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.

2. JNT Phase 2B was originally approved as a JOINT PROJECT (JNT) within the broader JNT2072 program, but since second pass it has been managed and reported as a LAND project. The remainder of this report will refer to JNT2072 Phase 2B.

In FY 2022-23 Boeing Defence Australia Ltd continued to experience the effects of COVID-19 supply chain issues. I-BTN Release 3 Vehicle Mounted Formation and Unit Nodes due for delivery in 2022 was impacted by COVID-19 supply chain issues, with acceptance commencing February 2023. The delivery of four Vehicle Mounted Formation Nodes (VMFN) and eight Vehicle Mounted Unit Nodes (VMUN) to the Commonwealth was completed by Boeing Defence Australia Ltd in June 2023, which constitutes delivery of Materiel Release 7 under the Boeing Defence Australia Ltd Contract. The delivery of the final four VMFN, eight VMUN and one VMFN to the Commonwealth was completed in June 2023, which constitutes Materiel Release 8 under the Boeing Defence Australia Ltd Contract. Defective GFM delayed Boeing Defence Australia Ltd delivery of HQOTM. This was rectified, and Boeing Defence Australia Ltd commenced delivery of the first HQOTM vehicles in November 2022 and completed the delivery of 16 vehicles by April 2023, meeting the contracted Release 3 System Maintenance Release Milestone. The project scope for ground based TRES will be delivered via a separate LC4SPO acquisition project. The Tethered TRES project scope will not proceed following the conduct of risk reduction activities.
Materiel Capability/Scope Delivery Performance Initial Materiel Release (IMR), as defined in the contract, was achieved by Boeing Defence Australia Ltd in December 2017, allowing the Capability Manager to declare IMR in February 2018. Achievement of Initial Operational Capability (IOC) was declared in March 2018. The later than planned delivery of the I-BTN Release 3 VMN and the Release 3 System Maintenance Release HQOTM vehicles delayed the achievement of Final Materiel Release (FMR) from January 2023 to August 2023. Final Operational Capability (FOC) for I-BTN remains unchanged and is planned to be achieved in September 2023, noting that the final two HQOTM vehicles will be delivered under the support contract in the first half of 2024. The project scope for ground based TRES will be delivered via an acquisition project known as the MRS. This acquisition is being conducted by LC4SPO using project funds. The tethered LC4SPO project scope will not proceed following the conduct of risk reduction activities.
Note Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.

1.3 Project Context

Background JNT2072 Phase 2B will enhance and modernise land force communications by replacing existing ADF deployable communication information systems. It will replace and enhance the existing BTN with an I-BTN. Second Pass approval also included a new purpose built System Support Facility (SSF). This facility replaces the previous support facility that has been operating out of demountable buildings. The design and construction of the SSF was delivered by Security and Estate Group, with the new facility commissioned in September 2017. The I-BTN capability being delivered is classified as developmental, as no off-the-shelf systems were available to meet the requirements for the I-BTN. The I-BTN is being developed to integrate a range of both developmental components as well as a range of off-the-shelf components, to meet the requirements. The I-BTN capability is being delivered in three releases: - Release 1 is a transit case based capability with an initial level of functionality of the Network Planning and Management System. Commencement of delivery of Release 1 capability is aligned to achievement of IMR 1A. - Release 2 is additional bearers and includes the Medium Mounted Satellite Communications capability, tropospheric scatter, External Network Access Point and an additional Currawong Network Edge Strategic to Tactical interface site. - Release 3 includes VMN and the HQOTM node as well as secure voice and video services. Completion of delivery of Release 3 capability is aligned to achievement of FMR. TRES will provide ground based retransmission of terrestrial tactical communications systems. TRES is not a component of the I-BTN and achievement of I-BTN FOC is not dependent on TRES. A performance based support contract was signed at the same time as the acquisition contract in September 2015 with Boeing Defence Australia Ltd. The support contract initially had a three-year term with rolling one-year extensions to a maximum of 12 years. The operative date of the support contract was 29 January 2018. As a consequence of Contract Change Proposal (CCP) 015, the introduction into service of equipment has been delayed resulting in an extension in support contract term of three to five years at a reduced yearly expenditure. The total saving over the five-year period is approximately \$6.0 million. The support contract was transitioned to Battlespace Communications Operations Group in June 2018.
Uniqueness The project is highly complex and technically challenging as a result of having to design an I-BTN that integrates capabilities being delivered by other projects within the Capability Acquisition and Sustainment Group (CASG) and the Chief Information Officer Group (CIOG), as well as delivering an I-BTN technical solution that is required to interoperate with a multitude of external interfaces. Boeing Defence Australia Ltd is required to design and verify that the I-BTN provides end-to-end connectivity of specified BCS-L services from tactical environment into strategic network. Boeing Defence Australia Ltd is executing the project in three capability releases across seven years. Boeing Defence Australia Ltd is developing both hardware and the network planning and management system software, as well as buying and integrating off-the-shelf equipment. Boeing Defence Australia Ltd is also required to integrate its system with existing satellite bearer systems and Information Technology systems that have been delivered by other projects within CASG and CIOG.
Major Risks and Issues The project is managing the following issue: The delivery of the final two HQOTM vehicles will be delayed to the first half of 2024 due to the late delivery of GFM to Boeing

