Project Data Summary Sheet[159]

Project Number	**LAND200 Tranche 2**
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)	**$962.3m**
2020-21 Budget	**$116.6m**
Complexity	ACAT I

Section 1 – Project Summary

1.1 Project Description

LAND200 is delivering the 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 will provide fast, accurate, secure and reliable digital communications that will 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) is: expanding and evolving 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; and the Program will embed BCS training into Army's training institutions to evolve from a paper based to a digital based learning capability.

The Commonwealth is the LAND200-2 Program's Prime System Integrator (PSI) supported by two prime contractors: Elbit Systems (Israel) Ltd (Elbit) is the contractor for the BMS; and Harris Communications (Australia) Pty Ltd (L3Harris) is the contractor for the TCN.

1.2 Current Status

Cost Performance

In-year

For financial year **20/21** the project spent **$67.5m** against a planned budget of **$116.6m**, resulting in a **variance of -$49.1m. The variation is due to the BMS contract experiencing significant delay. The delay is a result of the Project being unable to achieve the exit criteria associated with the Release 1.1 Software Release Review milestone and the Commonwealth being unable to provide some items of Government Furnished Materials (GFM)). The Commonwealth is working with Elbit to address these delays.**

Project Financial Assurance Statement

As at 30 June 2021, project LAND200-2 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, including contingency, remaining for the project to complete against the agreed scope.

Contingency Statement

The project has not applied contingency in the financial year.

Schedule Performance

LAND200-2 has established contracts with Elbit for the delivery of the BMS and L3Harris for delivery of the TCN. Elbit has completed the integration and installation of the Tranche 1 components onto the Medium Heavy Cargo trucks and has delivered BMS training systems and Release 1 of the BMS software. L3Harris has completed Preliminary Design and Detailed Design, **however Stop Payments were invoked with L3Harris in October 2020, due to an inability to achieve the exit criteria associated with the Detailed Design Review milestone. The Commonwealth worked with L3Harris to achieve the exit criteria and the Stop Payment condition was lifted in late October 2020.**

159 Notice to reader

Forecast dates and Sections: 1.2 (Materiel Capability Delivery Performance), 1.3 (Major Risks and Issues), 4.1 (Measures of Materiel Capability Delivery Performance), and 5 (Major Risks and Issues) are excluded from the scope of the ANAO's review of this Project Data Summary Sheet. Information on the scope of the review is provided in the *Independent Review Report by the Auditor-General* in **Part 3** of this report.

LAND200-2 has experienced schedule delays under both the Elbit contract for the BMS and the L3Harris contract for the TCN. The delays have resulted from the Commonwealth's inability to provide all the required Government Furnished Material (GFM) and contractor delays in meeting contract milestones.

A Contract Change Proposal (CCP) was finalised with L3Harris in financial year 19/20 that recognised a 10 month delay to the L3Harris contract, with costs shared between the Commonwealth and L3Harris.

A CCP is currently being workshopped with Elbit to remove the integration and installation scope from the PMV-M, M1A1 and M88.

A CCP for the integration of the Mission Partner Environment (MPE) in lieu of the Defence Secret Network **has been finalised with the introduction of a new milestone, covering BMS Release 1.1.**

The progress of BMS Release 1.1 has been delayed because of an inability to exit the Software Release Review milestone. The Commonwealth and Elbit are continuing to work through known issues. Defence and Elbit are undertaking a technical review to consider the remaining scope to be delivered under the BMS Contract.

In June 2021, Elbit advised that completion of the BMS Contract's Final Acceptance milestone would occur no earlier than February 2024, due to a number of issues including availability of GFM and the inability to meet milestone exit criteria. The Commonwealth is assessing the impact of this delay and continues to work with Elbit to progress delivery of capability

Materiel Capability 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 C2 Software Release 0 and BMS C2 Software Release 1.** LAND200-2 will deliver a further 390 vehicle BCS node integrations and installations with the M1A1, M88, PMV-M and PMV-L platforms. **Additionally, LAND200-2** will deliver the BMS-HQ software hosted on the MPE, **Syndicate Room/Tactical Exercise Without Troops (TEWT) training requirements**, BMS simulator systems and L3Harris AN/PRC-158 multi-channel multi-band radios.

