

## **2019–20 Major Projects Report**

Department of Defence

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Canberra ACT  
30 November 2020

Dear Mr President  
Dear Mr Speaker

In accordance with the authority contained in the *Auditor-General Act 1997*, I have undertaken a review of the status of selected major Defence equipment acquisition projects, as at 30 June 2020, as presented by the Department of Defence. The report is titled *2019–20 Major Projects Report*. I present the report of this review to the Parliament.

Following its presentation and receipt, the report will be placed on the Australian National Audit Office's website — <http://www.anao.gov.au>.

Yours sincerely

A handwritten signature in black ink, reading 'Grant Hehir', is positioned above the printed name.

Grant Hehir  
Auditor-General

The Honourable the President of the Senate  
The Honourable the Speaker of the House of Representatives  
Parliament House  
Canberra ACT

## AUDITING FOR AUSTRALIA

The Auditor-General is head of the Australian National Audit Office (ANAO). The ANAO assists the Auditor-General to carry out his duties under the *Auditor-General Act 1997* to undertake performance audits, financial statement audits and assurance reviews of Commonwealth public sector bodies and to provide independent reports and advice for the Parliament, the Australian Government and the community. The aim is to improve Commonwealth public sector administration and accountability.

For further information contact:

**Australian National Audit Office  
GPO Box 707  
Canberra ACT 2601**

**Phone: (02) 6203 7300**

**Fax: (02) 6203 7777**

**Email: [ag1@anao.gov.au](mailto:ag1@anao.gov.au)**

Auditor-General reports and information about the ANAO are available on our website:

<http://www.anao.gov.au>

### Assurance Review Team

Michelle Page	Erica Welton
Philip Rebula	Anora Harris
Wira Wibowo	Sara Casey
Jocelyn Watts	David Van Schoten
David Retnam	Katarina Ivanovic-Likic



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# Report snapshot

## Auditor-General Report No.19 2020–21 2019–20 Major Projects Report (MPR)



### What is the purpose of the MPR?

- ▶ The MPR is an annual review of the Department of Defence's major defence equipment acquisitions, undertaken at the request of the Parliament's Joint Committee of Public Accounts and Audit (JCPAA).
- ▶ Its purpose is to provide information and assurance to the Parliament on the performance of selected acquisitions.
- ▶ This year, it includes 25 major projects.
- ▶ This is the 13th Major Projects Report since its commencement in 2007–08.



### What did we find?

- ▶ The Auditor-General concluded:  
Based on the procedures I have performed and the evidence I have obtained, nothing has come to my attention that causes me to believe that the information in the 25 Project Data Summary Sheets in Part 3 (PDSSs) and the Statement by the Secretary of Defence, excluding the forecast information, has not been prepared in all material respects in accordance with the 2019–20 Major Projects Report Guidelines, as endorsed by the JCPAA.



### What is reviewed?

The Department of Defence prepares Project Data Summary Sheets (PDSS) on selected major defence equipment acquisition projects in accordance with guidelines endorsed by the Joint Committee of Public Accounts and Audit.

The ANAO reviews the information in the PDSSs in accordance with the ANAO Auditing Standards specified by the Auditor-General under the *Auditor-General Act 1997*.

The PDSSs cover:

1. Project background and government approvals
2. Financial performance
3. Schedule performance
4. Delivery against agreed scope
5. Risks and issues
6. Project maturity
7. Lessons learned by the project
8. Management accountability for the project

## \$78.7bn

is the value of the 25  
Defence Major Projects  
reviewed.

## 5 of 25

Defence Major Projects  
experienced in-year  
schedule slippage.

## 98%

is the expected delivery against  
agreed scope across the 25  
Major Projects.

## Glossary

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First Pass Approval	(if required) is the Government decision to select a specific option(s) and proceed with agreed timeframes, technical requirements and financial commitments to Second Pass Approval.
Initial Materiel Release (IMR)	is a milestone that marks the completion and initial release of Acquisition Project supplies required to support the achievement of Initial Operational Capability.
Initial Operational Capability (IOC)	is the capability state relating to the in-service realisation of the first subset of a capability system that can be employed operationally. Declaration of initial operating capability is made by the Capability Manager, supported by the results of operational test and evaluation and declaration by the Delivery Group(s) that the fundamental inputs to capability have been delivered.
Second Pass Approval	is the Government decision to acquire a fully defined and costed capability.
Final Materiel Release (FMR)	is a milestone that marks the completion and final release of Acquisition Project supplies required to support the achievement of Final Operational Capability.
Final Operational Capability (FOC)	is the capability state relating to the in-service realisation of the final subset of a capability system that can be employed operationally. Declaration of final operational capability is made by the Capability Manager, supported by the results of operational test and evaluation and declaration by the Delivery Group(s) that the fundamental inputs to capability have been delivered.



## Part 1. ANAO Review and Analysis





# Summary and Review Conclusion

## About the Major Projects Report

1. The Department of Defence's (Defence) major defence equipment acquisition projects (Major Projects) continue to be the subject of parliamentary and public interest. This is due to their high cost and contribution to national security, the challenges involved in completing them within the specified budget and schedule, and to the required capability, and their contribution to industrial and employment policy objectives.
2. The Major Projects Report (MPR) comprises Defence information and commentary on selected Major Projects, and assurance and analysis of that information by the Australian National Audit Office (ANAO). The objective of the MPR is 'to improve the accountability and transparency of Defence acquisitions for the benefit of Parliament and other stakeholders.'<sup>1</sup>
3. The ANAO has reviewed information provided by Defence regarding 25 of its Major Projects in this thirteenth annual report (2018–19: 26). In February 2012, the Parliament's Joint Committee of Public Accounts and Audit (JCPAA) identified this review as a 'Priority Assurance Review', under subsection 19A(5) of the *Auditor-General Act 1997* (the Act), allowing the ANAO full access to the information gathering powers under the Act.
4. Defence's Capability Acquisition and Sustainment Group (CASG) manages the process of bringing new defence capabilities into service and providing information for ANAO review as part of the MPR process. As at 30 June 2020, CASG was managing 206 active major and minor capital equipment projects worth \$130.5 billion<sup>2</sup>, with an in-year budget of \$8.7 billion.<sup>3</sup> Defence capitalised some \$8.8 billion from these projects in 2019–20.<sup>4</sup>
5. The 2020 *Defence Strategic Update* adjusted some of the strategic policy objectives of the 2016 *Defence White Paper* and foreshadowed that the Defence Budget will grow over the next ten years to \$73.7 billion in 2029–30, with total funding over the decade of \$575 billion (including approximately \$270 billion of investment in Defence capability).<sup>5 6</sup>

## Major Projects selected for review

6. Major Projects are selected for inclusion in the MPR based on the criteria included in the 2019–20 *Major Projects Report Guidelines* (the Guidelines), as endorsed by the JCPAA.<sup>7</sup> They represent a selection of the most significant Major Projects managed by CASG.

1 Joint Committee of Public Accounts and Audit, Parliament of the Commonwealth of Australia, *Report 473: Defence Major Projects Report (2016–17)*, (2018), Executive Summary, p. 1.

2 Department of Defence, *Defence Annual Report 2019–20*, Defence, Canberra, Chapter 3, Annual Performance Statements, 2020, p. 42.

3 Department of Defence, *Defence Portfolio Budget Statements 2019–20*, Defence, Canberra, 2019, p. 20.

4 Department of Defence, *Defence Annual Report 2019–20*, Defence, Canberra, Chapter 3, Annual Performance Statements, 2020, Appendix A Financial Statements, Note 3.2A, p. 204.

5 Department of Defence, *2020 Defence Strategic Update*, p. 7.

6 Department of Defence, *Defence Portfolio Budget Statements 2020–21*, Defence, Canberra, 2020, p. 5.

7 The 2019–20 *Major Projects Report Guidelines* were endorsed by the JCPAA in September 2019 and are included in **Part 4** of this report.

7. The total approved budget for the Major Projects included in this report is approximately \$78.7 billion, covering 60 per cent of the total budget of active major and minor capital equipment projects of \$130.5 billion.<sup>8</sup> The selected projects are listed in Table 1.

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<sup>8</sup> Department of Defence, *Defence Annual Report 2019–20*, Defence, Canberra, Chapter 3, Annual Performance Statements, 2020, p. 42.

**Table 1: 2019–20 MPR projects and approved budgets at 30 June 2020<sup>1,2</sup>**

Project Number (Defence Capability Plan)	Project Name (on Defence advice)	Abbreviation (on Defence advice)	Approved Budget \$m
AIR 6000 Phase 2A/2B	New Air Combat Capability <sup>3</sup>	Joint Strike Fighter	16,631.3
SEA 4000 Phase 3	Air Warfare Destroyer Build <sup>3</sup>	AWD Ships	9108.9
SEA 5000 Phase 1	Future Frigates	Future Frigates	6291.8
SEA 1000 Phase 1B	Future Submarines Design Acquisition <sup>3</sup>	Future Subs	5925.8
LAND 400 Phase 2	Combat Reconnaissance Vehicles <sup>3</sup>	Combat Recon. Vehicles	5761.7
AIR 7000 Phase 2B	Maritime Patrol and Response Aircraft System	P-8A Poseidon	5362.4
AIR 9000 Phase 2/4/6	Multi-Role Helicopter <sup>3</sup>	MRH90 Helicopters	3773.9
SEA 1180 Phase 1	Offshore Patrol Vessel <sup>3</sup>	Offshore Patrol Vessel	3701.4
AIR 5349 Phase 3	EA-18G Growler Airborne Electronic Attack Capability	Growler	3505.9
LAND 121 Phase 3B	Medium Heavy Capability, Field Vehicles, Modules and Trailers <sup>3</sup>	Overlander Medium/Heavy	3398.6
AIR 9000 Phase 8	Future Naval Aviation Combat System Helicopter	MH-60R Seahawk	3219.3
LAND 121 Phase 4	Protected Mobility Vehicle – Light (PMV-L) <sup>3</sup>	Hawkei	1987.5
AIR 8000 Phase 2	Battlefield Airlift – Caribou Replacement <sup>3</sup>	Battlefield Airlifter	1439.2
AIR 7000 Phase 1B	MQ-4C Triton Remotely Piloted Aircraft System	MQ-4C Triton	1311.4
SEA 1654 Phase 3	Maritime Operational Support Capability	Repl Replenishment Ships	1084.7
AIR 5431 Phase 3	Civil Military Air Management System <sup>3</sup>	CMATS	975.6
LAND 200 Tranche 2	Battlefield Command System <sup>3</sup>	Battlefield Command System	969.7
JP 2072 Phase 2B	Battlespace Communications System Phase 2B	Battle Comm. Sys. (Land) 2B	947.1
SEA 1439 Phase 5B2	Collins Class Communications and Electronic Warfare Improvement Program	Collins Comms and EW	610.7
SEA 3036 Phase 1	Pacific Patrol Boat Replacement	Pacific Patrol Boat Repl	504.3
LAND 53 Phase 1BR	Night Fighting Equipment Replacement	Night Fighting Equip Repl	446.7
SEA 1439 Phase 3	Collins Class Submarine Reliability and Sustainability <sup>4</sup>	Collins R&S	445.8
SEA 1442 Phase 4	Maritime Communications Modernisation	Maritime Comms	444.0
SEA 1448 Phase 4B	ANZAC Air Search Radar Replacement	ANZAC Air Search Radar Repl	429.4
JP 2008 Phase 5A	Indian Ocean Region UHF SATCOM	UHF SATCOM	422.1
<b>Total</b>	<b>25</b>		<b>78,699.2</b>

Note 1: The 2019–20 MPR Guidelines, at **Part 4** of this report, include 30 projects. Subsequent to endorsement of the 2019–20 MPR Guidelines in September 2020, five projects were removed from the MPR based on the low-risk nature of the remaining activities to FOC. Once a project is selected for review, it remains within the portfolio of projects under review until the JCPAA endorses its removal, normally once it has met the capability requirements of Defence.

Note 2: SEA 5000 Phase 1 Future Frigates, SEA 1000 Phase 1B Future Submarines Design Acquisition, LAND 400 Phase 2 Combat Reconnaissance Vehicles, AIR 7000 Phase 1B and LAND 200 Tranche 2 Battlefield Command System are included in the MPR for the first time in 2019–20.

Note 3: These projects have been the subject of individual performance audits. See Table 7 for more information.

Note 4: SEA 1439 Phase 3 Collins Class Submarine Reliability and Sustainability is a group of 24 activities primarily sustainment in nature. While not an acquisition project, it has been included at the JCPAA's request.

Source: The Project Data Summary Sheets in **Part 3** of this report.

## Engagement objective and scope

8. The objective of this assurance engagement and related procedures is to provide the Auditor-General's independent assurance over the status of the selected Major Projects. The status of the selected Major Projects is reported in the *Statement by the Secretary of Defence* (see **Part 3** of this report) and the Project Data Summary Sheets (PDSSs) prepared by Defence (see **Part 3** of this report). Assurance from the ANAO's review is conveyed in the *Independent Assurance Report* by the Auditor-General (see **Part 3** of this report).