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

Defence Australia Ltd.
Other Current Related Projects/Phases JNT2072 Phase 1, BCS-L. The initial phase of the JNT2072 program, this project has delivered communications bearers to the Battle Management System (BMS), and enhancing communications for ADF Land elements through the development of a holistic battlespace communications architecture for the Land environment. JNT2072 Phase 2A – Battlespace Communications Systems – Land (BCS-L). Phase 2A is continuing the rollout of products selected during Phase 1 primarily to provide voice services to dismantled users. Phase 2A will also establish a mature support system for ongoing sustainment of the Phases 1 and 2A materiel systems and contribute to ongoing prime system integration activities to evolve the BCS-L design. Investigation and/or market survey activities will be conducted to specify and identify products for potential procurement in future phases. JNT2072 Phase 3 – Battlespace Communications Systems – Land (BCS-L). This project will introduce into service a digital communication backbone for land based elements of the ADF and their enabling elements. The capability is aligned with LAND 75 Phase 4 as part of a second tranche of LAND 200 with the capability being a vital function of the BMS. This phase will enhance the digital communications backbone delivered under previous phases, expand the provisioning to additional land forces and ADF elements, and provide a new capability to support the distribution and data management of the land Battlespace. JNT2072 Phase 1 – Battlespace Communications Systems – Land (BCS-L) and JNT2072 Phase 2A – Battlespace Communications Systems – Land (BCS-L). Delivered the initial TCN. The scope of JNT2072 Phase 2B includes interface of the I-BTN to the TCN. Protected Mobility System Program Office (SPO). Coordination of the in-service management of Bushmaster Protected Mobility Vehicle (PMV) fleet (procured by LAND116) including configuration updates. The I-BTN is required to interface with multiple ADF platforms, including combat and non-combat vehicles, deployable satellite communication systems, and strategic communication systems. Any delays or issues within these platforms and systems can affect the testing, design, delivery or usability of the I-BTN.
Note
Major risks and issues are excluded from the scope of the Auditor-General's Independent Assurance Report.

Section 2 – Financial Performance³

2.1 Project Budget (out-turned) and Expenditure History

Date	Description	\$m	Notes
Project Budget			
Oct 11	Original Approval	3.9	1
May 15	Government Second Pass Approval	911.8	2
	Total at Second Pass Approval	915.7	
Jun 23	Real Variation – Transfer	1.0	3
Jun 23	Exchange Variation	30.7	
Jun 23	Total Budget	947.4	
Project Expenditure			
Prior to Jul 22	Contract Expenditure – Boeing Defence Australia Ltd	(672.6)	4
	Contract Expenditure – Kellogg Brown and Root Pty Ltd	(23.4)	
	Other Contract Payments / Internal Expenses	(135.9)	
		(831.9)	
FY to Jun 23	Contract Expenditure – Boeing Defence Australia Ltd	(46.5)	5
	Contract Expenditure – Kellogg Brown and Root Pty Ltd	(3.4)	
	Other Contract Payments / Internal Expenses	(1.1)	
		(51.0)	
Jun 23	Total Expenditure	(882.9)	
Jun 23	Remaining Budget	64.5	
Notes			
1	The projects original budget amount prior to Second Pass Approval.		
2	The total budget amount includes supplementary funding to JC4ISPO for the procurement of additional Enhanced Deployable Local Area Network (EDLAN) systems \$126.0m.		
3	Real Variation – Transfer of \$1.0m represents remaining funds from Capital Facilities and Infrastructure Branch being returned to the Project.		