The remaining node design descriptions are being updated to accommodate **network** architecture changes requested by the Army Program Sponsor.

Limited availability of required Government Furnished Data in support of the Weapons Integrated BMS (WINBMS) for the M1A1 **has resulted in a request from Army to remove this scope item from the Elbit contract. Based on direction from the Army program sponsor, the project does not expect to deliver the Hawkei GSV node: this is offset by the direction from the Army Program Sponsor to increase the delivered quantities of Hawkei C2V and MNV nodes.**

Defence and Elbit are undertaking a technical review to consider the remaining scope to be delivered under the BMS contract.

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 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 was presented to Government as a federation of two projects; JP2072 Phase 3 and LAND75 Phase 4. At this time, LAND200-2 received Government Combined Pass Approval for the continuation of LAND75 Phase 3.4, LAND125 Phase 3A and JP2072 Phase 1 (approved as LAND200-1) and First Pass Project Approval for new work to be delivered under LAND200-2.

LAND200-1 and LAND75 Phase 4 Work Package A delivered the Battle Group and Below Command, Control and Communications System (BGC3) for approximately one-third of the Land force. The BGC3 was primed by Elbit which integrated Raytheon and L3Harris radios acquired by JP2072 Phases 1 and 2. LAND200-1 and LAND75 Phase 4 Work Package A:

Installed the BGC3 into dismounted commanders, Bushmaster PMV, Unimog, G-Wagon and Armoured Personnel Carrier M113AS4.
Delivered a Track Management System (TMS) as the primary interface between the BMS and Joint and US Coalition systems providing an exchange of situational awareness data and the Land Forces common operational picture.
LAND75 Phase 3.4 and LAND125 Phase 3A achieved Initial Operating Capability (IOC) in April 2012 and Final Operating Capability (FOC) in March 2015.
Final Materiel Release (FMR) for LAND75 Phase 4 Work Package A (the final deliverable for the project) was achieved in December 2017.

LAND200-2 put forward a procurement decision for the further development of the BMS, which 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. This Government Approval draws together both projects to formulate under the name LAND200 Tranche 2 (Phase 2) Battlefield Command Systems. Under this approval, LAND200-2 will deliver:

An integrated Battle Management System – Command and Control (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.
Institutionalised BMS-C2 and TCN training and simulation across land forces.
Expanded functionality of the BMS-C2 to incorporate additional decision and planning tools for use at the Joint Task Force and Brigade Headquarters level.

The project was not approved under the revised Capability Life Cycle model and therefore did not undergo a Smart Buyer review. The project was subsequently the subject of a Smart Buyer workshop in September 2019, in order to consider the architecture changes requested by Army. The Project has not been considered by a Smart Buyer assessment this financial year.

The project was listed as a Project of Interest in September 2018 due to issues associated with vehicle integration and the drawdown of 30% of the Project's contingency to treat the issues.

Uniqueness

LAND200 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 project is currently managing the following major risks:

- Incorporation of PMV-L modifications with the LAND 121 Phase 4 deliveries.
- Contract impacts resulting from delayed Land Data Model development.
- Funding for the combined implementation of LAND200-2 modifications with PMICA.
- **Delay to the security accreditation of TCN software.**
- **A delay to the BMS SIM TTP Capability resulting from issues with external interdependencies.**

The project is also managing the following project issues:

- PMV-M installation delay.
- Delayed implementation of the M1A1 and M88 modifications, and necessary de-scoping of Elbit contract.
- Node design architecture changes.
- **Funding pressure associated with the procurement of Vehicle Installation Kits for PMV-M Gateway.**
- **Delayed delivery of BMS Release 2.**
- **BMS Release 1.1 is yet to satisfy the release criteria associated with the Software Release Review 1.1.**
- **Delay to TCN System Acceptance.**

Other Current Related Projects/Phases

LAND200-2 has direct BCS integration interdependencies with several other Defence Projects and Products, including: LAND 121 Phase 4 Protected Mobility Vehicle (Light) Hawkei; Mounted Combat System Program Office (Product CA01 M1A1 Tank and M88 Armoured Recovery Vehicle); and Commercial and General Service Vehicle Systems Program Office (Product CA-04 Protected Mobility Vehicle – Medium Bushmaster).