9. The following forecast information found in the PDSSs is excluded from the scope of the ANAO's review:

- Section 1.2 Current Status—Materiel Capability Delivery Performance, and Section 4.1—Measures of Materiel Capability Delivery Performance;
- Section 1.3 Project Context—Major Risks and Issues, and Section 5—Major Risks and Issues; and
- forecast dates where included in each PDSS.

10. Accordingly, the Auditor-General's *Independent Assurance Report* does not provide any assurance in relation to this information. However, material inconsistencies identified in relation to this information are required to be considered in forming the Auditor-General's conclusion.

11. The exclusions to the scope of the review, noted above, are due to a lack of Defence systems from which to provide complete and accurate evidence<sup>9</sup> in a sufficiently timely manner to facilitate the review. This has been an area of focus of the JCPAA over a number of years<sup>10</sup>, and it is intended that all components of the PDSSs will eventually be included within the scope of the ANAO's review.

12. Separate to the formal assurance review, the ANAO has undertaken an analysis of key elements of the PDSSs—including cost, schedule, progress towards delivery of required capability, project maturity, and risks and issues. Longitudinal analysis across these key elements of projects has also been undertaken.

13. Defence provides further insights and context in its commentary and analysis contained in **Part 2**. This commentary and analysis is not included within the scope of the ANAO's review.

## Review methodology

14. The criteria for Defence's preparation of information for ANAO review are provided by the Guidelines approved by the JCPAA. There is an expectation that Defence has procedures in place designed to ensure that project information and data was recorded in a complete and accurate manner, for all 25 projects.

15. The ANAO has reviewed the PDSSs prepared by Defence as a **priority assurance review** under subsection 19A(5) of the *Auditor-General Act 1997* (the Act), allowing the ANAO full access to the information gathering powers under the Act. The ANAO's review provides limited assurance and was undertaken in accordance with the applicable Auditing Standards. The ANAO's review

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9 For example, Defence project risk management records can be managed in spreadsheets, where the risk to the completeness and accuracy of records is too high to be included within the scope of the review.

10 Joint Committee of Public Accounts and Audit, Parliament of the Commonwealth of Australia, *Report 473: Defence Major Projects Report (2016–17)*, (2018), Recommendation 2, p. vii.

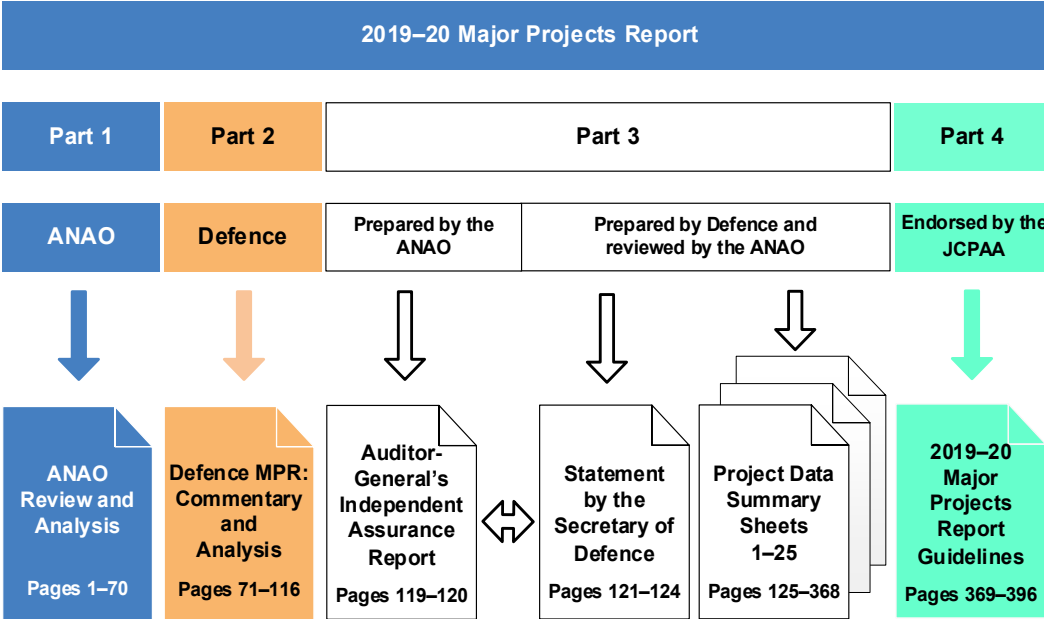
included an assessment of Defence’s systems and controls, including the governance and oversight in place, to ensure appropriate project management. The ANAO also sought representations and confirmations from Defence senior management and industry (through Defence) in relation to the status of the Major Projects in this report.

Report structure

16. The report is organised into four parts:
- **Part 1** comprises the ANAO’s review and analysis (pp. 1–70);
  - **Part 2** comprises Defence’s commentary, analysis and appendices (not included within the scope of the *Independent Assurance Report* by the Auditor-General) (pp. 71–116);
  - **Part 3** incorporates the *Independent Assurance Report* by the Auditor-General, the *Statement by the Secretary of Defence*, and the PDSSs prepared by Defence as part of the assurance review process (pp. 117–368); and
  - **Part 4** reproduces the *2018–19 Major Projects Report Guidelines* endorsed by the JCPAA, which provide the criteria for the compilation of PDSSs by Defence (pp. 369–396).

Figure 1, below, depicts the four parts of this report.

Figure 1: 2019–20 Report structure



Note: To assist in conducting inter-report analysis, the presentation of data in the PDSSs remains largely consistent and comparable with the 2018–19 MPR.

## Project Data Summary Sheets

17. The PDSSs include unclassified information on project performance, prepared by Defence.<sup>11</sup> As projects generally appear in the MPR for multiple years, changes to the PDSS from the previous year are depicted in bold orange text in the PDSS.

18. Each PDSS comprises:

- Project Header: including name; capability and acquisition type; Capability Manager; approval dates; total approved and in-year budgets; stage; complexity; and an image;
- Section 1—Project Summary: including description; current status including financial assurance and contingency statement; and context, including background, uniqueness, major risks and issues, and other current sub-projects;
- Section 2—Financial Performance: including budgets and expenditure; variances; and major contracts in place (in addition to quantities delivered as at 30 June 2020);
- Section 3—Schedule Performance: providing information on design development; test and evaluation; and forecasts and achievements against key project milestones, including Initial Materiel Release (IMR), Final Materiel Release (FMR)<sup>12</sup>, Initial Operational Capability (IOC) and Final Operational Capability (FOC)<sup>13</sup>;
- Section 4—Materiel Capability Delivery Performance: provides a summary of Defence's assessment of its expected delivery of key capabilities, the extent to which milestones were achieved (particularly where caveats are placed on the Capability Manager's declaration of significant milestones), and a description of the constitution of each key milestone;
- Section 5—Major Risks and Issues: outlines the major risks and issues of the project and remedial actions undertaken for each;
- Section 6—Project Maturity: provides a summary of the project's maturity, as defined by Defence<sup>14</sup>, and a comparison against the benchmark score;
- Section 7—Lessons Learned: outlines the key lessons that have been learned at the project level (further information on lessons learned by Defence is included in Defence's Appendix 6 in **Part 2** of this report); and
- Section 8—Project Line Management: details current project management responsibilities within Defence.

11 The MPR Guidelines provide that data of a classified nature is to be prepared in such a way as to allow for unclassified publication.

12 IMR and FMR are milestones that Defence utilises to mark the completion and release of acquisition project supplies required to support the achievement of IOC and FOC respectively. They are defined in the relevant MAA (Materiel Acquisition Agreement). See Department of Defence, Defence Materiel Standard Procedure (Project Management) DMSP (PROJ) 11-0-008, *Initial Materiel Release And Final Materiel Release Across The Project Lifecycle*, Defence, Canberra, 2013, p. 2. See also the Glossary at p. ix of this report.

13 Initial Operational Capability is the capability state relating to the in-service realisation of the first subset of a capability system that can be employed operationally. Final Operational Capability is the capability state relating to the in-service realisation of the final subset of a capability system that can be employed operationally. Declaration of IOC and FOC is made by the Capability Manager, supported by the results of operational test and evaluation and declaration by the Delivery Group(s) that the fundamental inputs to capability have been delivered. See Defence's Appendix 4 in **Part 2** of this report.

14 The project maturity framework — outlined in the Department of Defence's CASG Procedure (PM) 001 – *Project Maturity Scores*, Defence, Canberra, 2020 — is a methodology used to quantify the maturity of projects as they progress through the acquisition life cycle. See further explanation in paragraphs 1.69–1.72 of this report.

## The role of the Joint Committee of Public Accounts and Audit

19. The JCPAA has taken an active role in the development and review of the MPR program. Each year, the Committee considers the draft Guidelines, incorporating the selection of projects for review, and provides the Committee's views in relation to the Guidelines' content and development, prior to their endorsement. Following endorsement by the Committee, the Guidelines provide the criteria for Defence's preparation of PDSSs for ANAO review. The main changes to the MPR Guidelines have tended to follow on from the JCPAA's recommendations.<sup>15</sup>

20. The main change to the MPR Guidelines this year was amending the entry criteria to include the Future Subs project.<sup>16</sup> This was in response to the JCPAA's interest in including major naval shipbuilding projects in the MPR due to their large size and complexity.

## Overall outcomes

### Statement by the Secretary of Defence

21. The *Statement by the Secretary of Defence* was signed on 20 November 2020. The Secretary's statement provides his opinion that the PDSSs for the 25 selected projects 'comply in all material respects with the Guidelines and reflect the status of the projects as at 30 June 2020'.

22. In addition, the *Statement by the Secretary of Defence* details significant events occurring post 30 June 2020, which materially impact the projects included in the report, and which should be read in conjunction with the individual PDSSs. These include: Joint Strike Fighter, Future Subs, Combat Recon. Vehicles, P-8A Poseidon, MRH90 Helicopters, Hawkei, Repl Replenishment Ships, Battlefield Command System, Battle Comm. Sys. (Land) 2B, Collins Comms and EW, Pacific Patrol Boat Repl, Night Fighting Equip Repl, Maritime Comms, and ANZAC Air Search Radar Repl.

23. The 2019–20 MPR Guidelines require Defence to report in the *Statement by the Secretary of Defence* on projects which have been removed from the MPR which still have outstanding caveats, significant remaining materiel capability or milestones to be delivered. Defence has reported on outstanding caveats in the 2019–20 *Statement by the Secretary of Defence*.

### Conclusion by the Auditor-General

24. The Auditor-General has concluded in the *Independent Assurance Report* for 2019–20 that 'nothing has come to my attention that causes me to believe that the information in the 25 Project Data Summary Sheets in **Part 3** (PDSSs) and the *Statement by the Secretary of Defence*, excluding the forecast information, has not been prepared in all material respects in accordance with the 2019–20 *Major Projects Report Guidelines* (the Guidelines), as endorsed by the Joint Committee of Public Accounts and Audit.'

15 Under subsection 8(1) of the legislation establishing the JCPAA, the *Public Accounts and Audit Committee Act 1951*, one of the duties of the Committee is to 'examine all reports of the Auditor-General (including reports of the results of performance audits) that are tabled in each House of the Parliament' and 'report to both Houses of the Parliament, with any comment it thinks fit, on any items or matters in those reports, or any circumstances connected with them, that the Committee thinks should be drawn to the attention of the Parliament'.

16 While still in the design phase and not yet having received second pass government approval, the Future Submarine project has nonetheless incurred significant expenditure of public money. See Auditor-General Report No.22 2019–20 *Future Submarine Program—Transition to Design*.

## Key observations from the review

25. The ANAO's review includes Defence's project management and reporting arrangements contributing to the overall governance of Major Projects. The ANAO has made observations regarding the following areas:

### *Status of JCPAA Recommendations and Requests*

- Following a JCPAA recommendation made in September 2018<sup>17</sup>, Defence advised the Committee in May 2020 that Predict! will be mandated as the risk management system.<sup>18</sup> Defence advised the ANAO in October 2020 that there have been no updates to Defence policy to reflect that Predict! is now the mandated risk management tool. An update to Defence's policy is expected in May 2021 (see paragraphs 1.66 to 1.68).
- Following JCPAA recommendations made in May 2016 and October 2017<sup>19</sup>, Defence considered updates to the Project Maturity Score policy, but did not implement changes. Defence advised the ANAO in August 2020 that the Project Maturity Score will no longer be required as an input to the management of project performance. Defence further advised that an alternative to replace the Project Maturity Score in the PDSS will not be implemented. Therefore project maturity will not be reported in future MPRs (see paragraphs 1.71 to 1.72).
- Following JCPAA recommendations made in May 2014 and May 2016<sup>20</sup>, Defence is yet to implement a system of materiel capability delivery performance/scope reporting, with a robust methodology applicable to materiel acquisition (see paragraphs 2.54 to 2.59).
- Following a JCPAA request made in 2018<sup>21</sup> 'on how Defence major project cost variations and the costs of retaining project staff over time might be reported annually in future Major Projects Reports,' Defence advised that it is not yet in a position to provide the staff cost component of projects and its systems are not capable of calculating the cost of retaining project staff over time (see paragraph 1.51 and paragraphs 1.53 to 1.56).