Notice to reader

³ 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.

4	Other Contract Payments/Internal Expenses; EDLAN and EDLAN Information and Communication Technologies (ICT) Hardware and Software (\$108.8), HQOTM (\$18.0m), Travel (\$3.9m), Technical Services (\$2.4m), Other ICT Hardware & Other Equipment (\$1.5m) and Legal Fees (\$1.1m).
5	Other Contract Payments/Internal Expenses includes; Travel, Overheads, Admin, HQOTM (\$0.5m), Technical Services (\$0.4m) and Freight and Office Expenses (\$0.2m).

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Materiel Movements
57.1	73.5	54.1	Portfolio Budget Statement (PBS) to Portfolio Additional Estimates Statement (PAES): Variation is due to reallocation of funds into FY 2023-24. This reallocation is due to active delays of equipment delivery, HQOTM Platform delays and unforeseen complexity of Risk Reduction Activities. PAES to Final Plan: Variation is due predominately to the FMR milestone moving into FY 2023-24 as part of CCP046 which was signed on 23 June 2023.
Variance \$m	16.4	(19.4)	Total Variance (\$m): (3.0)
Variance %	28.6	(26.4)	Total Variance (%): (5.3)

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(3.1)	Australian Industry	The project has spent \$51.0m in FY 2022-23 against a budget of \$54.1m. The variance is due to a number of factors; delays to delivery of the I-BTN Release 3 VMN as a result of ongoing effects of COVID-19 supply chain issues. A later than planned delivery of I-BTN Release 3 System Maintenance Release HQOTM vehicles, where the production of the vehicles has been delayed due to defective GFM and the Tethered TRES procurement not proceeding as planned.
		-	Foreign Industry	
		-	Early Processes	
		-	Defence Processes	
		-	Foreign Government Negotiations/Payments	
		-	Cost Saving	
		-	Effort in Support of Operations	
		-	Additional Government Approvals	
54.1	51.0	(3.1)	Total Variance	
		(5.7)	% Variance	

2.3A Details of Project Major Contracts – Price

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 23 \$m			
Kellogg Brown and Root Pty Ltd (Integrated Support Contract)	Jul 15	9.6	28.3	Firm or Fixed	Standard Defence Contract	1
Boeing Defence Australia Ltd (I-BTN)	Sep 15	487.2	727.8	Firm or Fixed	Standard Defence Contract	2
Notes						
1	The increase in contract price is due to the extension of Integrated Support Contractor (ISC) services as part of CCP08, which increased the level of resources, required to assist in Materiel Release 2 and Materiel Release 3. Further price increase is due to the extension of this contract by 12 months as part of CCP10, and a further 12 months as part of CCP11.					
2	The increase in the contract price is due to postponement caused by Defective GFM (Vehicle Batteries) that delayed the delivery of HQOTM vehicles, as part of CCP046.					

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

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 23		
Kellogg Brown and Root Pty Ltd (Integrated Support Contract)	N/A	N/A	Range of ISC Services in support of the JNT2072 Phase 2B Project.	-
Boeing Defence Australia Ltd (I-BTN)	See scope	See scope	1 Force Node Vehicle Mounted. 8 Formation Nodes Vehicle Mounted. 18 Formation Nodes Transit Case. 16 Unit Nodes Vehicle Mounted. 21 Unit Nodes Transit Case. 23 Relay Nodes Transit Case. 2 Tactical Interface Stations. 16 HQOTM Nodes.	1, 2
Major equipment accepted and quantities to 30 Jun 23				
1 Force Node Vehicle Mounted. 8 Formation Nodes Vehicle Mounted. 18 Formation Nodes / Man Portable Transit Case. 18 Formation Nodes / Man Portable Transit Case Upgrade.				

