Project Data Summary Sheet[145]

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)	**$15,630.7m**
2020-21 Budget	**$2,252.9m**
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. Phase 2A/2B of the project is approved to acquire seventy-two 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 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, Netherlands and Turkey. However, 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.** Outside **of** the partnership, Japan, Israel, the Republic of Korea, Belgium, Poland and Singapore are procuring the F-35 JSF via US Foreign Military Sales (FMS).

1.2 Current Status

Cost Performance

In-year

30 June 2021 – The year-end cost variance of 13.9% or $312.5m has been driven primarily by air vehicle and engine work performed prior to end of year but not yet invoiced. There was no change to materiel delivery but the introduction of accrual accounting meant the expenditure was recognised earlier than planned. Overall during the financial year, core contracted arrangements were performed in accordance with contracted requirements and project expectations, reported at Budget Estimates 2021-22.

Project Financial Assurance Statement

In consideration of risks disclosed at Section 5.1, as at 30 June 2021, Project AIR6000 Phase 2A/2B has reviewed the approved scope and budget for those elements required to be delivered by the project. In 2019, the project obtained Government approval to move a final scope element between AIR6000 program phases, resolving the Project AIR6000 Phase 2A/2B affordability issue advised to Government in 2017. The approved changes have not increased funding for AIR6000 Phase 2A/2B or other associated program phases. Defence considers there is sufficient budget, including contingency, remaining for the project to deliver the revised scope. The project will continue to address cost risks in annual updates to Government.

Contingency Statement

The project has not applied contingency in the financial year.

145 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.

Schedule Performance
Initial Operating Capability (IOC) was achieved on 28 December 2020, despite COVID-19 impacts. However, the COVID-19 pandemic has increased the uncertainty and complexity of delivery of the F-35 Program. At this time, AIR6000 Phase 2A/2B has identified a number of activities that have been affected by the global situation. COVID-19 is a rapidly evolving environment and the effects on AIR6000 Phase 2A/2B have been largely mitigated to date, which include restrictions on international travel, supply chain and workforce.

The first two aircraft to be permanently based in Australia arrived in Williamtown on 10 December 2018, as planned in the schedule established at 2014 approval. In the 2020-21 financial year Australia accepted 14 aircraft bringing the total Australian fleet to 40.

Pilot and maintainer training were initially conducted in the US; both have now commenced in Australia.

The Australia Canada United Kingdom Reprogramming Lab (ACURL) Phase 1 system installation and testing was completed in December 2019, with operational evaluation completed in January 2020. The ACURL facility was commissioned 24 February 2020 and formal reprogramming operations have commenced. ACURL Phase 2 activities have continued in parallel with planning for the building extension and next generation reprogramming tools underway.

Facilities construction at RAAF Base Tindal is complete with ICT and security accreditation finalised, and 75SQN personnel taking up occupation. Facilities construction at RAAF Base Williamtown is complete, including the Retail Warehouse, and was occupied by 81WG in April 2021. The full length runway extension became operational in August 2020. 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 2014 US Government assignment of regional Airframe and Engine Maintenance, Repair, Overhaul and Upgrade responsibilities to Australia has assisted in the planning of Australian sustainment. In November 2016, the US Government assigned the regional maintenance and repair of 64 Tier 1 components to four Australian companies and in February 2019, 343 Tier 2 components to seven Australian companies. A Tier 3 F-35 Joint Program Office (JPO) component Request For Information is anticipated to be released in 2021/22. Sovereign sustainment requirements have been defined and JSF Branch is working closely with the F-35 JPO and industry on the planning and execution of these requirements.

Materiel Capability Delivery Performance
The F-35A JSF Air Vehicle met Initial Operating Capability (IOC) by the scheduled date of December 2020. Williamtown and Tindal facilities are complete. The Verification and Validation (V&V) Program has progressed well, mitigating risks to Final Operating Capability (FOC), but has also been impacted by COVID-19.