### *Status of Auditor-General Report Recommendations*

- In July 2020 Defence closed both recommendations from Auditor-General Report No. 31 2018–19 *Defence's Management of its Projects of Concern* (see paragraphs 1.15 to 1.16).

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17 Joint Committee of Public Accounts and Audit, Parliament of the Commonwealth of Australia, *Report 473: Defence Major Projects Report (2016–17)*, (2018), List of Recommendations, p. vii.

18 Department of Defence, written supplementary submission 7 to the Joint Committee of Public Accounts and Audit, Inquiry into the 2018–19 Major Projects Report and Future Submarines Project – Transition to Design, p. 11.

19 Joint Committee of Public Accounts and Audit, Parliament of the Commonwealth of Australia, *Report 458: Defence Major Projects Report (2014–15)*, (2016), Recommendation 3, p. 50.

Joint Committee of Public Accounts and Audit, Parliament of the Commonwealth of Australia, *Report 468: Defence Major Projects Report (2015–16)*, (2017), Recommendation 2, p. vii.

20 Joint Committee of Public Accounts and Audit, Parliament of the Commonwealth of Australia, *Report 442: Inquiry into the 2012–13 Defence Materiel Organisation Major Projects Report*, (2014), pp. 37–39.

Joint Committee of Public Accounts and Audit, Parliament of the Commonwealth of Australia, *Report 458: Defence Major Projects Report (2014–15)*, (2016), pp. 48–49.

21 The reporting of cost variations was also raised at the JCPAA's public hearing into the 2016–17 MPR on 23 March 2018 and at estimates hearings of the Finance and Public Administration Legislation Committee on 27 February 2018.



- Defence closed the recommendation from Auditor-General Report No. 3 2019–20 *Defence's Quarterly Performance Report on Acquisition and Sustainment* in March 2020 (see paragraphs 1.18 to 1.19).

### *Defence Acquisition Governance*

- The importance of capturing Government decisions in internal Defence documentation and ensuring that Materiel Acquisition Agreements are appropriately aligned with these decisions (see paragraphs 1.23 to 1.28).
- Defence's implementation of the Smart Buyer Framework to support strategic decision making in the acquisition of major projects. The framework was not utilised at the Second Pass government approval stage for projects in the current MPR (see paragraphs 1.29 to 1.30).
- Defence has advised that it is transitioning to a different reporting system for reporting on the status of acquisition projects from August 2020 (see paragraphs 1.31 to 1.33).
- Projects' use of contingency funds (see paragraph 1.45). One project in the MPR, MRH90 Helicopters, committed contingency funds of \$26.3 million in 2019–20 for supportability and performance risks.
- The status of CASG's Risk Management Reform Program (initiated by Deputy Secretary CASG in 2017) and establishment of the CASG Risk Management Framework (see paragraphs 1.59 to 1.62).
- A number of projects had not fully met the requirements of Defence's Project Risk Management Manual Version 2.5 (PRMM V2.5) (see paragraph 1.64).
- Defence updated its policy on Lessons Learned in May 2020. Compliance is not expected until May 2021 (see paragraphs 1.73 to 1.75).
- Defence has not defined, in its internal policies and procedures, the terms 'caveat' or 'deficiency' relating to the declaration of significant capability milestones. The ANAO has observed use of these terms by Defence to represent exceptions to the achievement of significant milestones (see paragraphs 1.76 to 1.80).

## **ANAO's analysis of project performance**

26. In addition to its limited assurance review, the ANAO has undertaken an analysis of key elements of the Defence PDSSs—relating to cost, schedule, progress towards delivery of required capability, project maturity, risks and issues, and longitudinal analysis across these key elements of projects.

27. Table 2 provides: summary data on Defence's progress toward delivering the capabilities for the Major Projects covered in this report; and compares current data against that reported in previous editions of the MPR. This section also contains a summary analysis of the three principal components of project performance: cost, schedule and capability.

**Table 2: Summary longitudinal analysis<sup>1</sup>**

	2017–18 MPR	2018–19 MPR	2019–20 MPR
Number of Projects	26	26	25
Total Approved Budget at 30 June	\$59.4 billion	\$64.1 billion	\$78.7 billion
Total Approved Budget at final Second Pass Approval	\$50.2 billion	\$53.9 billion	\$68.9 billion
Total Expenditure Against Total Approved Budget	\$32.4 billion (54.5%)	\$36.3 billion (56.6%)	\$38.9 billion (49.4%)
Total In-year Expenditure Against In-year Budget	\$4.6 billion (98.6%)	\$4.8 billion (93.4%)	\$5.7 billion (92.5%)
Total Budget Variation since initial Second Pass Approval <sup>2</sup>	\$23.0 billion (38.7%)	\$24.4 billion (38.0%)	\$24.2 billion (30.7%)
Total Budget Variation since final Second Pass Approval <sup>3</sup>	\$9.2 billion (15.5%)	\$10.2 billion (15.9%)	\$9.8 billion (12.5%)
In-year Approved Budget Variation	-\$0.3 billion (-0.5%)	\$1.2 billion (1.9%)	\$0.1 billion (0.1%)
Total Schedule Slippage <sup>4</sup>	771 months (31%)	651 months (25%)	507 months (21%)
Average Schedule Slippage across Projects <sup>4a</sup>	31 months	25 months	22 months
In-year Schedule Slippage	103 months (4%)	92 months (4%)	68 months (3%)
Total Project Maturity <sup>5</sup>	1484 / 1820 (82%)	1485 / 1820 (82%)	1301 / 1750 (74%)
Total Reported Risks and Issues <sup>6, 7</sup>	138	138	142
Expected Capability (Defence Reporting) <sup>8</sup>			
• High level of confidence of delivery (Green)	98%	98%	98%
• Under threat, considered manageable (Amber)	2%	2%	2%
• Unlikely to be met (Red)	0%	0% <sup>9</sup>	0% <sup>9</sup>

Refer to paragraphs 26 to 41 in **Part 1** of this report.

Note 1: The data for the 25 Major Projects in the 2019–20 MPR compares the data from projects in the 2018–19 MPR and 2017–18 MPR. The Major Projects included within each MPR are based on entry and exit criteria in the Guidelines, which have been included in **Part 4** of this report. The entry and exit of projects should be considered when comparing data across years.

Note 2: Where a project has multiple Second Pass Approvals, the MPR has historically reported budget variations from the initial Second Pass Approval. The figures in this row are consistent with prior year reporting. See Table 3 for a breakdown of the major components of this variance, and Table 7 for all real variations.

Note 3: Where a project has multiple Second Pass Approvals, the budget at Second Pass Approval reported in the Header refers to the total budget as at the final Second Pass Approval. The figures in this row use this methodology.

Note 4: Slippage refers to a delay in the current forecast date compared to the original government approved date of FOC. Slippage can occur due to late delivery, increases in scope or at times can be a deliberate management decision. In 2019–20, these figures have been adjusted to exclude delays to a project's schedule that do not result in slippage past the original government approved date, and to exclude schedule reductions over the life of the project. However, paragraph 2.40 reports total schedule reductions over the life of the projects.

Note 4a: As shown in Table 4 below and Table 10 on p. 66 of this report, for the fourteen 2019–20 major projects which have experienced slippage, the range is 1 to 108 months of total slippage.

Note 5: The figures represent the total of the reported maturity scores divided by the total benchmark maturity score, in the PDSSs across all projects.

Note 6: The grey section of the table is excluded from the scope of the ANAO's *priority assurance review*, due to a lack of systems from which to obtain complete and accurate evidence in a sufficiently timely manner to facilitate the review.

Note 7: The figures represent the combined number of open 'high' and 'extreme' risks and issues reported in the PDSSs across all projects. Risks and issues may be aggregated at a strategic level.

Note 8: These figures represent the average predicted capability delivery across all of the Major Projects. This method reduces the effect of any individual project's size on the aggregate figure. Previously, these figures were calculated based on the number of distinct capability measures defined by each project and therefore projects with more capability measures had more of an effect on the aggregate figure.

Note 9: Defence advised in these years that AWD Ships would not deliver one element of capability at FOC (which equated to approximately one per cent). However, across all the Major Projects this percentage rounded to zero per cent.

## Cost

28. Cost management is an ongoing process in Defence's administration of the Major Projects. While all projects reported that they could continue to operate within the total approved budget of \$78.7 billion, the MRH90 Helicopters project was required to draw upon contingency funds to complete project activities.

29. The approved budget for Major Projects included in this MPR has increased by \$24.2 billion (30.7 per cent) since initial Second Pass Approval. Budget variations greater than \$500 million are detailed in Table 3, below.<sup>22</sup> However, as the MPR predominantly focusses on the approved capital budget for acquisition, the ongoing costs of Project Offices<sup>23</sup>, training, replacement capability, etc., are not reported here.

**Table 3: Budget variation over \$500m post initial Second Pass Approval by variation type<sup>1,2</sup>**

Project	Variation Type	Explanation	Year	Amount \$b
Scope Increases				<b>14.1</b>
MRH90 Helicopters		34 additional aircraft at Phase 4/6 Second Pass Approval	2005–06	2.3
Joint Strike Fighter		58 additional aircraft at Stage 2 Second Pass Approval	2013–14	10.5
P-8A Poseidon		Four additional aircraft	2015–16	1.3
Real Cost and other Increases				<b>1.8</b>
AWD Ships		Real Cost Increase of \$1.2b offset by \$0.1b transfer for facilities in 2014	2013–14 and 2015–16	1.1
Overlander Medium/Heavy		Project supplementation <sup>3</sup> (\$684.2m) and additional vehicles, trailers and equipment (\$28.0m) at Revised Second Pass Approval	2013–14	0.7
Other budget movements				<b>1.2</b>
Other	Scope increase/budget transfers (net)	Other scope changes and transfers	Various	1.2
Price Indexation – materials and labour (net) (to July 2010) <sup>4</sup>				2.3
Exchange Variation – foreign exchange (net) (to 30 June 2020)				5.0
<b>Total</b>				<b>24.2<sup>5</sup></b>

Note 1: For the variations related to all projects and their value, refer to Table 7 of this report. For the breakdown of in-year variation, refer to Table 8 of this report.

<sup>22</sup> Individual PDSSs also report on budget variations.

<sup>23</sup> The JCPAA requested in May 2018 that the ANAO report back to the Committee on how Defence Major Projects cost variations and the costs of retaining project staff over time might be reported in future MPRs. See paragraphs 1.53 to 1.56 for the outcomes of this consideration.

Note 2: For projects with multiple Second Pass Approvals, this table shows variations from the initial approval.

Note 3: Defence has advised that 'project supplementation' is a unique term used to describe the approvals history of this project as follows: 'The original amount of \$2549.2, was the Government decision to split Phase 3 into Phase 3A and 3B. In 2011, Government approved Second Pass approval of Phase 3A and the 'Interim Pass' Government approval for Phase 3B. The decision to grant Phase 3B 'Interim Pass' was to allow greater bargaining power for Defence while negotiating Phase 3A. Phase 3B was always going to return to Government for formal Second Pass approval, which occurred in July 2013, once contract negotiations were complete.'

Note 4: Prior to 1 July 2010, projects were periodically supplemented for price indexation, whereas the allocation for price indexation is now provided for on an out-turned basis at Second Pass Approval.

Note 5: Figures do not add precisely due to rounding.

Source: ANAO analysis of the 2019–20 PDSSs.

## Schedule

30. Delivering Major Projects on schedule continues to present challenges for Defence, affecting when the capability is made available for operational release and deployment by the Australian Defence Force, as well as the cost of delivery.

31. The total schedule slippage for the 25 selected Major Projects, as at 30 June 2020, was 507 months when compared to the initial schedule.<sup>24</sup> This represents a 21 per cent increase since Second Pass Approval. Across MPR projects that have experienced slippage (14 of 23 projects with approved FOC dates<sup>25</sup>), the average slippage is 36.2 months (3.0 years). Table 4 below includes details of in-year and total schedule slippage by project. The table shows an increase of 68 months of in-year slippage during 2019–20.

32. The total slippage of 507 months in 2019–20 is 144 months lower than the total in 2018–19 of 651 months. This is due to:

- the exclusion of projects which have exited the MPR (LHD Ships, Additional MRTT, ANZAC ASMD 2B, HATS, Battle Comm. Sys. (Land) 2A, and LHD Landing Craft) removing 218 months of slippage from the total reported in 2018–19 (see Table 5);
- a reduction of 6 months of slippage due to the Collins Comms and EW project recovering this slippage in 2019–20;
- the addition of 68 months of in-year slippage described above; and
- the Battlefield Command System project adding 12 months of slippage to the total of 507 months. The slippage occurred prior to the project entering the MPR in 2019–20.