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

16 Unit Nodes Vehicle Mounted. 21 Unit Nodes Man Portable / Transit Case. 21 Unit Node Man Portable / Transit Case Upgrade. 23 Relay Nodes Transit Case. 2 Tactical Interface Station. 35 Broadband Terrestrial Beyond Line Of Sight Transit Case. 24 Medium Mounted Satellite Terminal. 16 HQOTM Vehicles (See Note 2).	
Notes	
1	The scope of the contract was varied under CCP015, in agreement with the Capability Manager, amending the number of required Tactical Interface Stations from four to three.
2	The scope of the contract was varied via CCP046, in agreement with the Capability Manager, amending the number of HQOTM vehicles from 18 to 16. Two further HQOTM vehicles will be delivered by the project via the I-BTN Contract (Support). It is planned that this delivery will be complete by mid-2024.

2.4 Australian Industry Capability

Summary	
The project has no contracted Australian Industry Capability (AIC) targets for Boeing Defence Australia Ltd and Kellogg Brown and Root Pty Ltd as the contracts were signed in 2015, prior to the implementation of AIC targets, therefore there are no defined contractual targets.	
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	System Requirements Review (SRR) Release 1,2	May 16	N/A	Mar 16	(2)	1
	System Definition Review (SDR) Release 1, 2	Jul 16	N/A	Mar 16	(4)	1
Preliminary Design	Release 1	Oct 16	N/A	Sep 16	(1)	-
	Release 2 and 3	Oct 17	Oct 18	Jul 18	9	2, 3
Detailed Design	Release 1	Dec 16	N/A	Nov 16	(1)	-
	Release 2	Jan 18	Feb 19	Dec 18	11	2
	Release 3	Mar 20	N/A	Nov 19	(4)	4
	Support System – Release 1	Nov 16	Feb 17	Dec 16	1	5
	Support System – Release 2	Jan 18	Mar 19	Feb 19	13	2
	Support System – Release 3	May 20	N/A	Dec 19	(5)	4
TRES Design	Tethered Aerial TRES	N/A	N/A	N/A	N/A	6
Notes						
1	SRR/SDR covered both Release 1 and Release 2. Project subsequently split Release 2 into Release 2 and Release 3 as part of CCP015; however, the approved SRR/SDR remained extant.					
2	Release 2 was impacted by delays affecting interfacing projects and note this against all Note 2 delays.					
3	Preliminary Design for Release 2 was completed in July 2018. Project subsequently split Release 2 into Release 2 and Release 3 as part of CCP015, with the approved Preliminary Design Review remaining extant.					
4	Release 3 was introduced as part of CCP015 that replaced the need for EDLAN integration with an alternate Local Area network (LAN). This reduced reliance on delayed interfacing projects. Detailed Design Review for Release 3 was achieved earlier than planned as Boeing Defence Australia Ltd work towards target dates. All their artefacts were ready prior to contract date so Detailed Design Review for Release 3 was entered into and achieved early.					
5	The Contract under CCP09 was amended to correct the sequencing of the Support System Detailed Design so it was logically scheduled to occur after the Mission System Detailed Design. Support System Detailed Design for Release 1 was achieved ahead of the current contract date.					
6	Ground based TRES will be delivered via a separate acquisition activity. Tethered TRES will not be proceeded with – refer Section 4.1.					

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	Release 1 Mission System Integration & Interoperability Verification	Jul 17	Dec 17	Dec 17	5	1
	Release 2 Mission System Integration & Interoperability Verification	Apr 19	May 20	Mar 20	11	1