Most of the capability requirements of FOC are delivered by the extant integrated F-35 Air System and new developments are on track for incorporation in production Lots 13-15. AIR6000 Phase 2A/2B will continue to contribute to JSF Program developments to enable Australia to consider capability options and upgrades. AIR6000 Phase 2A/2B has options to deliver Maritime Strike capabilities in a timeframe closely following that of the United States Navy. AIR6000 Phase 2A/2B will also continue to invest in F-35A development toward advanced Maritime Strike options open for consideration under AIR3023 in the context of a Joint Maritime Strike strategy.

On 15 January 2020, the United States Government Under Secretary of Defense for Acquisition and Sustainment, Ms Ellen Lord, announced that the F-35 Autonomic Logistics Information System (ALIS) will be replaced with a system called the F-35 Operational Data Integrated Network (ODIN). The United States F-35 JPO has confirmed that ODIN will deliver improved operational outcomes through the use of cloud-based technology, a government-managed integrated data environment, and user-centred applications. All partner nations will transition to the new integrated information system in a migration led by the F-35 Joint Program Office. The F-35 is a fifth generation platform that is designed to evolve. Improvements and upgrades to the logistics information system were already planned and Australia's extant budget includes funding for such upgrades.

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 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 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. At this time the project discontinued the competitive evaluation under AIR6000. The subsequent decision by Government to acquire the F-35A JSF has been taken progressively, including:

- Providing First Pass Approval in November 2006, which 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.
- Signing the multilateral Production, Sustainment and Follow-on Development (PSFD) Memorandum of Understanding (MoU) in December 2006 to allow entry into the next stage of the JSF Program.
- AIR6000 Phase 2A/2B Stage 1 Approval in November 2009 to acquire 14 CTOL F-35A JSF aircraft and associated support and enabling elements necessary to establish the initial training capability in the US, commencing in 2014, and to allow commencement of Operational Test in the US and Australia.
- AIR6000 Phase 2A/2B Stage 2 was approved by Government in April 2014 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 three operational squadrons of fifth generation F-35A JSF to replace the F/A-18A/B Hornet aircraft.
- 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. Beyond Line of Sight Communications (BLOS) was only desirable and will now be delivered as a cost effective common capability rather than Australian unique. In conjunction with the retirement of cost risks within the project, this has remediated the cost issues identified to Government in 2017. These adjustments have also aligned Australian delivery schedules with the global JSF development program. While the approved changes have reduced the capability being delivered by Phase 2A/2B it has not increased or reduced funding, or the capability being delivered, in the broader AIR6000 program. As the changes have minimal impact on overall delivery schedule of the project, AIR6000 Phase 2A/2B plans for FOC in 2023 remain unchanged.

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 Foreign Military Sales (FMS) customers.

The JSF is characterised by a low observable (stealth) design, internal weapons and fuel carriage, advanced electro-optical and infrared sensors (long range), the ability to employ a wide range of air-to-surface and air-to-air weapons, advanced communications suite to enable network centric operations, state of the art prognostics and health management, a single interchangeable engine and reduced support requirements.

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 and Pratt & Whitney on Australia's behalf in accordance with US contracting laws, regulations and procedures.
- The F-35 Joint Program Office acquisition strategy is to commence with eleven annual Low Rate Initial Production (LRIP) contracts transitioning from a Fixed Price Incentive Fee to a Firm-Fixed Price at the appropriate time.
- Each contract requires a separate Partner Procurement Request (PPR) from each partner nation defining their requirements for that buy. PPRs are submitted two years ahead of contract and four years ahead of delivery.
- F-35A JSF Aircraft to be delivered under AIR6000 Phase 2A/2B are acquired under annual contracts. Lots 12 to 14 production procurements leverage off a Block Buy initiative, with Australia's commitment remaining on an annual basis. The Australian F-35A JSF capability will be supported via an F-35 Global Support Solution that is progressively being implemented and a range of Australian sovereign sustainment contracts, with all arrangements planned to be performance-based.

As well as providing capability and programmatic benefits, a key aim of Australia's participation in the JSF Program is to embed Australian industry in the JSF global supply and support chain for the life of the JSF Program. The Commonwealth continues to work with the F-35 Joint Program Office as well as prime contractors Lockheed Martin and Pratt & Whitney, and their sub-contractors to achieve long term industry outcomes for Australia.