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24 As noted in Note 4 of Table 2, slippage refers to a delay in the current forecast date compared to the original government approved date of FOC. These figures exclude delays to a project's schedule that do not result in slippage past the original government approved date and schedule reductions over the life of the project. In November 2017, Defence raised with the ANAO, for the purposes of calculating total schedule slippage, the feasibility of identifying what the proportion of slippage represented by the expanded scope of projects is (for example with respect to the P-8A Poseidon and Collins Comms and EW projects). See Note 2 of Figure 8 of this report which shows that the slippage attributable to increases in project scope is 69 months.

25 Future Frigates and Future Subs are excluded as these projects do not yet have FOC milestones approved by Government.

**Table 4: Schedule slippage from original planned Final Operational Capability <sup>1</sup>**

Project	In-year (months)	Total (months)	Project	In-year (months)	Total (months)
Joint Strike Fighter <sup>2</sup>	0	0	MQ-4C Triton <sup>2</sup>	43	43
AWD Ships	0	37	Repl Replenishment Ships <sup>2</sup>	0	0
Future Frigates <sup>2, 3</sup>	N/A	N/A	CMATS <sup>2</sup>	6	34
Future Subs <sup>3</sup>	N/A	N/A	Battlefield Command System <sup>2</sup>	4	16
Combat Recon. Vehicles	0	0	Battle Comm. Sys. (Land) 2B	0	24
P-8A Poseidon	0	29	Collins Comms and EW	0	30
MRH90 Helicopters	0	89	Pacific Patrol Boat Repl	0	2
Offshore Patrol Vessel	0	0	Night Fighting Equip Repl	0	0
Growler	0	1	Collins R&S	0	108
Overlander Medium/Heavy	0	0	Maritime Comms	3	16
MH-60R Seahawk	0	0	ANZAC Air Search Radar Repl	0	0
Hawkei <sup>2</sup>	0	0	UHF SATCOM <sup>2</sup>	0	42
Battlefield Airlifter <sup>2</sup>	12	36			
<b>Total (months)</b>				<b>68</b>	<b>507</b>
<b>Total (%)</b>				<b>3</b>	<b>21</b>

Note 1: Refer to footnote 24.

Note 2: These projects have been identified by Defence as Projects of Interest (see paragraph 1.21 in **Part 1**).

Note 3: These projects' FOC milestones are yet to be approved by Government.

Source: ANAO analysis of the 2019–20 PDSSs.

33. Platform availability has contributed to the slippage experienced within some projects. For example, Maritime Comms and Collins R&S have been impacted by changes to docking schedules of the Anzac Class frigates and Collins Class submarines respectively. Significant delays have also been experienced by those projects with the most developmental content: AWD Ships, MRH90 Helicopters, CMATS, MQ-4C Triton, and Battle Comm. Sys. (Land) 2B.

34. Table 5, below, provides details of total schedule slippage by project, for projects which have exited the MPR. Compared to the 507 months total schedule slippage for the current 23 Major Projects<sup>26</sup>, the 27 projects which have exited the MPR<sup>27</sup> have reported accumulated schedule slippage of 1146 months, as at their respective exit dates. Table 5 indicates that schedule slippage for projects which have exited the MPR was more pronounced in projects with the most developmental content.

26 Future Frigates and Future Subs are excluded from this analysis as they do not yet have FOC milestones approved by Government.

27 Hornet Refurb and BMS are excluded from this analysis as they did not have FOC milestones approved by Government.

**Table 5: Schedule slippage for projects which have exited the MPR <sup>1</sup>**

Project	Total (months)	Project	Total (months)
Wedgetail (Developmental)	77	HF Modernisation (Developmental)	136
Super Hornet (MOTS)	0	Armadales (Australianised MOTS)	43
LHD Ships (Australianised MOTS)	37	HATS (Australianised COTS)	0
Hornet Upgrade (Australianised MOTS)	39	Collins RCS (Australianised MOTS)	107
ARH Tiger Helicopters (Australianised MOTS)	82	Battle Comm. Sys. (Land) 2A (MOTS)	39
C-17 Heavy Airlift (MOTS)	0	Hw Torpedo (MOTS)	61
Air to Air Refuel (Developmental)	64	SM-2 Missile (Australianised MOTS)	26
FFG Upgrade (Developmental)	132	ANZAC ASMD 2A (Australianised MOTS)	80
Bushmaster Vehicles (Australianised MOTS)	1	155mm Howitzer (MOTS)	7
Overlander Light (Australianised MOTS)	4	Stand Off Weapon (Australianised MOTS)	37
Additional MRTT (Australianised MOTS)	21	Battle Comm. Sys. (Australianised MOTS)	24
Next Gen Satellite <sup>2</sup> (MOTS)	0	C-RAM (MOTS)	2
ANZAC ASMD 2B (Developmental)	75	LHD Landing Craft (Australianised MOTS)	46
Additional Chinook (MOTS)	6		
<b>Total</b>			<b>1146</b>

Note 1: The Hornet Refurb and Battle Management System (BMS) projects are not included in this table as they did not have FOC milestones.

Note 2: Next Gen Satellite shows slippage in Figure 9, which related to the final capability milestones at the time. By the time it reached FOC, a new final capability milestone had been introduced and slippage was reduced.

Source: PDSSs in Major Projects Reports and ANAO analysis.

35. Additional ANAO analysis (refer to Figure 8, on page 59) has compared project slippage against the Defence classification of projects as Military Off-The-Shelf (MOTS), Australianised MOTS or developmental. These classifications are a general indicator of the difficulty associated with the procurement process.

36. Figure 9 (on page 60) provides analysis of projects either completed, or removed from the MPR review, and shows that a focus on MOTS<sup>28</sup> acquisitions has assisted in reducing schedule slippage. Prima facie, the more developmental in nature a project is, the more likely it will result in a greater degree of project slippage. Figure 9 was requested by the JCPAA in May 2014.<sup>29</sup>

37. Longitudinal analysis indicates that while the reasons for schedule slippage vary, it primarily reflects the underestimation of both the scope and complexity of work, particularly for Australianised MOTS and developmental projects (see paragraphs 2.27 to 2.34).

28 Off-The-Shelf: Systems, hardware or software that already exists or is confirmed in service for an equivalent purpose and requires no, or minimal change. Sometimes expressed as commercial off-the-shelf or military off-the-shelf. Department of Defence, *Defence Test and Evaluation Policy*, Defence, Canberra, 2019, Annex 1A, Definitions, p. ii.

29 Joint Committee of Public Accounts and Audit, Parliament of the Commonwealth of Australia, *Report 442: Inquiry into the 2012–13 Defence Materiel Organisation Major Projects Report*, (2014), Recommendation 5, p. 31.

## Capability

38. The third principal component of project performance examined in this report is progress towards the delivery of capability required by government. While the assessment of expected capability delivery by Defence is outside the scope of the Auditor-General's formal review conclusion, it is included in the analysis to provide an overall perspective of the three principal components of project performance.

39. The Defence PDSSs report that 19 projects in this year's report will deliver all of their key capability requirements. Defence's assessment indicates that some elements of the capability required may be 'under threat', but the risk is assessed as 'manageable'. The five project offices experiencing challenges with expected capability delivery (2018–19: five) are Joint Strike Fighter, MRH90 Helicopters, Hawkei, Battlefield Command System and Battlefield Airlifter. One project office (AWD Ships) reports that it is unable to deliver all of the required capability by FOC.

40. Table 6, below, summarises expected capability delivery as at 30 June 2020, as reported by Defence.

**Table 6: Capability delivery**

Expected Capability (Defence Reporting)	2017–18 MPR (%)	2018–19 MPR (%)	2019–20 MPR (%)
High Confidence (Green)	98	98	98
Under Threat, considered manageable (Amber)	2	2	2
Unlikely (Red)	0	0 <sup>1</sup>	0 <sup>1</sup>
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

Note 1: Defence advised in these years that AWD Ships would not deliver one element of capability at FOC (which equates to approximately one per cent of elements required). However, across all the Major Projects this percentage rounds to zero.

Source: PDSSs in Major Projects Reports and ANAO analysis.

41. In addition to reporting on expected capability delivery, Defence has continued the practice of including in the PDSSs declassified information on contractual remedies for projects, including stop payments and liquidated damages. During 2019–20, Combat Recon. Vehicles, Hawkei and UHF SATCOM had negotiated contractual remedies involving stop payments or liquidated damages. Prior settlements for projects within this report related to MRH90 Helicopters, Hawkei, Pacific Patrol Boat Repl, Maritime Comms, and UHF SATCOM.

## Impact of COVID-19 on the Major Projects

42. Sixteen of the 25 projects have reported experiencing an impact as a result of the COVID-19 pandemic in their PDSSs. The pandemic has seen projects reporting impacts to cost and schedule.

## Cost

43. Six projects reported an impact on project budget as a result of the COVID-19 pandemic. A further two projects highlighted an impact to the budget as an emerging issue. Of the six projects that have reported impact to the budget, four experienced an underspend, citing varying reasons for this (delay to training and support, overseas suppliers, shipyard closures and international travel restrictions). Two projects experienced an overspend – one due to

accelerated payment terms and the other citing FOREX losses. The remaining 19 projects did not report an impact to the project budget.

### **Schedule**

44. Fifteen projects reported an impact on scheduling as a result of the COVID-19 pandemic, relating to:

- i) supplier disruption (supplier production and/or shipping delays);
- ii) workforce limitations – travel (specialists and crew were due to travel both interstate and from other countries to work with/on the projects); and/or
- iii) contractor delays (scope, delivery and certification delays).

45. Some projects identified multiple impacts across these three areas. Ten projects reported nil impacts to scheduling.

### **Capability**

46. No projects reported an impact relating to capability.

47. Further information on COVID-19 impacts is reported in the *Statement by the Secretary of Defence*.



# 1. The Major Projects Review

1.1 This chapter provides the Australian National Audit Office's (ANAO) overview of the scope and approach adopted for its limited assurance review of the 25 Project Data Summary Sheets (PDSSs) prepared by the Department of Defence (Defence). The chapter also includes information and commentary on developments in Defence's acquisition governance processes, based on the ANAO's review.

## Review scope and approach

1.2 In 2012 the Parliament's Joint Committee of Public Accounts and Audit (JCPAA) identified the ANAO's review of Defence PDSSs as a **priority assurance review**, under subsection 19A(5) of the *Auditor-General Act 1997* (the Act). This provided the ANAO with full access to the information gathering powers under the Act. The ANAO's review of the individual project PDSSs, which are reproduced in **Part 3** of the Major Projects Report (MPR), was conducted in accordance with the auditing standards set by the Auditor-General under section 24 of the Act through its incorporation of the Australian Standard on Assurance Engagements (ASAE) 3000 *Assurance Engagements Other than Audits or Reviews of Historical Financial Information*, issued by the Australian Auditing and Assurance Standards Board.

1.3 The following forecast information is excluded from the scope of the ANAO's review: capability delivery, risks and issues, and forecast dates. These exclusions are due to the lack of Defence systems from which to provide complete and accurate evidence<sup>30</sup>, in a sufficiently timely manner to complete the review. Accordingly, the *Independent Assurance Report* by the Auditor-General does not provide any assurance in relation to this information. However, material inconsistencies identified in relation to this information are required to be considered in forming the conclusion.

1.4 The ANAO's work is appropriate for the purpose of providing an *Independent Assurance Report* in accordance with the *ANAO Auditing Standards*. However, the review of individual PDSSs is based on a limited assurance approach and is not as extensive as individual performance and financial statement audits conducted by the ANAO, in terms of the nature and scope of issues covered, and the extent to which evidence is required by the ANAO. Consequently, the level of assurance provided by this review, in relation to the 25 major Defence equipment acquisition projects (Major Projects), is less than that provided by the ANAO's program of performance and financial statement audits.

1.5 Separately, the ANAO reviews: developments in Defence's acquisition governance processes (information and commentary on governance issues appears in this chapter); and undertakes analysis of key elements of the PDSSs (information and commentary on systemic issues and longitudinal analysis for the 25 projects reviewed appears in the next chapter).

30 Joint Committee of Public Accounts and Audit, Parliament of the Commonwealth of Australia, *Report 473: Defence Major Projects Report (2016–17)*, (2018), Recommendation 2, p. vii, which recommended transitioning to risk registers with better version control measures than spreadsheets. Defence is transitioning its risk management system to Predict! for all projects in this report, the implementation of which will be reviewed by the ANAO in the next MPR.

1.6 The ANAO's review was conducted in accordance with the *ANAO Auditing Standards* at a cost to the ANAO of approximately \$2.0 million.<sup>31</sup>

## Review methodology

1.7 The ANAO's review of the information presented in the individual Defence PDSSs included:

- examination and assessment of the governance and oversight in place to ensure appropriate project management;
- an assessment of the systems and controls that support project financial management, risk management and project status reporting, within Defence;
- an examination of each PDSS and the documents and information relevant to them;
- a review of relevant processes and procedures used by Defence in the preparation of the PDSSs;
- discussions with persons responsible for the preparation of the PDSSs and management of the projects;
- analysis of project information, for example, cost and schedule variances;
- taking account of industry contractor comments provided on draft PDSS information;
- assessing the assurance by Defence managers attesting to the accuracy and completeness of the PDSSs;
- examination of the representations by the Chief Finance Officer supporting the project financial assurance and contingency statements;
- examination of confirmations, provided by the Capability Managers, relating to each project's progress toward Initial Materiel Release (IMR), Final Materiel Release (FMR), Initial Operational Capability (IOC) and Final Operational Capability (FOC); and
- examination of the *Statement by the Secretary of Defence*, including significant events occurring post 30 June, and management representations by the Secretary of Defence.