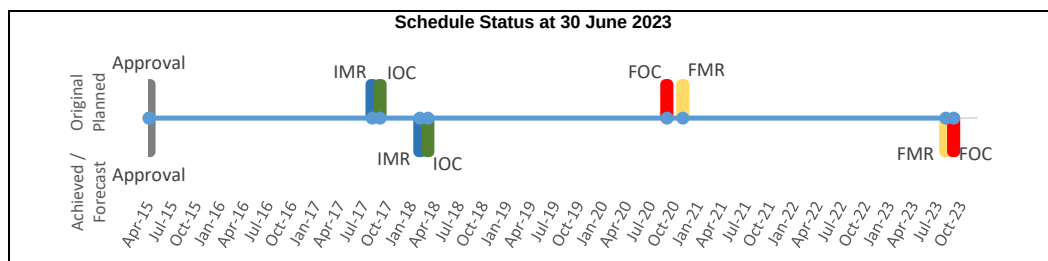
Acceptance	Release 3 Mission System Integration & Interoperability Verification	Mar 21	N/A	Nov 21	8	2, 3
	TRES	N/A	N/A	N/A	N/A	4
	System Acceptance – R1	Aug 17	Feb 18	Dec 17	4	1
	System Acceptance – R2	Jun 19	Jul 20	Apr 20	10	1
	System Acceptance – R3	May 21	Jan 22	Dec 21	7	2, 3
	System Acceptance – R3 SMR (HQOTM)	Jan 22	May 22	Aug 22	7	5
	Final Acceptance (FA) - Acquisition Contract	Feb 21	Feb 23	Aug 23	30	2, 3
	TRES	N/A	N/A	N/A	N/A	4
Notes						
1	Release 2 expands the capability of Release 1, and has been impacted by delays affecting interfacing projects					
2	Release 3 was introduced as part of CCP015 that replaced the need for EDLAN integration with an alternate LAN. This reduced reliance on delayed interfacing projects.					
3	The movement of schedule due to CCP039 (COVID-19 Delay) resulted in a change to these dates and is reflected in Materiel Acquisition Agreement (MAA) V2.3.					
4	Ground based TRES will be delivered via a separate acquisition activity. Tethered TRES will not be proceeded with – refer Section 4.1.					
5	Delay due to safety Report On Defective or Unsatisfactory Materiel (RODUM).					

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
I-BTN	N/A	N/A	-	-
Initial Materiel Release (IMR) 1A	Aug 17	Feb 18	6	1
I-BTN Initial Operational Capability (IOC)	Sep 17	Mar 18	6	1
(Release 1) Materiel Release 1	Oct 17	May 18	7	2
(Release 1) Materiel Release 2	May 18	Dec 18	7	2
(Release 1) Materiel Release 3	Oct 18	Apr 19	6	2
(Release 2) Materiel Release 5	Dec 19	May 21	18	1, 2
(Release 2) Materiel Release 6	Oct 20	Apr 22	18	1, 2, 3
(Release 3) Materiel Release 7	Nov 21	Jul 23	19	1, 2, 3
(Release 3) Materiel Release 8	Mar 22	Jul 23	14	1, 2, 3
I-BTN Final Materiel Release (FMR)	Nov 20	Aug 23	33	2, 3
DLAN Hardware Release	Jul 18	Jun 19	12	4
TRES Materiel Release	N/A	N/A	N/A	5
I-BTN Final Operational Capability (FOC)	Sep 20	Sep 23	36	6
Notes				
1	Due to delays incurred to date with interfacing projects, alternative interim interface requirements for Release 1 were implemented and resulted in a six month slip to IMR 1A and IOC I-BTN. This delay resulted in reallocation of Release 2 equipment into Materiel Release 5, introduced Materiel Release 6, and removed Materiel Release 4. CCP15 introduced Release 3 (Materiel Releases 7 and 8) to remove the requirement to integrate I-BTN with EDLAN. There was a resultant slip to FMR of 16 months to forecast date. Materiel Releases 5 and 6 have been delivered. Materiel Releases 7 and 8 were subject to vendor delays. Boeing Defence Australia Ltd has delivered Materiel Release 7 and Materiel Release 8 equipment to the Commonwealth in June 2023. Delivery of equipment from Commonwealth to Army is yet to be finalised and is forecast for July 2023.			
2	Materiel Release (Release 1, Release 2, Release 3) milestones will be achieved when the units receiving the capability sign the unit acceptance certificate. This variance is dependent on unit availability to conduct the unit test activity.			
3	The movement of schedule due to COVID-19 related delays has resulted in a change to these dates to be reflected in the next endorsed MAA.			
4	Integration between EDLAN and the I-BTN is no longer required. Army has endorsed the declaration of the DLAN Hardware Release milestone, as no further work will be undertaken due to the I-BTN system no longer being required to integrate with the EDLAN system.			
5	Ground based TRES will be delivered via a separate acquisition activity. Tethered TRES will not be proceeded with – refer Section 4.1.			
6	The FOC date has changed due to extension of project schedule as a result COVID-19 related delays. The project has conducted workshops with the Capability Manager to assist in identifying a new FOC date. The Capability Manager has advised government of the revised FOC date of September 2023.			