Note

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

Section 2 – Financial Performance

2.1 Project Budget (out-turned) and Expenditure History

Date	Description	$m		Notes
	Project Budget			
Sep 17	Original Approved (Second Pass Approval)	930.0		1
	Total at Second Pass Approval		930.0	
Jun 21	Exchange Variation		32.3	
	Total Budget		962.3	
	Project Expenditure			
Prior to Jul 20	Contract Expenditure – L3Harris Communications	270.7		
	Contract Expenditure – Elbit Systems	276.3		
	Contract Expenditure – Downer EDI Engineering Power Pty Ltd[160]	8.3		
	Contract Expenditure – Thales Australia Limited	0.0		
	Other Contract Payments / Internal Expenses	18.7		2
			574.0	
FY to Jun 21	Contract Expenditure – Elbit Systems	2.0		
	Contract Expenditure – L3Harris Communications	39.3		
	Contract Expenditure – Downer EDI Engineering Power Pty Ltd	12.7		
	Contract Expenditure – Thales Australia Limited	2.9		
	Other Contract Payments / Internal Expenses	10.6		3
			67.5	
Jun 21	**Total Expenditure**		641.5	
Jun 21	**Remaining Budget**		320.8	

160 This is the Team Downer Major Service Provider (MSP) arrangement for the provision of a multi-discipline workforce to deliver the LC4S Branch Integrated Works Package (IWP).

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	Other expenses for prior years includes **$8.7m** for Technical Services, **$3.2m for Specialist Military Equipment, $2.3m for Operational Plant & Equipment, $1.6m for Travel, $1.6** for Software Licenses and **$1.2m** for Miscellaneous.
3	Other expenses for FY **20/21** include **$5m** for Technical Services, **$3.2m for Specialist Military Equipment, $0.7m for Operational Plant & Equipment, $0.5m for Freight, $0.4m for Project Maintenance Contracts, $0.3m for General Stores Inventory** and **$0.5m** for Miscellaneous.

2.2A In-year Budget Estimate Variance

Estimate PBS $m	Estimate PAES $m	Estimate Final Plan $m	Explanation of Material Movements
216.5	**118.5**	**116.6**	PBS to PAES: **The variation is primarily due to the need to finalise a number of contract change proposals, which will update the payment and delivery schedules for both the BMS and TCN prime contracts.** PAES to Final Plan: A stronger Australian dollar has resulted in a minor variance to the $AUD equivalent planned Budget for **20/21**.
Variance $m	**(98.0)**	**(1.9)**	Total Variance ($m): **(99.9)**
Variance %	**(45.3)**	**(1.7)**	Total Variance (%): **(46.1)**

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan $m	Actual $m	Variance $m	Variance Factor	Explanation
		49.1	Australian Industry	**The variance is a result of the inability to achieve the exit criteria for the Release 1.1 Software Release Review milestone and the inability to finalise Contract Change Proposals (CCP) to the Elbit BMS contract.**
			Foreign Industry	
			Early Processes	
			Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
116.6	**67.5**	**49.1**	**Total Variance**	
		(42.1)	**% Variance**	

2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature $m	30 Jun 21 $m			
Elbit Systems Limited	Sep 17	365.2	**406.7**	Fixed	**Standard Defence Contract**	1,**3**
L3Harris Communications Australia	Sep 17	330.0	**356.7**	Fixed	**Standard Defence Contract**	1,2
Downer EDI Engineering Power Pty Ltd	**Aug 19**	**17.7**	**47.3**	**Variable**	**Integrated Work Package**	**4**
Thales Australia Limited	**May 21**	**12.7**	**12.5**	**Fixed**	**Standard Defence Contract**	**5**