1.8 The ANAO's review of PDSSs also focused on project management and reporting arrangements contributing to the overall governance of the Major Projects. The ANAO considered:

- developments in acquisition governance (see paragraphs 1.10 to 1.33, below);
- the financial framework, particularly as it applies to the project financial assurance and contingency statements, and Defence's advice that project financial reporting during 2019–20 would be prepared on the same basis as project approvals and expenditure represented in the Portfolio Budget Statements and the Defence Annual Report (i.e. on a cash basis) (see Section 2 of the PDSSs);
- schedule management and test and evaluation processes (see Section 3 of the PDSSs);
- materiel capability / scope delivery forecast assessments, including Defence statements of the likelihood of delivering key capabilities, particularly where caveats are placed on the Capability Manager's declaration of significant milestones (see Section 4 of the PDSSs);

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31 In 2018–19 Defence reported that its estimated cost of contributing to the MPR was \$2.4 million. Defence has not identified the estimated cost of its contribution to the 2019–20 MPR. See also page 96 at **Part 2** of this report.

- the changes due to Defence's reform of the Defence Enterprise Risk Management Framework, and the completeness and accuracy of major risk and issue data (see Section 5 of the PDSSs);
- the project maturity framework along with its related reporting and the systems in place to support the consistent and accurate application and the provision of this data (see Section 6 of the PDSSs); and
- the impact of acquisition issues on sustainment to ensure the PDSS is a complete and accurate representation of the acquisition project.

1.9 This review informed the ANAO's understanding of the systems and processes supporting the PDSSs for the 2019–20 review period. It also highlighted issues in those systems and processes that warrant attention.

## Acquisition governance

1.10 Consistent with previous years, the ANAO considered Defence's Major Project acquisition governance processes when planning and conducting the review for the 2019–20 MPR. While some of these processes are now established, others continue to mature or require further development to achieve their intended impact.

### *Defence Independent Assurance Reviews*

1.11 The Defence Independent Assurance Review (IAR) process provides the Defence Senior Executive with assurance that projects and products will deliver approved objectives and are prepared to progress to the next stage of activity. These management initiated reviews consider a project's status while sufficient time remains for corrective action to be implemented.<sup>32, 33</sup>

1.12 IARs are intended to commence at project initiation and are usually conducted on an annual basis through to FOC. They are an important input to key acquisition and sustainment decision points or milestones as defined in the Capability Life Cycle.<sup>34</sup>

1.13 Sixteen of the 25 projects included in this report had an Independent Assurance Review conducted during 2019–20<sup>35</sup>, which formed key evidence for the ANAO's review.<sup>36</sup> Defence advised that there was a pause in the conduct of IARs in mid-2020 due to COVID-19.

32 Department of Defence, *Independent Assurance Reviews for Programs, Projects and Products*, Defence, Canberra, 2020, pp. 5 and 12.

33 Although referred to by Defence as 'assurance' reviews, these administrative reviews are not carried out within frameworks issued by the Australian Auditing and Assurance Standards Board.

34 Department of Defence, *Capability Life Cycle Manual (Version 2.0)*, Defence, Canberra, 2020, p. 9.

35 Independent Assurance Reviews were conducted for: Joint Strike Fighter, AWD Ships, P-8A Poseidon, MRH90 Helicopters, Growler, Overlander Medium/Heavy, Hawkei, Battlefield Airlifter, Repl Replenishment Ships, CMATS, Battlefield Command System, Collins Comms and EW, Pacific Patrol Boat Repl, Maritime Comms, ANZAC Air Search Radar Repl, and Night Fighting Equip Repl.

36 IAR processes were also reviewed in two ANAO performance audits of procurements included in this MPR—Offshore Patrol Vessel and Combat Reconnaissance Vehicles: Auditor-General Report No.12 2020–21, *Defence's Procurement of Offshore Patrol Vessels—SEA 1180 Phase 1* included an agreed recommendation that Defence plan the sequencing of IARs undertaken during a platform selection process, to avoid conflicts with other processes and ensure access to all relevant information. See paragraphs 2.16 – 2.22 of that audit report. Auditor-General Report No.18 2020–21, *Defence's Procurement of Combat Reconnaissance Vehicles (LAND 400 Phase 2)* included an agreed recommendation that Defence review the process in place to provide assurance to its senior leadership that agreed IAR recommendations have been implemented appropriately and in a timely manner.

## Projects of Concern

1.14 The Projects of Concern process is intended to focus the attention of the highest levels of government, Defence and industry on remediating problem projects.<sup>37</sup> As at 30 June 2020, one MPR project, MRH90 Helicopters, was a continuing Project of Concern. The project was placed on the list in November 2011 due to contractor performance relating to significant technical issues preventing the achievement of milestones on schedule.<sup>38</sup> The project has progressed the materiel capability delivery relating to the cargo hook, mission troop seats and fast roping and rappelling. There remains an ongoing inability to meet materiel capability delivery milestones and performance criteria to do with the Taipan Gun Mount, aero-medical evacuation equipment and the Common Mission Management System.<sup>39</sup> Final Operational Capability is scheduled for December 2021.

1.15 Auditor-General Report No.31 2018–19, *Defence's Management of its Projects of Concern*, assessed whether the Department of Defence's Projects of Concern regime was effective in managing the recovery of underperforming projects. It concluded that, while the regime is an appropriate mechanism for escalating troubled projects to the attention of senior managers and ministers, Defence was not able to demonstrate the effectiveness of its regime in managing the recovery of underperforming projects. Moreover, the audit observed that the transparency and rigour of the framework's application has declined in recent years. The audit recommended that:

- Recommendation no.1: Defence introduce, as part of its formal policy and procedures, a consistent approach to managing entry to, and exit from, its Projects of Interest and Projects of Concern lists. This should reflect Defence's risk appetite and be made consistent with the new Capability Acquisition and Sustainment Group Risk Model and other, Defence-wide, frameworks for managing risk. To aid transparency, the policy and the list should be made public.
- Recommendation no.2: Defence evaluates its Projects of Concern regime.<sup>40</sup>

1.16 In July 2020 Defence closed both these recommendations, advising that: CASG has developed a consistent approach to entry and exit from the Projects of Interest and Projects of Concern lists and the Projects of Concern list is publicly available; and CASG has evaluated the Projects of Concern regime and has effective assurance mechanisms in place, underpinned by Independent Assurance Reviews.

### Quarterly Performance Report

1.17 The Defence Quarterly Performance Report (QPR) aims to provide senior stakeholders within government and Defence with insight into the delivery of capability to the Australian Defence Force.<sup>41</sup> The report is provided to the Minister for Defence and the Minister for Defence Industry on a quarterly basis.<sup>42</sup>

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37 Department of Defence, *Defence Annual Report 2019–20*, Chapter 7, Asset Management, Defence, Canberra, 2020, p. 153.

38 Issues in the project were discussed in Auditor-General Report No.52 2013–14, *Multi-Role Helicopter Program*.

39 Department of Defence, Quarterly Performance Report June 2020, Defence, Canberra, 2020, pp. 29–30.

40 Auditor-General Report No.31 2018–19, *Defence's Management of its Projects of Concern*, p. 10.

41 Department of Defence, Quarterly Performance Report June 2020, Defence, Canberra, 2020, p. 5.

42 Auditor-General Report No.3 2019–20 *Defence's Quarterly Performance Report on Acquisition and Sustainment*, p. 7.

1.18 In July 2019, the ANAO completed an audit on the effectiveness of the QPR in providing senior stakeholders with accurate and timely information on the status and emerging risks and issues. It found the June 2018 QPR, reviewed by the ANAO, to be largely effective, contained mostly accurate information, and was valued by senior stakeholders.<sup>43</sup> The ANAO recommended that Defence improve the QPR as a tool for senior leaders by reporting on:

- (a) trend performance data for sustainment products; and
- (b) emerging candidates for the Projects/Products of Concern list and Products/Projects of Interest list that have been recommended by an Independent Assurance Review or which are under active consideration by senior management.<sup>44</sup>

1.19 In the course of its review for the 2018–19 MPR, the ANAO observed that Defence's June 2019 QPR reported on both improved and deteriorated performance for both acquisition and sustainment products since the previous QPR. This reflected a change in trend reporting consistent with the agreed ANAO recommendation. The ANAO also observed that Defence's June 2019 QPR reported the emerging candidates for the Projects/Products of Concern list and Products/Projects of Interest list which had been recommended either by an IAR or which were under active consideration. This change was also consistent with the agreed ANAO recommendation.<sup>45</sup> Defence closed this recommendation in March 2020.

1.20 The ANAO examines QPRs as part of the procedures for its limited assurance review of Defence's PDSSs.<sup>46</sup> For the 2019–20 review, the ANAO examined the four QPRs from September 2019 to June 2020.

1.21 The June 2020 QPR identified nine MPR projects as Projects of Interest<sup>47</sup>:

- Joint Strike Fighter—the QPR notes risks to the achievement of IOC in December 2020 due to the impacts of COVID-19, which have included delayed aircraft production, travel restrictions, the postponement of air exercises and the isolation of personnel.<sup>48</sup>
- Future Frigates—due to size, complexity, risk-profile and media interest. The QPR notes that all scheduled activities have been progressing as planned, although some will need to be reassessed in light of COVID-19 restrictions.<sup>49</sup>

43 Auditor-General Report No.3 2019–20 *Defence's Quarterly Performance Report on Acquisition and Sustainment*, pp. 8–9.

44 *ibid.*, p. 11.

45 Auditor-General Report No.19 of 2018–19, 2019–20 *Major Projects Report*, paragraphs 1.20–1.21, p. 23.

46 Similar to the PDSSs, the QPR provides a summary of projects' performance in the areas of cost, schedule and capability. However, there are some differences between the measures used, and the level of detail provided. For example, both the PDSSs and the QPR use a 'traffic light indicator' to reflect materiel capability delivery/scope, but the indicators are defined differently between the two products. In the PDSSs, Amber materiel capability delivery is defined as 'under threat but still considered able to be met', whereas the QPR defines Amber materiel capability delivery/scope as 'major elements of scope about to fail against the baseline'. In addition, the QPR allows for only one indicator to be used in the assessment, i.e. 'all Green', 'all Amber' or 'all Red'. In contrast, the Pie Chart in the PDSSs allows for a breakdown of capability, with individual components assessed as Green, Amber or Red, providing a more detailed assessment (see paragraphs 2.48–2.59).

47 These are Capability Acquisition and Sustainment Group (CASG) acquisition projects that have variances significant enough — in the areas of schedule, cost, and/or capability performance — to warrant attention from senior management. Department of Defence, Quarterly Performance Report June 2020, Defence, Canberra, 2020, p. 34.

48 Department of Defence, Quarterly Performance Report June 2020, Defence, Canberra, 2020, p. 38.

49 *ibid.*, p. 35.

- Hawkei—the QPR notes schedule risks due to COVID-19 which may impact Army’s ability to undertake the full range of operational test and evaluation activities, and operator and maintainer training, required to achieve IOC in December 2020.<sup>50</sup>
- Battlefield Airlifter—Final Operational Capability (FOC) was not met in December 2019 and the QPR notes that ‘residual’ activities remain outstanding, including fleet fitment and certification of Mode 5 Identification Friend or Foe and remediation of the Missile Approach Warning System. Air Force expects to review the capability requirement and advise the Government of a revised capability definition and Final Operational Capability date, no later than December 2020.<sup>51</sup>
- Repl Replenishment Ships (Maritime Operational Support Capability)—the QPR notes delays to delivery of both ships due to COVID-19, which has slowed construction progress and resulted in international travel restrictions, preventing Australian based contractors from travelling to Spain to complete their activities. There is no forecast delay to FOC.<sup>52</sup>
- MQ-4C Triton, due to the United States Navy announcing a production funding suspension for its Triton program until 2023. The suspension will have capability, schedule and cost implications, and potential sustainment cost and capability impacts. The project is undergoing a fundamental review.<sup>53</sup>
- Civil Military Air Traffic Management System (CMATS)—the QPR notes risks to schedule due to execution of design milestones, integration with related projects (procurement of digital radios and surveillance radars), and the ongoing need for Airservices Australia to implement cost saving changes agreed with Defence.<sup>54</sup>
- Battlefield Command System—the QPR notes schedule risks due to vehicle integration issues.<sup>55</sup>
- UHF SATCOM—the QPR notes that software rectification issues require attention.<sup>56, 57</sup>

1.22 These ongoing issues for the Joint Strike Fighter, Future Frigates, Hawkei, Battlefield Airlifter, Repl Replenishment Ships, MQ-4C Triton, CMATS, Battlefield Command System and UHF SATCOM projects align with the results of the ANAO’s review of the PDSSs. Delays to progress have impacted the delivery schedule of Joint Strike Fighter, Battlefield Airlifter, MQ-4C Triton, CMATS and Battlefield Command System during 2019–20<sup>58</sup> (see Table 4, on page 15).