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

**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 is currently meeting the majority of capability requirements as expressed in the MAA and supporting suite of Capability Definition Documentation.
	Amber: N/A
	Red: This relates to the JNT2072 Phase 2B ground based and Tethered TRES scope. The project scope for ground based TRES will be delivered via an acquisition project known as the MRS. This acquisition is being conducted by Land C4 LC4SPO using project funds. The Tethered TRES project scope will not proceed following the conduct of risk reduction activities. The scope of the contract was varied via CCP046, in agreement with the Capability Manager, amending the number of HQOTM vehicles from 18 to 16. Two further HQOTM vehicles will be delivered by the project via the I-BTN Contract (Support). It is planned that this delivery will be complete by mid-2024. FOC will be declared with a caveat that the two remaining HQOTM vehicles will be delivered via the I-BTN sustainment program (funded by JNT2072 Phase 2B).

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)	- Verification & validation, testing and certification completed. - Initial Learning Management Packages Approved. - Initial Support Contract is in place. - Commonwealth acceptance of supplies for those units identified for Materiel Release 1. - Completion of Acceptance Testing for initial release. IMR 1A was achieved in February 2018.	Achieved
Initial Operational Capability (IOC)	- For Army - Delivery of four man portable formation nodes, four unit nodes, and three High Capacity Line of Sight (HCLOS) with trained soldiers to enable planning, configuration and operation of Force and Formation level networks. - For Air Force - Delivery of four man portable formation nodes, two man portable unit nodes and one HCLOS with trained crew to enable planning, configuration and operation of a Formation level network. IOC was achieved in March 2018.	Achieved
Final Materiel Release (FMR)	- Verification & validation, testing and certification completed. - All elements of the Mission System are delivered to units.	Not yet Achieved

	- All introduction into service training is completed and approved Learning Management Plans for sustainment training delivered to Army. - Mature Support Contract in place including delivery of Data Transfer Equipment. - Delivery of Hand Held Satellite Terminal.	
Final Operational Capability (FOC)	The provision, support and training of the I-BTN to all Army and Air Force in accordance with the Basis of Issue. Scope includes: - One Force Node Vehicle Mounted. - Eight Formation Nodes Vehicle Mounted. 18 Formation Nodes Transit case. 16 Unit Nodes Vehicle Mounted. 21 Unit Nodes Transit Case. 23 Relay Nodes Transit Case. - Three Tactical Interface Stations. 16 HQOTM nodes.	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 COVID-19 may still impact project milestones within current schedule time frames.	For FY 2022-23, COVID-19 continued to impact global supply chains and impacted Boeing Defence Australia Ltd's delivery schedule of I-BTN Release 3 Man Portable and VMN Nodes. By March 2023, the impact of COVID-19 had diminished. Boeing Defence Australia Ltd completed the delivery of I-BTN Release Man Portable Nodes. The delivery of VMN will be completed by August 2023. The delivery of HQOTM vehicles is complete. The project is no longer impacted by COVID-19. This risk has been retired.
2	There is a risk that FOC and project closure will be impacted due to the lack of Integrated Logistic Support (ILS) APS5 level practitioners since October 2021.	The project has sufficient ILS staff to support FOC and project closure. This risk has been retired.
3	There is a risk that the TRES capability may delay project FMR.	Boeing Defence Australia Ltd has proposed a tethered drone solution to meet Army's TRES requirements. The project has entered into a Risk Reduction activity via Survey and Quotation 21 in order to understand the technical and schedule risks. Army determined that it would not proceed with the Tethered TRES due to reasons of technical risk, changes to its operational needs and overall value for money considerations. Army also determined that the scope of JNT2072 Phase 2B for Ground Based TRES would be met by the MRS solution being procured by Land C4 LC4SPO of CASG. JNT2072 Phase 2B project funds will be used for part of this procurement. The severity of the risk has been reduced from High to Medium as a result of updated scope delivery requirement.
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 has impacted on completion of project tasks and milestones within current schedule time frames, the risk to the September 2023 FOC date is being monitored. There is a risk that restrictions related to COVID-19 will impact the completion of project tasks and milestones within current schedule time frames, this resulting in an inability to meet the current FOC date.	For FY 2022-23, COVID-19 continued to impact global supply chains and impacted Boeing Defence Australia Ltd's delivery schedule of I-BTN Release 3 Man Portable and VMN. By March 2023, the impact of COVID-19 had diminished. Boeing Defence Australia Ltd completed the delivery of I-BTN Release Man Portable Nodes. The delivery of VMN will be completed by August 2023. The delivery of HQOTM vehicles is complete. The project is no longer impacted by COVID-19. This issue has been retired.
2	Project Engineering Team may be unable to exercise the expected level of engineering rigour for Verification and Validation activities due to a lack of adequate engineering resources.	In FY 2022-23, the project and Boeing Defence Australia Ltd have completed I-BTN Release 3 System Acceptance and also I-BTN Release 3 System Maintenance Release (HQOTM) System Acceptance. The project has sufficient engineering workforce to support the project until project closure. This Issue has been retired.