The New Air Combat Capability – Industry Support Program (NACC-ISP) was launched on 10 August 2011. **In total,** $21.9 million (GST exclusive) **was** available to Australian businesses and research organisations to support development of new or improved capabilities that may enhance their ability to win work in production, sustainment and follow-on development phases of the F-35 Program. This program will have **fully obligated** all funds by end **2021**. To date, over 50 Australian companies have, some with NACC-ISP support, directly shared in excess of **$2.7** billion in global F-35 contracts.
The Joint Strike Fighter – Industry Support Program (JSF-ISP) **was launched on 9 December 2020** with initial funding of **$4m** from Phase 2A/2B. JSF-ISP will assist with further industry opportunities, including component repair capacity workloads. The Cooperative Partnership will continue to progressively enhance the capability of the entire F-35A Air System over its life of type under the auspices of the Follow-on Modernisation program.

Major Risks and Issues
The F-35 Joint Program is large and complex with varying challenges. 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 also reliant on the international Cooperative Program through the Joint Program Office to develop and sustain the F-35 system and to develop the Global Support Solution. Australia's standing in the Cooperative Program may be compromised by security or cyber breaches. The project is also managing risks regarding industry, including realisation of economic benefits and the management of the workforce.

The primary issue that the project is addressing is the impact from COVID-19 to schedule and potentially to cost. It is affecting the supply chains and production efforts of the F-35 prime contractors Lockheed Martin and Pratt & Whitney, resulting in delays to delivery of aircraft and support elements. Travel restrictions are limiting the ability of US-based staff to install specialist equipment in Australia and for Australian and US staff to conduct verification and validation activities. The project is mitigating these with alternative plans, where possible, and otherwise monitoring the changes through regular communication. **Another minor issue is the need for Air Force Maintainers to practice fitting Alternate Mission Equipment and loading dummy rounds using Air Vehicles instead of a training aid. Delivery of the Weapons Loading Trainer and Gun Module upgrades will resolve this issue in Q4 2021.**

Other Current Related Projects/Phases
AIR JSF System Development and Demonstration (SDD) – Participation in the JSF SDD Program: In November 2018, Australia closed the Materiel Acquisition Agreement for AIR JSF SDD – Participation in the JSF System Development and Demonstration (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 Department of Defense decision to go into full-rate aircraft production.

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 (WVR) and Beyond-Visual-Range (BVR) missiles for the Air Combat Capability including the F-35A Joint Strike Fighter.

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-35 Joint Strike Fighter.

