Project Data Summary Sheet[1]

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 Performance[2]

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		
Jan 21	Real Variation – Subsequent Government Approval	24.0		1
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 Expenditure			
Prior to Jul 22	Contract Expenditure – FMS Case AT-B-ULU	(39.2)		
	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)		2
			(72.3)	
FY to Jun 23	Contract Expenditure – FMS Case AT-B-ULU	(35.9)		
	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)		3
			(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	Portfolio Budget Statement (PBS) to Portfolio Additional Estimates Statement (PAES): The variance in Estimate PBS and Estimate PAES is due to the timing of Second Pass Approval. PAES to Final Plan: 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 incudes 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

	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

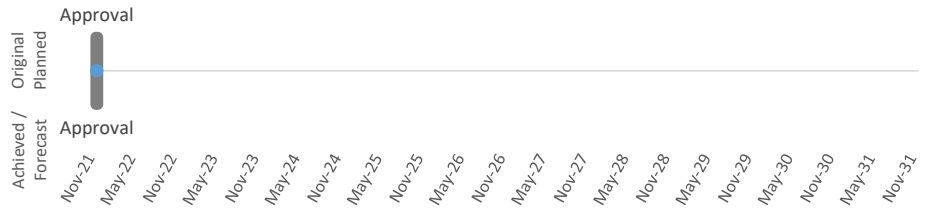
Notes	
1	The Commonwealth is not in contract for the above major reviews, nor similar reviews with the US Army due to being an FMS Case arrangement under (FMS Case AT-B-ULU). The US Army has contractual arrangements in place with subcontractors that does include similar major reviews. However, the Commonwealth 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.

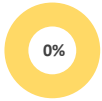
Schedule Status at 30 June 2023
Dates associated with capability realisation are NFP



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