Notes	
1	Contract value as at 30 June **2021** is based on actual expenditure to 30 June **2021** and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable).
2	Contract value at 30 Jun **2021** includes the cost of CCPs to address changes in system requirements.
3	**The value of this contract may be adjusted, via negotiation and agreement of a contract change proposal with Elbit to remove the integration and installation from some platforms.**
4	**Provision of multi-discipline workforce to deliver the LC4S Branch Integrated Work Package via the CASG Major Service Provider Arrangement. In addition the directed establishment of a PSI and improved governance measures lead to an increase in the contracted workforce.**
5	**This procurement occurred via CCP078 to the LAND121 Phase 4 Acquisition Contract with Thales. LAND200-2 will pay Thales to produce the LAND200-2 BCS integration design solution within Hawkei vehicles.**

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 21		
Elbit Systems Limited	N/A	N/A	Development of BMS software and integration and installation of systems into the M1A1, M88 and PMV-M.	1,**3**
L3Harris Communications Australia	N/A	N/A	Development TCN software and provision of AN/PRC-158 radios.	2

Downer EDI Engineering Power Pty Ltd	N/A	N/A	Provision of multi-discipline workforce to deliver the LC4S Branch Integrated Work Package via the CASG Major Service Provider Arrangement.	4
Thales Australia Limited	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 21
150 x MHC vehicles have been modified with BMS **162 x New and 50 x Upgraded BMS Training Assemblages.** **36 x Foundation Training Classroom Kits.**

Notes	
1	This contract is for the provision of BMS systems for installation in the following: GSV Node PMV-L x 108, MNV Node M1A1 x 59, MNV Node M88 x7, MNV Node PMV-L x126, GSV Node MHC x 150, C2V Node PMV-M x 57, C2V Node PMV-L x33, BMS-HQ hosted on MPE x 33, BMS Training System and BMS SIM.
2	The contract is for the provision of TCN systems for installation in the following: GSV Node PMV-L x 108, MNV Node M1A1 x 59, MNV Node M88 x7, MNV Node PMV-L x126, GSV Node MHC x 150, C2V Node PMV-M x 57, C2V Node PMV-L x33.
3	**The scope of this contract is expected to change, via negotiation and agreement of a contract change proposal with Elbit to remove the installation and integration from some platforms.**
4	**As a Project within LC4S Branch, LAND200-2 pays for its share of the workforce provided via this arrangement.**
5	**Installation of the LAND200-2 BCS within Hawkei vehicles will be the subject of a separate procurement.**

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	8
	BMS Systems Requirements Review	N/A	N/A	N/A	N/A	1
Preliminary Design	TCN Preliminary Design Review	May 19	N/A	Sep 19	4	2
	BMS Preliminary Design Review (Various Reviews)	N/A	N/A	N/A	N/A	1
	Preliminary Design ReviewM1A1/M88	Jan 20	N/A	**N/A**	**N/A**	5
	Preliminary Design Review PMV-L	**Oct 21**	N/A	**Oct 21**	**0**	4
	Preliminary Design Review PMV-M	Sep 19	N/A	**Jun 21**	**21**	6
	BCS Preliminary Design Review	**Feb 21**	**N/A**	**Oct 21**	**8**	**11**
Detailed Design	TCN Detailed Design Review	Sep 19	Aug 20	**Oct 20**	**13**	3
	BMS R1 Detailed Design Review	Nov 19	N/A	Mar 20	4	9
	BMS R1.1 Detailed Design Review	**Aug 20**	**N/A**	**Aug 20**	**0**	**10**
	BMS R2 Detailed Design Review	Nov 20	N/A	**Oct 22**	**23**	7
	Detailed Design ReviewM1A1/M88	Jul 20	N/A	**Dec 20**	**5**	5
	Detailed Design Review PMV-L	**Jan 22**	N/A	**Jan 22**	**0**	4
	Detailed Design Review PMV-M	Feb 21	N/A	**Feb 22**	**12**	6
	BCS Detailed Design Review	**Jun 21**	**N/A**	**Mar 22**	**9**	**11**