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		
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**	
Apr 18	Real Variation – Transfer		(8.4)	3
Jul 10	Price Indexation		351.0	4
Jun 21	Exchange Variation		2,024.0	
Jun 21	**Total Budget**		15,630.7	
	Project Expenditure			
Prior to Jul 20	Contract Expenditure - US Government - LRIP 10 Production	(875.8)		5
	Contract Expenditure - US Government - LRIP 11 – Production	(878.9)		5
	Contract Expenditure - US Government (Block Buy Contract Production)	(1,997.3)		5, 6
	Contract Expenditure - US Government - PSFD MoU (FY14/15 – 22/23)	(359.9)		
				5
	Contract Expenditure - US Government (Block Buy Contract Propulsion)Contract Expenditure - US Government - LRIP 10 Propulsion	(338.7) (139.1)		5, 6 5
	Contract Expenditure - US Government - LRIP 11 – Propulsion	(143.6)		5
	Contract Expenditure - US Government - Reprogramming Laboratory	(114.2)		5
	Contract Expenditure - US Government - LRIP 8 - Production and Non-Annualised Sustainment	(87.7)		5
	Contract Expenditure - US Government - LRIP 10 Non-Annualised Sustainment Contract	(115.7)		5
	Contract Expenditure - US Government - FMS Case AT-D-YAF, AT-P-AMN (Weapons)	(146.3)		5
	Contract Expenditure - US Government-LRIP11 - Non-Annualised Sustainment	(74.6)		5
	Contract Expenditure - US Government-LOT 12-14 IDIQ Contract	(3.6)		5
	Other Contract Payments / Internal Expenses	(1200.2)		7
			(6,475.6)	
FY to Jun 21	Contract Expenditure - US Government (Block Buy Contract Production)	(1,018.9)		5,6
	Contract Expenditure - US Government (Block Buy Contract Propulsion)	(289.0)		6
	Contract Expenditure - US Government PSFD MoU (FY14/15 - 22/23)	(121.1)		5
	Contract Expenditure - US Government - FMS Cases AT-D-YAF, AT-P-AMN (Weapons)	(13.5)		5
	Contract Expenditure - US Government - LRIP 11 Non-Annualised Sustainment	(52.2)		5
	Contract Expenditure - US Government - LRIP 11 - Production	(-1.9)		5
	Contract Expenditure - US Government - LRIP 10 Non-Annualised Sustainment	(78.9)		5
	Contract Expenditure - US Government - LRIP 11 - Propulsion	(4.2)		5
	Contract Expenditure - US Government – LOT 15 Production	(21.7)		
	Contract Expenditure - US Government - LRIP 10 Production	(1.6)		5
	Contract Expenditure - US Government - LOT 12-14 Indefinite Delivery Indefinite Quality (IDIQ)	(59.5)		5
	Contract Expenditure - US Government - Reprogramming Laboratory	(6.9)		5
	Contract Expenditure - US Government - LRIP 10 Propulsion	(0.2)		5
	Contract Expenditure - US Government - LRIP 8 - Production and Non-Annualised Sustainment	(10.7)		5
	Other Contract Payments / Internal Expenses	(889.2)		8
			(2,565.9)	
Jun 21	**Total Expenditure**		(9,041.4)	
Jun 21	**Remaining Budget**		(6,589.3)	

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 New Air Combat Capability (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.
3	Transfer to Estate and Infrastructure Group following request for funding scope changes for RAAF Base Tindal Joint Strike Fighter facilities.
4	Up until July 2010, indexation was applied to project budgets on a periodic basis. The cumulative impact of this approach was $70.3m. 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 2020** is associated with Mission Systems (**$509.2m**) comprising of FMS cases, weapons & aircraft; Support Systems (**$365.4m**) which comprises of software capability for the reprogramming lab, facilities, support and test equipment, spares, information communications technology and ALIS; Production Sustainment and the follow on development **of a** Memorandum of Understanding ($180.9m) for the 2009-10 financial year through to the end of the 2013-14 financial year; Project Office services (**$58.0m**) comprising of Project Office services (travel, contract support services) and contract administration in relation to the Joint Project Office; NACC Operating Expenditure (**$82.8m**) comprising of Project Office expenses, initial support & maintenance, US pilot training and NACC ISP Grants Program; Non-standard mission system (**$3.9m**) for the Ferry activities.
8	Other expenditure for the period J**uly 2020 to June 2021** is associated with Support Systems (**$698.7m**) comprising of software capability for the reprogramming lab, facilities, support and test equipment, spares, information communications technology, training simulators, spares and the ALIS; Mission Systems (**$153.4m**) comprising of FMS cases, weapons and aircraft; Project Office services (**$15.3m**) comprising of Project Office services (travel, contract support services) and contract administration in relation to the Joint Project Office NACC operating expenditure (**$18.7m**) comprising of Project Office expenses, initial support and maintenance, US pilot training and the NACC ISP Grants Program; and non-standard mission system (**$3.1m**) for the Ferry activities.

2.2A In-year Budget Estimate Variance

Estimate PBS $m	Estimate PAES $m	Estimate Final Plan $m	Explanation of Material Movements
2,430.6	**2,354.4**	**2,252.9**	PBS – PAES: **During 2020-21, activities have continued as planned to support achievement of Initial Operational Capability, with some minor disruptions to the aircraft production schedule due to COVID-19.** **The variation is primarily due to foreign exchange updates.** PAES – Final Plan: The acquisition is as now forecast in **2021-22 PBS Rates.**
Variance $m	**(76.2)**	**(101.5)**	Total Variance ($m): **(177.7)**
Variance %	**(3.1)**	**(4.3)**	Total Variance (%): **(7.3)**