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50 Department of Defence, Quarterly Performance Report June 2020, Defence, Canberra, 2020, p. 45.

51 *ibid.*, pp. 61-62.

52 Department of Defence, Quarterly Performance Report June 2020, Defence, Canberra, 2020, pp. 55-56.

53 *ibid.*, p. 59.

54 *ibid.*, p. 40.

55 Department of Defence, Quarterly Performance Report June 2020, Defence, Canberra, 2020, p. 42.

56 *ibid.*, p. 49.

57 In the March 2019 QPR, the entire JP2008 program was identified as a Program of Interest, which is inclusive of UHF SATCOM. Department of Defence, Quarterly Performance Report March 2019, Defence, Canberra, 2019, p. 27.

58 The FOC dates for these projects slipped in-year by: two months for Joint Strike Fighter, 12 months for Battlefield Airlifter, 43 months for MQ-4C Triton, six months for CMATS and four months for Battlefield Command System.

## *Project Directives and Materiel Acquisition Agreements*

1.23 Project Directives (previously known as Joint Project Directives) state the terms of government approval, reflecting the approved scope and timeframes for activities, responsibilities and resources allocated, and key risks and issues.<sup>59</sup> Project Directives have historically been used to inform internal Defence documentation such as Materiel Acquisition Agreements (MAAs) between Capability Acquisition and Sustainment Group (CASG) and the Service Chiefs.<sup>60, 61</sup> Project Directives had previously been described as a key governance document under the Capability Life Cycle<sup>62</sup>, intended to ensure that all parties in Defence are informed of Government decisions. Defence updated the Capability Life Cycle Manual in June 2020, which no longer refers to Project Directives as a key governance document. Defence has advised the ANAO that Government decisions are recorded in Defence's Capability Lifecycle Management Tool, which records Government decisions in relation to a project. In some cases, the Joint Force Authority may provide a specific documented directive. The ANAO has previously highlighted the importance of ensuring that Project Directives properly reflect the relevant Government decision, and that MAAs are appropriately aligned with the relevant Project Directive.<sup>63</sup>

1.24 Of the five new projects entering the 2019–20 MPR, the Future Frigates and MQ-4C Triton projects advised the ANAO that they had direct access to government approved documentation. The Future Subs, Combat Recon. Vehicles and Battlefield Command System projects advised that they did not have access to Government approvals through the Capability Life Cycle Management Tool. In November 2020, Defence advised the ANAO that 'the internal Cabinet Liaison Services section provides advice to Defence in relation to information pertaining to Government approvals. Where a Project has not been identified as having a need to know, the Project can request access to relevant Cabinet documents via a business case.'

1.25 The Combat Recon. Vehicles achieved Second Pass Approval (Government Approval) in March 2018. Defence proceeded to update the Materiel Acquisition Agreement between CASG and the Capability Manager in May 2019. Key dates listed in the MAA do not align with Government approvals, and Defence has advised the ANAO that it intends to update the MAA to ensure alignment.<sup>64</sup>

1.26 The risk of misalignment or error is reduced if Defence has appropriate access to Government records, such as that previously provided by the Project Directive.

1.27 The ANAO requires access to original approval documents to validate the requirements of projects. At this time, validation based on internal Defence documentation is not always possible.

59 Department of Defence, *Interim Capability Life Cycle Manual*, Defence, Canberra, 2017, pp. 14 and 93.

60 The Project Directive defines the project, in terms of fundamental inputs to capability, together with the resources necessary to deliver the project and is developed in accordance with the parameters agreed by government. Department of Defence, *Interim Capability Life Cycle Manual*, Defence, Canberra, 2017, p. 93.

61 The *Capability Life Cycle Manual* (Version 2.0) does not describe MAAs and instead refers to Product Delivery Agreements (PDAs) (see paragraph 1.28). Projects in this MPR have an approved MAA.

62 Department of Defence, *Interim Capability Life Cycle Manual*, Defence, Canberra, 2017, p. 14 and p. 93.

63 Auditor-General Report No.6 2013–14 *Capability Development Reform*, p. 232.

64 See the Combat Recon. Vehicles PDSS in **Part 3** of this report and Auditor-General Report No.18 2020–21, *Defence's Procurement of Combat Reconnaissance Vehicles (LAND 400 Phase 2)*, paragraphs 4.10 – 4.15.



1.28 First advised by Defence in July 2016<sup>65</sup>, Product Delivery Agreements (PDAs)<sup>66</sup> were to be developed to replace the existing MAAs and Materiel Sustainment Agreements (MSAs). Defence advised the ANAO that this initiative is still in the concept phase and will not apply until a PDA framework is approved and implemented.

### *Smart Buyer Framework*

1.29 The 2015 First Principles Review recommended the construction of a 'smart buyer' framework, with the aim of '[ensuring] Defence can make strategic decisions regarding the most appropriate procurement and contracting methodologies'. Defence has begun to conduct Smart Buyer assessments for acquisition projects at different stages of approval. None of the projects currently in the Major Projects portfolio have been approved under the Smart Buyer processes. The ANAO will continue to report on the outcomes of the First Principles Review and the Smart Buyer framework.

1.30 Defence advised the ANAO that no MPR projects have been considered by the Smart Buyer Framework in 2019–20 as the Smart Buyer Framework is not applicable post Government approval. Defence records indicate that two MPR projects have undergone a Smart Buyer workshop during 2019–20: AIR 8000 Ph. 2 (Battlefield Airlifter) and LAND 200 Ph. 2 (Battlefield Command System). In both cases, the workshops were conducted to remediate project issues, not to initiate an approach to a Gate.<sup>67</sup>

### *Business systems*

1.31 Defence continues to review its business systems with the aim of consolidating processes and systems in order to provide a more manageable system environment. During 2019–20, Defence continued to report on the status of acquisition projects in the Monthly Reporting System (MRS), which provides much of the data for the PDSSs. In August 2020, Defence discontinued the Monthly Reporting System with project reporting now occurring via the Monthly Reporting Module (MRM). Defence advised the ANAO that MRM replicates the functionality of MRS while delivering an updated platform and user interface, and that the Project Performance Report Information Platform (PPRIP) delivers a platform for projects to also conduct monthly reviews of their project and enable raising of risks and actions with line management.

1.32 Defence further advised the ANAO in November 2020 that all 25 of the Major Projects in this report are using the PPRIP.

1.33 As the MRM was implemented in the 2020–21 financial year, the ANAO will review Defence's use of the MRM in the 2020–21 MPR. As the replacement for the MRS, the MRM is a key system of reporting used to support disclosures in Defence's PDSSs.

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65 Auditor-General Report No.40 2016–17 *2015–16 Major Projects Report*, paragraph 1.21, page 21.

66 A PDA is an agreement between the Sponsor and Lead Delivery Group which specifies the scope, resourcing, priorities and performance and preparedness requirements for support of a capability system throughout its life, to support performance measurement. Department of Defence, *Capability Life Cycle Manual* (Version 2.0), Defence, Canberra, 2020, p. 49.

67 AIR 7000 Phase 1B (MQ-4C Triton Remotely Piloted Aircraft System) and SEA 1448 Phase 4B (ANZAC Air Search Radar Replacement) held internal workshops informed by the Smart Buyer Decision Making Framework, but without the mandated independent oversight required by that framework. Smart Buyer workshops were also being held for future tranches and phases of projects in the MPR, including Future Subs.



## Results of the review

1.34 The following sections outline the results of the ANAO's review, which inform the overall conclusion in the *Independent Assurance Report* by the Auditor-General for 2019–20.

### *Financial framework*

1.35 The project financial assurance statements were introduced in the 2011–12 Major Projects Report and have been included within the scope of the *Independent Assurance Report* by the Auditor-General since 2014–15. The contingency statements were introduced for the first time in the 2013–14 report and these describe the use of contingency funding to mitigate project risks. Together, they are aimed at providing greater transparency over projects' financial status.

1.36 A project's total approved budget comprises:

- the allocated budget, which covers the project's approved activities, as indicated in the MAA; and
- the contingency budget, which is set aside for the eventuality of risks occurring and includes unforeseen work that arises within the delivery of the planned scope of work.<sup>68</sup>

1.37 In 2019–20, the ANAO reviewed the financial framework as it applied to managing project budgets and expenditure, including: project financial assurance, contingency, the reporting environment, and reporting cost variations and personnel costs.

### *Project financial assurance statement*

1.38 The project financial assurance statement's objective is to enhance transparency by providing readers with information on each project's financial position (in relation to delivering project capability) and whether there is 'sufficient remaining budget for the project to be completed'.<sup>69</sup>

1.39 As discussed in the 2018–19 MPR (para 1.38), in September and November 2018, due to cost pressures, the Joint Strike Fighter (JSF/F-35) project received government approval to transfer project scope of \$1.5 billion to other phases of the program (none of which have been approved by government). There was no corresponding transfer of funds out of the project budget.<sup>70</sup> Defence has not made any further disclosures of this sort for other projects in this year's PDSSs. The 2019–20 PDSS for the Joint Strike Fighter (found in **Part 3** of this MPR) states that:

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, of the

68 Department of Defence, (PM) 003, *CASG Project Controls Manual*, Acronyms, Abbreviations and Definitions, 2017, p. 8.

69 Joint Committee of Public Accounts and Audit, Parliament of the Commonwealth of Australia, *Report 436: Review of the 2011–12 Defence Materiel Organisation Major Projects Report*, (2013), paragraph 3.4, p. 14.

70 Defence advised the ANAO in November 2019 that scope elements (principally the Engine Maintenance Repair Overhaul and Upgrade facility, worth \$0.08 billion) were brought forward from later phases into the Joint Strike Fighter project without commensurate funding transfer.

capability being delivered, in the broader AIR 6000 program. As the changes have minimal impact on overall delivery schedule of the project, AIR 6000 Phase 2A/B plans for FOC in 2023 remain unchanged.

1.40 The Joint Strike Fighter PDSS reports a risk that project capability may be affected by overall funding or programming issues arising from internal cost growth, forecasting accuracy and external budget constraints. The remedial actions to address this risk reported in the PDSS include:

- ‘Conduct ongoing engagement with the [United States] 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’ — i.e. clarifying potential cost pressures on the project;
- ‘Proactive management of cost risk identification and engagement with the Capability Manager to prioritize requirements to deliver project capability within the approved project budget’ — i.e. actively identify cost risk and engage with senior leaders; and
- ‘Options may be developed for Capability Manager consideration to achieve project affordability by aligning project expenditure with the Defence Integrated Investment Program capacity in any specific year’ — i.e. consider options for scheduling project expenditure to align with Defence’s available funding.

1.41 The Chief Finance Officer’s representation letter to the Secretary of Defence on the 2019–20 MPR’s project financial assurance statements was unqualified. The project financial assurance statement is restricted to the current financial contractual obligations of Defence for these projects, including the result of settlement actions and the receipt of any liquidated damages, and current known risks and estimated future expenditure as at 30 June 2020.

Contingency statements and contingency management

1.42 The purpose of the project contingency budget is to estimate the inherent cost, schedule and technical uncertainties of projects’ in-scope work.<sup>71</sup> Defence policy requires project managers to ensure that all decisions in regards to a project’s contingency budget are included in the project’s contingency budget log to ensure ongoing transparency and traceability.<sup>72</sup>

1.43 PDSSs are required to include a statement regarding the application of contingency funds during the year, if applicable, as well as disclosing the risks mitigated by the application of those contingency funds. Defence’s Project Risk Management Manual (PRMM version 2.5, page 105) requires that contingency be applied for identified risk mitigation activities.

1.44 Contingency provisions for projects are not programmed or funded in cash terms<sup>73</sup> and projects are encouraged to meet contingency funding requirements from within their currently programmed cash funding. If this cannot be achieved, a project may propose to access contingency funding from the relevant capital program (Approved Major Capital Investment

71 Department of Defence, *Management of Contingency Budgets in Defence Acquisition Projects*, Defence, Canberra, 2019, p. 2.

72 *ibid.*, p. 5.

73 Department of Defence, *Management of Contingency Budgets in Defence Acquisition Projects*, Defence, Canberra, 2019, p. 3.

Program (AMCIP), Facilities and Infrastructure Program (FIP) and ICT Capital Program). If this cannot be achieved, the contingency call will be presented to the Defence Investment Committee, which if agreed will potentially be met by budget offsets across the whole Integrated Investment Program.<sup>74</sup>

1.45 One project in the MPR, MRH90 Helicopters, had contingency funds of \$26.3 million committed in 2019–20 for supportability and performance risks. Access to these funds was approved in previous financial years.