Notes	
1	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.
2	TCN Preliminary Design Review variance resulted from the late entry into and exit from the Systems Definition Review.
3	The TCN Detailed Design Review 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 Detailed Design Review milestone. The Commonwealth worked with L3Harris to achieve the exit criteria and the Stop Payment condition was lifted in late October 2020.**
4	**Contract Change Proposal Number 078 (CCP078) to the LAND121 Phase 4 Acquisition Contract with Thales was signed in May 2021. LAND200-2 will pay Thales 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.**
5	**This scope item was originally planned to be delivered under the under the Elbit contract, however, this was not able to be progressed because of an inability to obtain original design information from the US OEM to allow for WINBMS development. Instead of a formal PDR/DDR, a tailored TCN Node will be installed in the M1A1/M88 in response to an immediate obsolescence and risk mitigation request from AHQ, to replace the current radios. This work will be performed as an internal CASG Engineering Change Proposal (ECP), supported by HCA. 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.**
6	**This scope item will not be performed under the Elbit 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. HCA will be engaged as a subcontractor to Thales.**
7	The Commonwealth implemented a change to the hosting for the secure environment from the Defence Secret Network to the Mission Partner Environment, requiring revised work requirements **Delay of Release 2 Detailed Design Review is linked to the delay in delivery of Release 1.1, as well as issues with external interdependencies. Concurrent work has continued in the development and design of software to minimise further delay.**

8	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.
9	BMS R1 Detailed Design Review 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 Release 1.1 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 Detailed Design Review milestone. The Commonwealth endorsed progress to commence T&E activities in order to provide Elbit with an opportunity to meet the exit criteria of SWRR 1.1.**
11	**The Commonwealth is the Prime Systems Integrator (PSI) responsible for the integration of the BMS and the TCN to realise the Battlefield Command System (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.**

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	May 21	N/A	**Sep 21**	**4**	1
	BMS R1 Acceptance Test &Evaluation	Jun 19	N/A	Mar 20	9	7
	BMS R1.1 Acceptance Test & Evaluation	**Aug 20**	**N/A**	**Jun 21**	**10**	**9**
	BMS R2 Acceptance Test &Evaluation	Dec 20	N/A	**Nov 22**	**23**	6
	M1A1/M88 Platform Integration Acceptance Test & Evaluation	Apr 21	N/A	**Mar 21**	**(1)**	5
	PMV-L Acceptance Test & Evaluation	**Jan 22**	N/A	**Jan 22**	**0**	3
	PMV-M Acceptance Test & Evaluation	Feb 20	N/A	**Dec 22**	**34**	4
	BCS Acceptance Test & Evaluation	**Oct 21**	**N/A**	**Jul 22**	**9**	**10**
Acceptance	TCN System Acceptance	Jun 20	Aug 21	**May 22**	**23**	2
	BMS Acceptance R1	Jan 20	N/A	Mar 20	2	8
	BMS Acceptance R1.1	**Sep 20**	**N/A**	**Jun 21**	**9**	**9**
	BMS Acceptance R2	Mar 21	**Aug 21**	**Mar 23**	**24**	6
	M1A1 Tank	Feb 22	N/A	**Jul 21**	**(7)**	5
	M88	May 22	N/A	**Jul 21**	**(10)**	5
	PMV-L	**May 22**	N/A	**May 22**	**0**	3
	PMV-M	Apr 21	N/A	**Mar23**	**23**	4
	BCS Acceptance	**May 22**	**N/A**	**Mar 23**	**10**	**10**