Project Data Summary Sheets

Auditor-General Report No.14 2023–24
2022–23 Major Projects Report

3	Contract milestones for R3 SMR (HQOTM) will not be met due to safety RODUM delaying Boeing Defence Australia Ltd's production and subsequent delay to training.	In September 2022, an interim battery solution was identified and batteries were subsequently fitted to the HQOTM vehicles at Boeing Defence Australia Ltd, in order that the production of HQOTM vehicles could recommence. In February 2023, repaired, production batteries were fitted to the HQOTM vehicles. As at May 2023, quantity 16 HQOTM vehicles have been delivered by Boeing Defence Australia Ltd. This issue has been retired.
4	Delivery of the HQOTM vehicles Army units is delayed due to vehicle servicing and maintenance issues.	Thales Australia Ltd manages the servicing of the HQOTM vehicles whilst it is conducting other, higher priority, task, for Defence including the preparation of Bushmaster vehicles for the Ukraine and United Nations. The delivery of the first two vehicles to Army was delayed, however subsequent deliveries are occurring on time. The project, Army, Boeing Defence Australia Ltd and Thales Australia Ltd monitor this issue closely. The final HQOTM vehicles (quantity 16 of 18) were delivered to Army 27 June 2023. This issue has been retired.
5	The delivery of the final two HQOTM vehicles will be delayed to the first half 2024 due to the late delivery of GFM to Boeing Defence Australia Ltd.	The PMV – Medium (Bushmaster) vehicle on which the HQOTM is based is subject to an engineering change for a new power management system. This engineering change will now not be finalised until first half 2024 delaying delivery of the vehicles to Boeing Defence Australia Ltd which then delays the production and delivery of the final two HQOTM vehicles. JNT2072 Phase 2B will continue to work closely with the Bushmaster vehicle contractor, Thales Australia Ltd, and Boeing Defence Australia Ltd to minimise the impact of 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 three lessons related to Contract Management, First of Type Equipment, Schedule Management, Governance, and Requirements Management. These project lessons are provided below:	The project has not categorised any of its lessons information as a whole-of-Defence Lesson Learned.
Lesson Type – Lessons identified. Collaborative engagement by the Contractor, CASG and the Capability Manager has resulted in better outcomes for the delivered capability.	Requirements Management
Lesson Type – Insights. Contracting for a performance based support contract at the same time as the acquisition contract results in better design decisions during the acquisition contract.	Contract Management
Lesson Type – Observation. User engagement during the Mission System Integration Test Events has resulted in an improved capability by early user engagement during the design phase. This also leads to improving the management of user expectations.	Requirements Management

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2023

Unit	Name
Division	Joint Systems Division
Branch	Land C4 Systems