1.46 The ANAO's examination of projects' contingency logs as at 30 June 2020 highlighted that the clarity of the relationship between contingency allocation and identified risks continues to be an issue. Four projects (Combat Recon. Vehicles, Offshore Patrol Vessel, Repl Replenishment Ships, and Pacific Patrol Boat Repl) did not explicitly align their contingency log with their risk log to ensure the expected cost impact of risks is maintained effectively, as required by PRMM version 2.5.

1.47 The ANAO will continue to monitor non-compliance with PRMM version 2.5 and the release of specific guidance following the implementation of the CASG Risk Management Framework expected to be implemented in stages to 2022 (see paragraphs 1.61–1.63).

#### Reporting environment

1.48 On 4 April 2018, Defence advised project offices that project financial reporting for 2017–18 PDSSs would be prepared on the same basis as project approvals and expenditure represented in the Portfolio Budget Statements and the Defence Annual Report (i.e. on a cash basis).<sup>75</sup>

1.49 Defence obtains cash expenditure data using a management reporting tool called Budget and Output Reporting Information System (BORIS). Prior to the 2017–18 MPR, accrual expenditure data was extracted from the Financial Management Information System known as Resource and Output Management and Accounting Network (ROMAN). Given the change in the extraction method, the ANAO requested that Defence perform reconciliations of the cash expenditure figures from BORIS to ROMAN for each project.

1.50 In the 2019–20 MPR, Defence continued to report the projects' financial information on a cash basis and therefore continued to perform these reconciliations. This activity concluded in October 2020 and enabled the ANAO to obtain assurance over the cash expenditure. Defence's Chief Finance Officer has determined that, from the 2020–21 MPR onwards, Defence would report expenditure data on an accrual basis. The 2019–20 MPR will therefore be the last year that these reconciliations need to be performed.

#### Reporting cost variations since Second Pass Approval and personnel costs

1.51 In May 2018, the JCPAA wrote to the Auditor-General to request that the ANAO report back to it 'on how Defence major project cost variations and the costs of retaining project staff over time might be reported annually in future Major Projects Reports.'<sup>76</sup>

<sup>74</sup> *ibid.*, p. 4.

<sup>75</sup> Auditor-General Report No.26 2017–18 *2016–17 Major Projects Report*, p. 41.

<sup>76</sup> The reporting of cost variations was also raised at the JCPAA's public hearing into the 2016–17 MPR on 23 March 2018 and at estimates hearings of the Finance and Public Administration Legislation Committee on 27 February 2018.

1.52 A new table was included in the 2017–18 MPR showing all budget variations post initial Second Pass Approval for projects. Refer to Table 7 on page 44.

#### Project Personnel Numbers and Costs

1.53 In terms of calculating the cost of retaining project staff, Defence advised the ANAO in November 2018 that its IT systems did not provide a direct mapping of personnel to projects. It noted that personnel often work on multiple projects and sustainment activities at any given time.

1.54 The ANAO observed during fieldwork in 2019 that several MPR projects had staff who worked concurrently on other projects, which included shared corporate staff. Some of these projects did not have systems in place to record accurately the proportion of time these shared staff attributed to the project. Moreover, the ANAO observed that MPR projects used different methods to record personnel data.

1.55 In April 2020, the Defence Finance Group (DFG) indicated that it was possible to extract employee expenses (excluding contractors) from Defence’s personnel system, known as the Personnel Management Key Solution (PMKeyS). DFG advised the ANAO that it would need to work with Defence People Group to ensure all relevant Department IDs within PMKeyS for a project have been captured, as well as ensuring that people are properly allocated to the correct Department IDs. In November 2020 Defence advised that it continued to investigate whether PMKeyS could be used as a robust source to track employee costs by projects.

1.56 However, Defence has advised the ANAO that it is still not yet in a position to provide the staff cost component of projects and that its systems are not capable of calculating the cost of retaining project staff over time. Accordingly, Defence has not provided any data on the costs of project staff for projects in the MPR.<sup>77</sup> The ANAO will continue to monitor Defence’s progress in recording project personnel numbers and costs.

#### *Enterprise Risk Management Framework*

1.57 While major risks and issues data in the PDSSs remains excluded from the formal scope of the Auditor-General’s *Independent Assurance Report*<sup>78</sup>, material inconsistencies identified in relation to this information are required to be detailed in the report. The following information is included to provide an overall perspective of how risks and issues are managed within Defence and the selected Major Projects.

1.58 Risk management has been a focus of the MPR since its inception. The CASG risk management environment consists of multiple policies and varying implementation mechanisms and documentation. There are multiple group-level (i.e. CASG), sub-group (i.e. Divisional) and project-level risk management documents. The primary focus of the ANAO’s examination of risk management is at the project level, in order to provide assurance over the PDSSs.

1.59 At the Group level, the Deputy Secretary CASG issued a directive in May 2017 establishing a CASG Risk Management Reform Program to implement a risk management model that is situated within Defence’s risk management framework. Defence advised the ANAO in November 2020 that it has delivered all three phases of the reform. The third phase, which included the development of

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77 However, Defence has demonstrated that it can estimate the cost of completing activities for the MPR. See footnote 31 and page 96 in **Part 2** of this report.

78 See paragraph 1.3 in **Part 1** of this report for more information.

risk management policies and toolsets for use by projects, was initially planned to be concluded in June 2019; Defence concluded the contract with its industry partner in May 2020. In addition, Risk Profiles for some CASG Domains remain in draft, and Risk Management Implementation Plans and the Risk Management Annual Program Plan are still being updated.

1.60 In June 2020 the Deputy Secretary CASG issued a directive establishing the CASG Risk Management Framework, which is the key deliverable of the CASG Risk Management Reform Program. This initiative includes:

- the framework—which is the primary policy and operating framework for the management of risk across the group; and
- the Group Risk Management Strategy 2020-22, which provides a structured pathway to implementing the remodelled approach to managing risk across the 2020-22 period.

1.61 Defence also advised on the release of tools to standardise risk practices across CASG. This will include the rollout of Predict! version 6.0 across CASG.<sup>79</sup> Defence anticipates the roll-out of these tools and risk practices to be complete by February 2022.

1.62 It is not clear whether Defence has achieved the outcomes of all three phases of the CASG Risk Reform as intended in the 2017 Deputy Secretary CASG Directive. That Directive included implementation of the remodelled approach to management of risk, which is now not due to be completed until February 2022.<sup>80</sup>

1.63 The ANAO will continue to monitor implementation of the Risk Management Framework, but will not be able to consider including risks and issues in the scope of the MPR until implementation of the framework is more mature.

1.64 In 2019–20, the ANAO again examined project offices' risk and issue logs at the Group and Service level, which are predominantly created and maintained utilising spreadsheets and/or Predict! software. Overall, the issues with risk management that the ANAO observed related to:

- variable compliance with corporate guidance. While all 25 MPR projects had a Risk Management Plan, five did not validate the currency of the Risk Management Plan in line with PRMM version 2.5<sup>81</sup>;
- the visibility of risks and issues when a project is transitioning to sustainment;
- for one project (Joint Strike Fighter), sustainment and acquisition risks are managed together<sup>82</sup>;

<sup>79</sup> Predict! is a risk management tool used by Defence to manage risks and issues.

<sup>80</sup> See **Part 2** of this report.

<sup>81</sup> The CASG Project Risk Management Manual version 2.5, Business Rule 2 requires the project manager to validate the currency of the Risk Management Plan on transition from one stage of the Capability Life Cycle to the next stage and, for any stage that is longer than six months, every six months within that stage.

<sup>82</sup> As at 30 June 2020, Defence risk management guidance for acquisition projects was the PM, 002 CASG Project Risk Management Manual (PRMM), Version 2.5 2019. Defence has advised that the PRMM also provides some guidance for sustainment products; there is currently no policy providing risk management guidance for sustainment products in particular. Defence further advised that CASG is currently working on new risk management policy for products in the 'CAS-RM Manual'. The previous guidance for sustainment products, the DMM (LOG) 04-0-003 *Material Logistics Manual Volume 3 Risk Management in Sustainment*, provided different consequence and likelihood descriptors to those used for acquisition risk management.

- the frequency with which risk and issue logs are reviewed to ensure risks and issues are accurate and complete, appropriately managed in a timely manner, and accurately reported to senior management;
- risk management logs and supporting documentation of variable quality, particularly where spreadsheets are being used<sup>83</sup>; and
- lack of quality control resulting in inconsistent approaches in the recording of issues within Predict!

1.65 The ANAO has previously observed that Defence's use of spreadsheets as a primary form of record for risk management is a high risk approach. Spreadsheets lack formalised change/version control and reporting, thereby increasing the risk of error. This can make spreadsheets unreliable corporate data handling tools as accidental or deliberate changes can be made to formulae and data, without there being a record of when, by whom, and what change was made. As a result, a significant amount of quality assurance is necessary to obtain confidence that spreadsheets are complete and accurate at 30 June, which is not an efficient approach.

1.66 The JCPAA recommended in September 2018 that Defence plan and report a methodology to the Committee showing how acquisition projects can transition from the use of spreadsheet risk registers to tools with better version control.<sup>84</sup> In response, Defence advised in May that Predict! will be mandated as the risk management system.<sup>85</sup> Defence advised the ANAO in October 2020 that there have been no updates to Defence policy to reflect that Predict! is now the mandated risk management tool. An update to Defence's policy is expected in May 2021.

1.67 Defence advised the ANAO in November 2020 that as at 30 June, 21 out of the 25 MPR projects<sup>86</sup> have a presence in Predict!, but are not necessarily using it to manage risks and issues. The ANAO's review of the documentation from CASG's 25 project offices at 30 June indicates that:

- nine utilise spreadsheets<sup>87</sup> as their primary risk management tool;
- nine utilise Predict!<sup>88</sup>;
- three (Maritime Comms, Combat Recon. Vehicle and Future Subs) utilise both Microsoft Excel and Predict!;
- two (Joint Strike Fighter and CMATS) utilise a bespoke SharePoint based tool;
- one (Night Fighting Equip Repl) utilises the Project Performance Report (see paragraph 1.31 to 1.32); and
- one (Future Frigates) uses Predict! and Defence's Capability Lifecycle Management Tool.

83 Spreadsheets lack formalised change/version control and reporting, increasing the risk of error.

84 Joint Committee of Public Accounts and Audit, Parliament of the Commonwealth of Australia, *Report 473: Defence Major Projects Report (2016–17)*, (2018), List of Recommendations, p. vii.

85 Department of Defence, written supplementary submission 7 to the Joint Committee of Public Accounts and Audit, Inquiry into the 2018–19 Major Projects Report and Future Submarines Project – Transition to Design, p. 11.

86 Defence advised in October 2020 that, as at 30 June, the four projects not yet using Predict! were: Growler, UHF Satcom, Battlefield Command System, and Night Fighting Equip Repl.

87 The nine projects are: MRH90 Helicopters, MH-60R Seahawk, Hawkei, Battlefield Airlifter, Collins Comms and EW, Collins R&S, Battlefield Command System, ANZAC Air Search Radar Repl, and UHF SATCOM.

88 The nine projects are: AWD Ships, P-8A Poseidon, Offshore Patrol Vessel, Growler, Overlander Medium/Heavy, Repl Replenishment Ships, MQ-4C Triton, Battle Comm. Sys. (Land) 2B, and Pacific Patrol Boat Repl.

1.68 Defence advised in November 2020 that CASG has an approved rollout plan to transition all CASG projects to Predict! over the next few years. The ANAO will report on MPR projects' use of the mandated Predict! tool in the next MPR.

### *Project maturity framework*

1.69 Project Maturity Scores have been a feature of the Major Projects Report since its inception in 2007–08. The *DMO [Defence Materiel Organisation] Project Management Manual 2012* defined a maturity score as:

The quantification, in a simple and communicable manner, of the relative maturity of capital investment projects as they progress through the capability development and acquisition life cycle.<sup>89</sup>

1.70 Maturity scores are a composite indicator, cumulatively constructed through the assessment and summation of seven different attributes. The attributes are: Schedule, Cost, Requirement, Technical Understanding, Technical Difficulty, Commercial, and Operations and Support, which are assessed on a scale of one to 10.<sup>90</sup> Comparing the maturity score against its expected life cycle gate benchmark provided internal and external stakeholders with a useful indication of a project's progress.

1.71 In 2016<sup>91</sup> and again in 2017<sup>92</sup>, the JCPSA recommended that Defence update the policy on Project Maturity Scores. In 2018 and 2019 Defence considered updates to the policy, but did not implement changes.<sup>93</sup>

1.72 Defence advised the ANAO in August 2020 that the Project Maturity Score will no longer be required as an input to the management of project performance. Defence also advised that an alternative to replace the Project Maturity Score currently included in its PDSSs will not be implemented. This component of the PDSS has therefore been removed from the 2020–21 MPR Guidelines.

### *Lessons Learned*

1.73 In May 2020, CASG released a revised version of its Lessons Program Policy. The Policy is enforced by a Defence Joint Directive which directs all Defence 'Groups and Services, as required, to establish and lead a whole-of-Defence Joint Lessons that provides centralised Lessons management and coordination'.