Notes	
1	TCN System Integration delay is directly driven from delays to progress **through the Test Readiness Review (TRR).**
2	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 Acceptance Test and Evaluation.**
3	**Contract Change Proposal Number 078 (CCP078) to the LAND121 Phase 4 Acquisition Contract with Thales was signed in May 2021. LAND200-2 will pay Thales 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.**
4	**This scope item will not be performed under the Elbit 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. HCA will be engaged as a subcontractor to Thales.**
5	**This scope item will not be performed under the Elbit contract. Instead, a Tailored TCN Node will be installed in the M1A1/M88 in response to an immediate obsolescence and risk mitigation request from AHQ to replace the current radios. This work will be performed as an internal CASG ECP, supported by HCA. The full BCS node functionality will be realised in the M1A1/M88 by FMR.**
6	The Commonwealth implemented a change to the hosting for the secure environment from the Defence Secret Network to the Mission Partner Environment, requiring revised work requirements. **Delay of Release 2 Acceptance Test & Evaluation (AT&E) is linked to the delay in delivery of Release 1.1 achievement, as well as issues with external interdependencies. Concurrent work has continued in the development of software to minimise further delay.**
7	The BMS AT&E delay flows from the delay to the Detailed Design Review.
8	The delay to the Software Release Review and associated acceptance for BMS Release 1 resulted from delays in achieving the Release 1 Software Design Review/Test Readiness Review (DD/TRR).
9	**Issues were identified during Acceptance Test and Evaluation activities. Elbit has provided a Resolution Plan aimed at resolving the technical issues impeding the Commonwealth's ability to accept the Release 1.1 capability. The Commonwealth has yet to accept Release 1.1. As at 30 June 2021, the Commonwealth and Elbit continue to work to achieve the exit criteria of SWRR 1.1.**
10	**The Commonwealth is the Prime Systems Integrator (PSI) responsible for the integration of the BMS and the TCN to realise the Battlefield Command System (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 acceptance.**

3.3 Progress Toward Materiel Release and Operational Capability Milestones

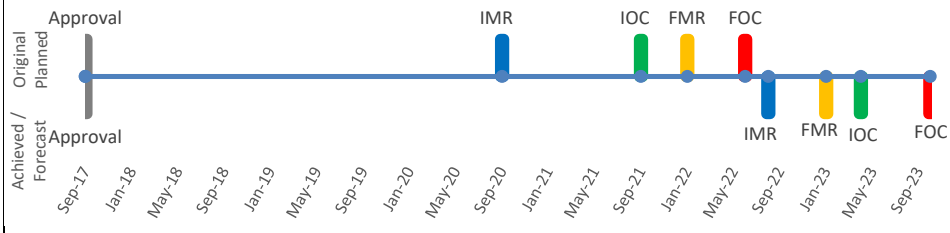
Item	Original Planned	Achieved / Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Sep 20	Aug 22	23	1,2
Initial Operational Capability (IOC)	Sep 21	Apr 23	19	1,2
Final Materiel Release (FMR)	Jan 22	Jan 23	12	1,2
Final Operational Capability (FOC)	Jun 22	Oct 23	16	1,2

Notes

1 IOC and FOC delays are being driven by time taken to establish new contracts for platform integration; availability of GFM; materiel and data from interdependent projects that are in separate, but parallel delays and contractor performance.

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.**

Schedule Status at 30 June 2021



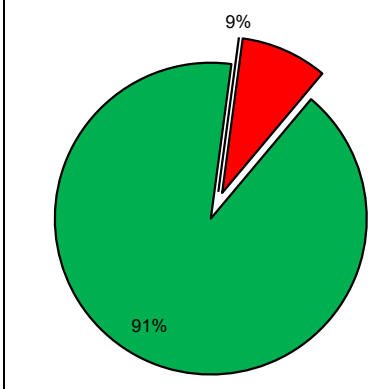
Note

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

Section 4 – Materiel Capability Delivery Performance

4.1 Measures of Materiel Capability Delivery Performance

Pie Chart: Percentage Breakdown of Materiel Capability Delivery Performance



Green:
The project expects to meet Materiel Capability requirements as expressed in the Materiel Acquisition Agreement.