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan $m	Actual $m	Variance $m	Variance Factor	Explanation
			Australian Industry	**30 June 2021 – The variation is primarily due to early achievement of cooperative program deliverables associated with the air vehicle and engine. The project also had a foreign exchange loss of approximately $70m due to the additional cost of foreign exchange payments as a result of the depreciation of the Australian dollar which has also contributed.**
		316.7	Foreign Industry	
			Early Processes	
		(3.7)	Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
2,252.9	**2,565.9**	**313.0**	Total Variance	
		13.9	% 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			
US Government PSFD MoU (FY 14/15 – 22/23)	Dec 06	253.1	**768.7**	Various	MoU	1, 9, 10
US Government (LRIP 10 Production)	Dec 14	79.2	**902.8**	Fixed Price Incentive	USG Contract	2, 9, 10
US Government (LRIP 10 Propulsion)	Mar 15	13.4	**145.8**	Fixed Price Incentive	USG Contract	3, 9, 10
US Government (Reprogramming Laboratory)	Mar 15	119.0	**137.6**	Fixed Price Incentive	USG Contract	4, 9, 10
US Government (LRIP 8 Production and Non-Annualised Sustainment)	Jun 15	99.9	**123.2**	Fixed Price Incentive	USG Contract	5, 9, 10
US Government (LRIP	Dec 15	88.2	917.1	Fixed Price Incentive	USG	6, 9, 10

11 Production)					Contract	
US Government (AT-D-YAF)	Jun 16	111.9	111.6	Reimbursement	FMS	9, 10
US Government (LRIP 10 Non-Annualised Sustainment)	Jun 16	31.8	283.2	Various	USG Contract	9, 10, 13
US Government (AT-P-AMN)	Jul 16	132.3	140.9	Reimbursement	FMS	9, 10
US Government (LRIP 11 Propulsion)	Jul 16	14.2	168.2	Fixed Price Incentive	USG Contract	9, 10, 12
US Government (Block Buy Contract Production)	Feb 17	236.3	4,443.2	Various	USG Contract	7, 9, 10
US Government (Block Buy Contract Propulsion)	Aug 17	39.6	**842.9**	Various	USG Contract	7,9, 10
US Government (LRIP 11 Non-Annualised Sustainment)	May 18	57.5	**186.0**	Various	USG Contract	9, 10, 13
US Government (LOT 12-14 Indefinite Delivery Indefinite Quantity)	Jan 19	52.8	**155.9**	Various	USG Contract	9, 10, 14
US Government (LOT 15 Production)	Jan 20	125.3	**113.5**	Fixed Price Incentive	USG Contract	9, 10, 15

Notes	
1	Contribution to PSFD MoU shared costs based on proportionality principle: i.e. number of aircraft purchased 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 Joint Program Office administration.
2	LRIP 10 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	LRIP 10 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 sparing for operating units, maintenance depots and the Global Pool and (3) the migration of ALIS propulsion data.
4	Contract for Reprogramming Laboratory hardware and software tools.
5	LRIP 8 Production and Non Annualised Sustainment contract for the provision of training devices, support equipment, non-aircraft spares and an aircrew fitting service.
6	LRIP 11 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	Lots 12-14 Production and Propulsion are procured under separate Block Buy Contracts, Air Vehicle Production via Lockheed Martin and Propulsion via Pratt & Whitney. Both contracts encompass Long Lead items for the procurement of aircraft under Lots 12-14 and Economic Order Quantities for the production contract only. Both production and propulsion are also contracted under Undefinitised Contract Action 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	FY17 Air Vehicle Initial Spares & ACURL Spares contract for Australia's Deployable Spares Pack (DSP), Australia's contribution to the F-35 global spares pool and spares for the Reprogramming Lab. The FY 17 Air Vehicle Initial Spares contract had USD$30,709,575 deobligated, as the eventual Definitised Contract value was lower than the 'not to exceed' value of the Undefinitised Contracting Action.
9	Contract value as at 30 June 2021 is based on actual expenditure to 30 June 2021 and remaining commitment at current exchange rates. This includes adjustments for indexation (where applicable).
10	The scope of these contracts is explained further below.
11	The project has reviewed the list of major contracts reported in the PDSS to ensure it reflects only the most significant contracts of the project. This has resulted in some contracts previously reported separately now being reported as part of other contract payments/internal expenses and being removed from the list of major contracts.