Amber:
N/A.

Red:
Based on direction from the Army program sponsor, the project does not expect to deliver the WINBMS capability within the M1A1. Further, also based on direction from the Army program sponsor, the project does not expect to deliver the Hawkei GSV node: this is offset by the direction from the Army Program Sponsor to increase the delivered quantities of Hawkei C2V and MNV nodes. This approach is expected to be confirmed following Government consideration.

Note

This Pie Chart represents Defence's expected capability delivery. Capability assessments and forecast dates are excluded from the scope of the Auditor-General's Independent Assurance Report.

4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	IMR 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 16 x M1A1 Tanks • MNV Nodes fitted to 2 x M88 Hercules • C2V Nodes fitted to 11 x 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 IMR is forecast to be achieved in Aug 22.	Not yet achieved
Initial Operational Capability (IOC)	• IOC incorporates the components of FIC sufficient to constitute an operational capability. • Commander and staff in a Brigade Headquarters are able to use the BMS to support the planning and conduct of operations. • The data network includes sufficient material to support a BG sized force to plan and conduct operations using the BMS and weapons integrated BMS. • The TCN is established using Tranche 1 and Tranche 2 solutions to support a BG deployment. • The BMS is able to interface with JCATS and VBS systems to establish an initial simulation system. Capability Manager sign-off of IOC. IOC is forecast to be achieved in Apr 23.	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 FMR is forecast to be achieved in Jan 23.	Not yet achieved
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 Brigade HQ. • 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. FOC is forecast to be achieved in Oct 23.	Not yet achieved

Section 5 – Major Risks and Issues

5.1 Major Project Risks

Identified Risks (risk identified by standard project risk management processes)	
Description	Remedial Action
There is a risk that the BMS software version V9.1 may not be available in time for Army to conduct its planned confidence testing at the LNIC in September 2020 causing a delay to the release of the software and to the achievement of IMR and IOC.	A Contract Change Proposal **CCP4 was** developed to integrate the revised scope into the Elbit contract. A further Contract Change Proposal **was** developed with the supplier of the BMS-C2 Enclave to provide support to additional CoA confidence testing activities. **This risk has been retired due to further testing which took place in November 2020.**
There is a schedule risk that the design solution for integrating BCS nodes within PMV-L will be delayed because of coordination problems between AHQ, LAND200-2, LAND121 Phase 4 and Thales resulting in a delay to the achievement of IMR.	**Close coordination between all stakeholders will be maintained through the conduct of fortnightly Integrated Project Team (IPT) meetings and adherence to the Contract's schedule of Mandated System Reviews.**

There is a risk that the PSI function will not be fully functional in time to address the systems integration requirements for the BMS and the TCN for full operation within the modified vehicles.	**This risk has been retired because CASG has established a dedicated team to serve as the Commonwealth PSI across both the BMS and TCN capability scope and to work with Army to deliver BCS as a single integrated system.**
There is a risk that the required updates to the Australian Land Data Model will be released by LNIC after the Elbit and L3Harris contract development gates have passed resulting in additional costs and schedule delay to delivering the FOC capability.	**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.**
There is a risk that there will be a funding shortfall for the combined implementation of the LAND200-2 modification and the Protected Mobility Integration Assurance (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.**
Emergent Risks (risk not previously identified but has emerged during 2020–21)	
Description	Remedial Action
There is a schedule risk due to the length of time to achieve security accreditation of TCN software that may delay the achievement of TCN Systems Acceptance.	**Additional resourcing will be allocated to the security accreditation team within the Commonwealth to minimise the impact.**
There is a schedule risk that the BMS Simulation – Tactics, Training and Procedures (SIM TTP) Capability will be delayed resulting in a delay to the capability delivery and a delay to the completion of the BMS contract.	**Discussions from the outcomes of a Technical Review and a Finance Review are currently underway and will determine the best way forward.**

5.1 Major Project Issues

Description	Remedial Action
The delivery of the modification to the PMV-M vehicles will be delayed due to the need to combine the integration and installation activity with the vehicle upgrades being progressed under the PMICA program.	An interim fit of the new capability is **currently being trialled** in the G-Wagon Command Post Mobile vehicles. At a cost of approximately $3m, this **will** allow Army to gain experience with the TCN waveform and software as part of an interim Gateway capability, pending the delivery of the full capability on the PMV-M vehicles. **The interim fit is being managed as a Survey and Quote task to the L3Harris contract.**
The Weapons Integrated Battle Management System (WINBMS) software is not able to be fully implemented in the M1A1 tank due to the non-availability of Government Furnished interface data.	Army **has agreed a proposal** to reduce the WINBMS scope for the M1A1 tank and transfer the integration of the full WINBMS to another Army platform. **Accordingly, this issue is retired. Discussions from the outcomes of a Technical Review and a Finance Review are currently underway and will determine the best way forward on this matter.**
The progression of the M1A1 Tank and M88 platform integration and installation under the Elbit contract has been delayed.	**Discussions from the outcomes of a Technical Review and a Finance Review are currently underway and will determine the best way forward.**
The Army Program Sponsor has requested architecture changes to the implementation of the node designs, requiring contract changes for some platform integration activities.	**In order to understand the impact of these changes, progression of a Survey and Quote task to the L3 Harris contact is ongoing. AHQ endorsement of the resultant updated System Specification is anticipated in Q4 2021.**
Pending the finalisation of an agreed CCP to the BMS contract to remove from some platform elements, there is currently insufficient uncommitted funds to progress the procurement of PMV-M Gateway Vehicle Installation Kits (VIKS) resulting in a delay to the modification of the vehicle.	**Discussions from the outcomes of a Technical Review and a Finance Review are currently underway and will determine the best way forward.**
There is a schedule issue that the delivery of BMS Release 2 has been delayed resulting in a delay to the capability delivery and a delay to the completion of the BMS contract.	**Discussions from the outcomes of a Technical Review and a Finance Review are currently underway and will determine the best way forward.**
There is a BMS software schedule issue that the Release 1.1 delivered BMS Command and Control (BMS-C2) software has been unable to satisfy the release criteria associated with the Software Release Review 1.1, , resulting in further re-work and delays to acceptance.	**Discussions from the outcomes of a Technical Review and a Finance Review are currently underway and will determine the best way forward.**
There is a delay to TCN System Acceptance (SA) stemming from an inability to exit the Test Readiness Review (TRR).	**The Commonwealth and L3Harris continue to work collaboratively to determine the best way forward.**

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
Complex projects that involve multiple delivery contracts for different elements of the capability need to establish clear strategies for the systems integration requirements across the project. Where the Commonwealth selects an in-house option for the implementation of the systems integration function, this needs to be resourced appropriately at an early stage of the project.	Resourcing
ICT Security Accreditation activities are complex, expensive, time consuming and require specialist staff with ICT security accreditation qualifications and experience. Without a clear understanding of the scope, process and boundaries, there is a high probability that there will be confusion between the Commonwealth and the Contractor regarding who is responsible for the conduct of ICT Security Accreditation Activities. In order to avoid confusion, ambiguity, rework and delay, before releasing the Request for Tender, the Commonwealth must have a clear understanding of these matters, and that understanding must be reflected in the Statement of Work.	**Resourcing**
The integration of complex ICT systems onto platforms, especially complex, developmental platforms, should not be the responsibility of the ICT acquisition project. This is because coordination and alignment of outcomes between both complex projects becomes increasingly difficult and unmanageable. Instead, the scope of the ICT acquisition project should be limited to delivery of the ICT mission system (hardware and software) to the platform acquisition project. The platform acquisition project should then assume responsibility for integrating the ICT mission system onto the platform.	**Schedule management**

Section 7 – Project Line Management

7.1 Project Line Management as at 30 June 2021

Position	Name
Division Head	**Mr Gavin Rawlins**
Branch Head	Ms Rosemary Gauci