12	LRIP 11 Propulsion contract for eight engines for installation on Australia's tranche of eight F-35A aircraft being procured through the LRIP 11 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'.
13	LRIP 10 and 11 Non-Annualised (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.
14	**FY19-20 Air Vehicle Initial Spares, Lot 12 - 14 Generation III Heavy Helmet Mounted Display Systems (GEN IIIH HMDS) and Lot 13 - 14** Ancillary Mission Equipment (AME) and Pilot Fit Equipment (PFE) have been placed on the Lockheed Martin Indefinite Delivery Indefinite Quantity (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.
15	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.

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 21		
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 (LRIP 10 Production)	8	8	Procurement of Advanced Acquisition items associated with the next eight F-35A aircraft procurement.	
US Government (LRIP 10 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.	
US Government (Reprogramming Laboratory)	N/A	N/A	Reprogramming Laboratory Hardware and Software tools.	
US Government (LRIP 8 Production and Non-Annualised Sustainment)	N/A	N/A	Training devices, support equipment and non-aircraft spares.	
US Government (LRIP 11 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 (SDB 1) and associated racks.	
US Government (AT-P-AMN)	N/A	N/A	Procurement of Radio Frequency Countermeasures.	
US Government (Block Buy Contract Production)	N/A	45	Procurement of Long Lead items and Economic Order Quantities for Lots 12-14, with full funding contract awarded in Quarter 4 2019, for procurement of 45 F-35A aircraft.	2
US Government (FY17 Air Vehicle Initial Spares & ACURL Spares)	N/A	N/A	F35 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 Lots 12-14, with full funding contract awarded in Quarter 4 2019, for procurement of 45 F135 propulsion systems.	2
US Government (LRIP 11 Propulsion)	8	8	Procurement of propulsion systems required for the eight F-35A aircraft being procured through the LRIP 11 Production Lot.	
US Government (LRIP 10 Non-Annualised 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 (LRIP 11 Non-Annualised 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 Indefinite Delivery Indefinite Quantity)	N/A	N/A	Procurement of Lot 13-14 Ancillary Mission Equipment and Pilot Fit Equipment and HMDS Spares, Lots 12-14 Helmet Mounted Display System (HMDS), and FY 19-20 Air Vehicle Spares.	
US Government (Lot 15 Production)	N/A	N/A	Procurement of Advanced Acquisition items associated with the next nine F-35A aircraft procurement.	

Major equipment accepted and quantities to 30 June 21	
Forty 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.

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 (CDR) 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 IMS7 Baseline)	Jun 15	Jun 15	Jul 15	1	1
	Block 3i Initial Release to support LRIP 6 (against IMS7 Baseline)	Mar 14	Nov 14	Sep 14	6	2
	Block 3F Fleet Release (against IMS7 Baseline) – for F-35A (full envelope with weapons)	Aug 17	Oct 17	Aug 17	0	3, 4, 5
Acceptance	Accept and deliver two (LRIP 6) 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	**Nov 23**	**(1)**	8

Notes	
1	Block 2B supported the United States Marine Corps IOC declaration which occurred on 31 July 2015.
2	Block 3i Initial Release software provides initial pilot training capability for the LRIP 6 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 LRIP 6 aircraft.
3	F-35 aircraft software is developed and released in capability blocks. Block 3F software is the final release under the System Development and Demonstration (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 LRIP 9 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 LRIP 6 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 10, 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 19. This will achieve a revised Australian IOC by December 20.
8	Variance is due to the expected completion of Aircraft 72 production in **October** 2023, resulting in Aircraft 72 acceptance and **delivery** in **November** 2023.

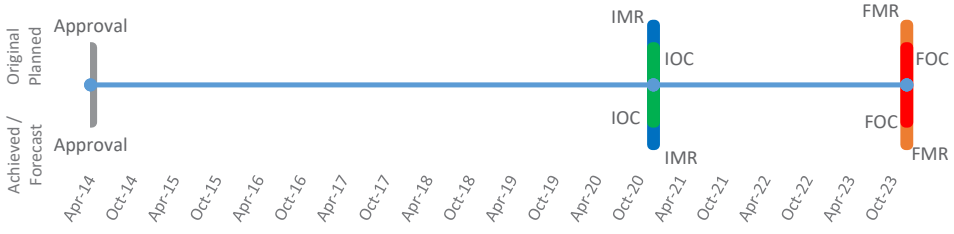
3.3 Progress toward Materiel Release and Operational Capability Milestones

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	Dec 23	(0)	**1**
Final Operational Capability (FOC)	Dec 23	Dec 23	(0)	**1**

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. The capability continues to track toward FOC in 2023. Delivery of aircraft remains largely in line with the capability manager's expectation. Aircraft availability remains a concern, however, the fleet is currently able to generate sufficient flying hours to achieve all essential tasking.**

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 Delivery Capability Performance

Green:
The Project expects to meet the majority of capability requirements as expressed in the Materiel Acquisition Agreement and supporting suite of Capability Definition Documentation, with delivery in accordance with requirements of the relevant Technical Regulatory Authorities.

Amber:
AIR6000 Phase 2A/2B has options to deliver Maritime Strike capabilities in a timeframe closely following that of the United States Navy. Phase 2A/2B will also continue to invest in F-35A development toward advanced Maritime Strike options for consideration under AIR3023 in the context of a Joint Maritime Strike strategy.

Red:
N/A

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)	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 (2OCU); 3SQN 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	The JSF system shall be capable of performing and sustaining one squadron capable of Defensive Counter Air (DCA), and Offensive Counter Air (OCA) 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. Initial Operational Capability **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 Continuous Capability Development and delivery (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. FMR is expected to be achieved December 2023.	Not yet achieved
Final Operational Capability	The JSF system shall be capable of performing and sustaining three operational squadrons and one training squadron, as per strategic and capability guidance. FOC is expected to be achieved in December 2023.	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
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. F-35A air system elements include aircraft/engine, weapons, Autonomous Logistics Information System (ALIS) system, reprogramming enterprise and the training system.	**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 air system elements are monitored and controlled within the integrated master schedule and the Project Performance Review process. The inclusion of Cooperative Partner Personnel positions within the Joint Program Office will give Australia early insight into emergent potential issues. The Capability Manager is a key informed stakeholder in this process which will ensure the systems being delivered will meet Air Forces evolving capability needs.
The Australian F-35 capability relies on a cohesive Joint Strike Fighter Cooperative Program to develop and sustain the F-35 system. Significant changes to the program organisation may impact Australia's and the F-35 Partners' ability to influence the program.	Defence will maintain cohesive working relationships with enterprise stakeholders, maintain Government to Government engagement in the program, and continue to engage in multilateral and bilateral discussions with F-35 partners. Australia will continue representation at strategic fora and where appropriate take the lead on influencing the F-35 Partners with the F-35 JPO and any future F-35 sustainment organisation.

The Australian F-35A sustainment solution may be impacted by the Joint Program Offices (JPO) ongoing development and evolution to a mature and effective Global Support Solution (GSS), leading to an impact on Australia's sustainment performance.	The F-35 Lightning II 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 Air Combat Systems Program Office will continue to provide feedback on the GSS performance at F-35 JPO governance fora to make it effective for the Australian F-35 capability.
Australia's standing and reputation in the international F-35 co-operative partnership may be compromised due to security or cyber breaches leading to potential disclosure of sensitive information to potential adversaries.	**AIR6000 Phase 2A/2B** will 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 mitigations are deployed to address any identified issues. Robust security compliance assurance control activities are continually conducted within Defence and our broader industry partners. 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.
Acquisition and operation of the F-35A capability may be affected by overall funding or programming issues arising from internal cost growth / forecasting **inaccuracy, production cost increases, future development of the common reprogramming laboratory and COVID-19;** leading to an impact on capability and schedule.	**AIR6000 Phase 2A/2B** will conduct on-going engagement with the F-35 Joint Program Office and major project suppliers to facilitate improved cost data to allow the F-35 project to meet budgeting and programming expectations along with proactive management of cost risk identification and engagement with the Capability Manager to prioritise requirements to deliver project capability within the approved project budget.
The required Australian industry benefit may not be realised, or may be delayed, resulting in a reduced advantage to the Australian economy and causing reputational damage to Defence and Government. Australian industry may not be able to meet Global Support Solution (GSS) performance, cost or schedule requirements. Australian industry assignment MRO&U activation may impact on the performance outcomes of F-35 GSS.	**AIR6000 Phase 2A/2B** will conduct coordinated activities with Defence Industry Division and maintain the close working relationship with Centre for Defence Industry Capability. The project will continue to use the grants program to provide financial support for industry capacity and capability growth, and **AIR6000 Phase 2A/2B** advocacy on behalf of Australian Industry with Joint Program Office, United States Prime Contractors and Original Equipment Manufacturers.
Failure to effectively employ and manage the Military, Government employee and supporting Defence Industry workforce may impact the effectiveness and efficiency of the Australian F-35A program.	The JSF Integrated Project Team conducts a comprehensive review of its Workforce Plan quarterly. This plan feeds into the CASG Total Workforce Model to ensure the right balance of APS, permanent Air Force **personnel** and reserves that will generate a built-in resilience in key operational areas. Resource planning working groups have been set up to address niche or nascent capabilities to ensure sufficient attention is given to addressing workforce fragility. Where appropriate a skilled contractor workforce will be engaged to provide surety of capability delivery. Regular engagement of RAAF personnel management, APS recruitment agencies and industry partners enables the program to be responsive to issues, across the total workforce, and address deficiencies in a timely manner.
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 will burn-down the risk through persistent and consistent education.
Emergent Risks (risk not previously identified but has emerged during 2020-2021	
Description	Remedial Action
N/A	N/A

5.2 Major Project Issues

Description	Remedial Action
COVID-19 is affecting the supply chains and production efforts of the F-35 prime contractors Lockheed Martin and Pratt & Whitney, resulting in delays to delivery of aircraft and support elements. Travel restrictions are limiting the ability of US-based staff to install specialist equipment in Australia and for Australian and US staff to conduct verification and validation activities.	The project is mitigating these delays with alternative plans where possible and otherwise monitoring the changes through regular communication.
The upgrade of the Weapons Loading Trainer to the 3.2 and 3.2.1 configurations was affected by delays in contracting,	**Until the Weapons Loading Trainer upgrade is fully delivered, Air Force maintainers are required to practice**

resulting in the delivery schedule being late to need.	**loading of Alternate Mission Equipment/dummy weapons to external Air Vehicle wing mounting points and to undertake load and maintenance training on an Air Vehicle gun.**

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
JSF is a complex program that requires a robust Program Management framework to be established early in the life of the program lifecycle.	Governance
JSF is a collaborative program that requires active engagement to ensure national requirements are met.	Requirements Management
JSF Production, Sustainment and Follow-on Development Memorandum of Understanding is run by the Joint Program Office and it is difficult to predict cost, schedule and associated budgeting impact on ADF processes and procurement.	Governance
Integration of JSF into ADF systems of systems has been underestimated.	Requirements Management
The collaborative environment of the JSF program introduces additional stakeholder complexity due to the engagement of the nine partner nations.	Governance
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 TAE came up with a proposal to renovate a disused Masters hardware facility rather than building a new facility on a green field site. This resulted in significant schedule reduction.	Requirements Management
The disadvantages of conducting staged facility handover / takeover (HOTO) activities outweigh the advantages. Traditional HOTO activities should be conducted.	Requirements Management
Having a dedicated ICT SME team (CIOG) embedded within the Project Office was a significant contributor to reducing ICT risks.	Requirements Management
The ongoing sustainment costs of ICT intensive projects is expensive - hardware refresh, software licensing, upgrades, personnel (administrators) - and cannot be underestimated.	Requirements Management

Section 7 – Project Line Management

7.1 Project Line Management as at 30 June 2021

Position	Name
Division Head	AVM Greg Hoffmann
Branch Head	AIRCDRE Damien Keddie