1.74 Version 2.0 of the CASG Lessons Program Policy states that<sup>94</sup>:

Deputy Secretary CASG expects the CASG leadership to share best practices and lessons. To facilitate this the CASG Lessons Program continually analyses lessons collected from programs,

89 Department of Defence, DMM (PROJ) 1-0-001, *DMO Project Management Manual 2012*, Defence, Canberra, 2012, p. 75. This manual has since been superseded by PM 002 *CASG Project Management Manual* which does not refer to project maturity.

90 See Appendix 3 in **Part 2** of this report and footnote 14 for further detail.

91 Joint Committee of Public Accounts and Audit, Parliament of the Commonwealth of Australia, *Report 458: Defence Major Projects Report (2014–15)*, (2016), Recommendation 3, p. 50.

92 Joint Committee of Public Accounts and Audit, Parliament of the Commonwealth of Australia, *Report 468: Defence Major Projects Report (2015–16)*, (2017), Recommendation 2, p. vii.

93 Auditor-General Report No.19 2019–20 *2018–19 Major Projects Report*, paragraphs 1.65 to 1.67.

94 Department of Defence, PM 006 – Lessons – CASG Lessons Program, Version 2.0, Defence, Canberra, 2020.



projects, products and governance review outcomes; and ensures they are readily available via the Defence Lessons Repository (DLR).

1.75 Defence advised the ANAO that this policy does not impact the reporting of lessons in the MPR and that compliance with the new policy is not expected until May 2021. Defence also advised that it is establishing a framework for monitoring compliance.

### *Caveats and deficiencies*

1.76 Defence has not defined the terms ‘caveat’ or ‘deficiency’ to the declaration of significant milestones in its internal policies and procedures. The ANAO has observed the use of these terms by Defence to represent exceptions to the achievement of significant milestones declared by Defence such as IMR, IOC, FMR and FOC.

1.77 The 2017–18 MPR noted a ‘reduced trend of Major Projects which had achieved significant milestones with caveats’, consistent with Defence’s advice at the time that it discourages Independent Assurance Reviews recommending caveats at FOC.<sup>95</sup> Only one project (Growler) achieved a major milestone with caveats in 2017–18.<sup>96</sup>

1.78 In 2018–19, Defence declared major milestones with caveats or deficiencies for four projects (P-8A Poseidon, Growler, Additional MRTT and LHD Ships). In 2019–20, Defence declared a similar number of milestones with caveats to the previous year:

- P-8A Poseidon — as at 30 June the project expected to declare three caveats to the achievement of the Material Release 3 (MR3) milestone, related to Objective Search and Rescue (SAR) store capability (UNIPAC III), spares and permanent installation of one Mobile Tactical Operations centre. MR3 was acknowledged by the Capability Manager in September 2020.
- Overlander Medium/Heavy — Defence declared one caveat to the achievement of the IOC milestone in December 2019, related to certification of the Air Movements Training and Development Unit.
- Hawkei — Defence declared four caveats to the achievement of the IMR milestone in May 2020, related to low risk verification and validation activities, delivery of spares and deficiencies in the delivery of the mission system Complete Equipment Schedule and Repair Parts Scale.
- Additional MRTT<sup>97</sup> — Defence declared caveats to FOC in January 2020 relating to aircrew staffing across the KC-30A fleet.

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95 Auditor-General Report No.20 of 2017–18, *2017–18 Major Projects Report*, paragraphs 1.61–1.62, p. 32.

96 The following projects which have exited the MPR, had also achieved FOC with caveats: Wedgetail (achieved FOC with caveats in 2015), Overlander Light (achieved FOC with caveats in 2016), and ARH Tiger Helicopters (achieved FOC with caveats in 2016).

97 This project was removed from the 2019–20 MPR and its status has been reported in the *Statement by the Secretary of Defence* in **Part 3** of this report.



1.79 In addition, Defence accepted two ‘concessions’ to the declaration of FOC in December 2019 for the Battle Comm. Sys (Land) 2A project<sup>98</sup>, with two out of six nodal configurations having ‘capability limitations’ due to exceeding weight limits.

1.80 The ANAO will continue to monitor Defence’s declaration of caveats (or exceptions) to the achievement of significant Capability Milestones. The MPR Guidelines provide that in respect to projects which have been removed from the MPR with outstanding caveats, reporting will be provided in the *Statement by the Secretary of Defence* until their final status is accepted by the Capability Manager.<sup>99</sup>

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98 This project was removed from the 2019–20 MPR and its status has been reported in the *Statement by the Secretary of Defence* in **Part 3** of this report.

99 This requirement was first included in the *2018–19 Major Projects Report Guidelines* endorsed by the JCPAA in September 2018. The 2019–20 MPR Guidelines are included in **Part 4** of this report.



## 2. Analysis of Projects' Performance

2.1 Performance information is important in the management and delivery of major Defence equipment acquisition projects (Major Projects). It informs decisions about the allocation of resources, supports advice to government, and enables stakeholders to assess project progress.

2.2 Project performance has been the subject of many of the reviews of the Department of Defence (Defence), and a consistent area of focus of the Parliament's Joint Committee of Public Accounts and Audit (JCPAA) since the first Major Projects Report (MPR). This chapter progresses previous Australian National Audit Office (ANAO) analysis over project performance.

### Project performance analysis by the ANAO

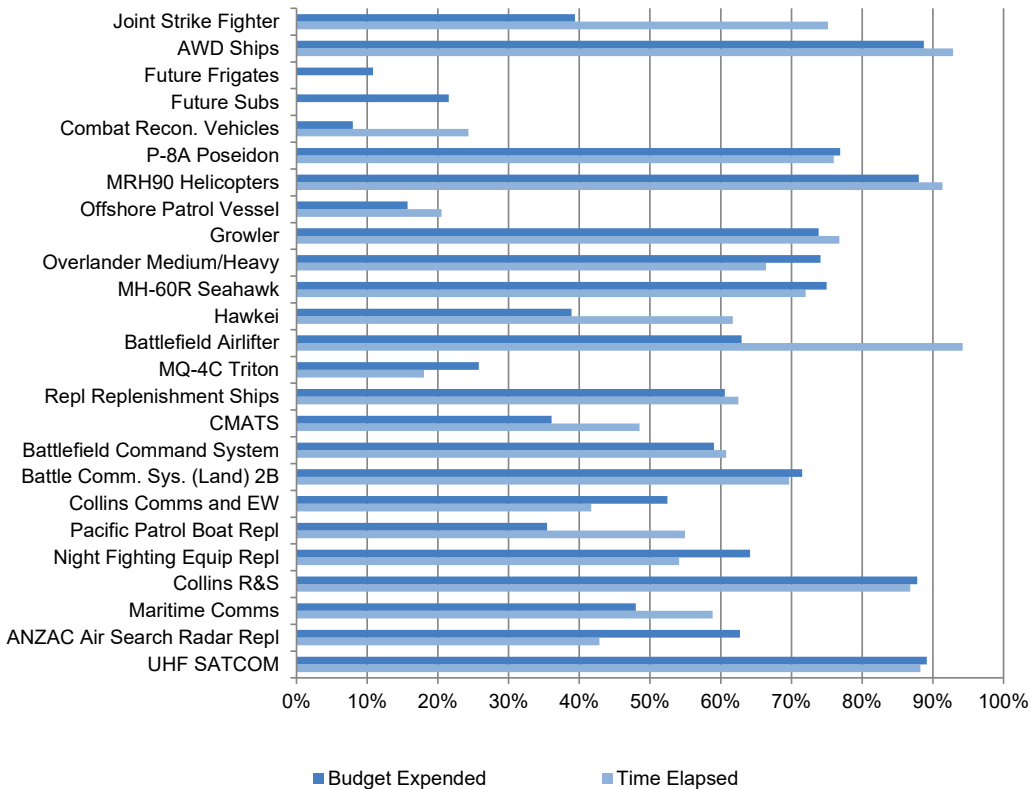
2.3 The major dimensions of projects' performance examined in this chapter are:

- Cost performance (pp. 40–51) — this includes the percentage of budget expended (Budget Expended), changes in budget since Second Pass Approval, in-year changes to budget, and in-year expenditure.
- Schedule performance (pp. 52–656) — this includes the percentage of time elapsed (Time Elapsed), total schedule slippage, and in-year changes to schedule.
- Capability performance (pp. 67–69) — this includes the key challenges faced by Defence in the delivery of key materiel capabilities.

2.4 The following sections of this chapter provide ANAO analysis relating to the three principal dimensions of project performance noted above, drawing on the Defence PDSSs for the 25 Major Projects. This work includes analysis of in-year information, longitudinal analysis and analysis of the results of project progress for the year-ended 30 June 2020. Figure 2 (below) directly compares cost performance with schedule performance through two metrics, Budget Expended and Time Elapsed.<sup>100</sup>

<sup>100</sup> A project's budgeted cost and schedule data is at 30 June 2020, and may differ from originally approved budgets and schedules.

Figure 2: Budget Expended and Time Elapsed



Note: Future Frigates and Future Subs are yet to have their FOC milestones approved by Government.  
Source: ANAO analysis of the 2019–20 PDSSs.

2.5 Figure 2 shows that for most projects (20 of 23<sup>101</sup>), Budget Expended is broadly in line with (within 10 per cent), or lagging, Time Elapsed. This relationship is generally expected in an acquisition environment predominantly based on milestone payments. However, due to the varying complexity, stages and acquisition approaches across the portfolio of projects, further analysis of these simple performance measures is required to provide a better understanding of key variances.

2.6 Where Budget Expended is significantly lagging Time Elapsed, the project schedule may be at risk — i.e. expenditure lags may indicate delays in milestone achievement. In 2019–20, the Budget Expended for three projects lagged Time Elapsed by at least 20 per cent. For two of these three projects, milestones have been delayed, as detailed below:

- Hawkei (Budget Expended 39 per cent, Time Elapsed 62 per cent) — the project’s achievement of milestones has been delayed by reliability issues, design maturity, and

101 Future Frigates and Future Subs are excluded from this analysis as they do not yet have FOC milestones approved by Government.

production delays. The project completed its Production Reliability Acceptance Test 24 months later than originally contracted.

- Battlefield Airlifter (Budget Expended 63 per cent, Time Elapsed 94 per cent) — the project anticipates delivering some requirements after the achievement of the FOC milestone, including some training equipment, aircraft upgrades, the Structural Substantiation Program, and the Missile Approach Warning System. Defence is revalidating the business case and execution strategy for this acquisition activity during 2020.

2.7 For the third project, Joint Strike Fighter (Budget Expended 39 per cent, Time Elapsed 75 per cent), the expenditure lag reflects the recent transition from the aircraft development stage, where relatively little budget was expended. The project has now entered into main production contracts for aircraft, with in-year expenditure increasing compared to prior years.

2.8 Where Budget Expended leads Time Elapsed, the project budget may be at risk — i.e. expenditure increases may indicate real cost increases. However, for the three projects where Budget Expended leads Time Elapsed by 10 per cent or more, the cause of the variance does not relate to insufficient project funds, as detailed below:

- Collins Comms and EW (Budget Expended 52 per cent, Time Elapsed 42 per cent) — the project's contract is structured so that more significant milestone payments fall earlier in the life of the project. The project also expects expenditure to reduce as lessons learned on early installations are applied to later installations.
- Night Fighting Equip Repl (Budget Expended 64 per cent, Time Elapsed 54 per cent) — this project's FOC date anticipates the purchase of a second tranche of equipment, which has not yet been funded. The currently funded tranche of equipment was largely delivered at 30 June 2020, leading the approved expenditure to exceed the approved schedule.
- ANZAC Air Search Radar Repl (Budget Expended 63 per cent, Time Elapsed 43 per cent) — this project spent approximately nine per cent of its budget prior to Second Pass, to conduct a Risk Reduction Program and make early purchases of equipment to ensure the schedule would be met.<sup>102</sup>

2.9 In each case of significant variance between Budget Expended and Time Elapsed, the performance information highlights projects that may require further attention. This is to ensure that unspent funds are returned to the Defence budget for re-allocation in a timely manner, the timing of key deliverables remains in focus, or planning focuses on bringing together all elements in a timely manner, as equipment is delivered.

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102 Between First Pass Approval in May 2015 and Second Pass Approval in August 2017, Government approved \$65.6 million of funding to undertake these activities.

## Cost performance analysis

### Budget Expended and Project Maturity

2.10 Figure 3, below, sets out each project's Budget Expended against Project Maturity<sup>103</sup> and shows that Budget Expended lags Project Maturity for the majority of projects (21 of 25). This relationship is typical of acquisition projects for two reasons:

- in an acquisition environment predominantly based on milestone payments, projects will typically develop confidence in delivering their scope through design reviews, testing and demonstration, ahead of formal acceptance of milestone achievement or equipment deliveries (and expenditure of budget); and
- more generally, Budget Expended will often lag Project Maturity as the result of Defence's project maturity framework attributing approximately 50 per cent (35 out of 70 points) of total Project Maturity at Second Pass Approval (the main investment decision by government) prior to any significant expenditure of budget.

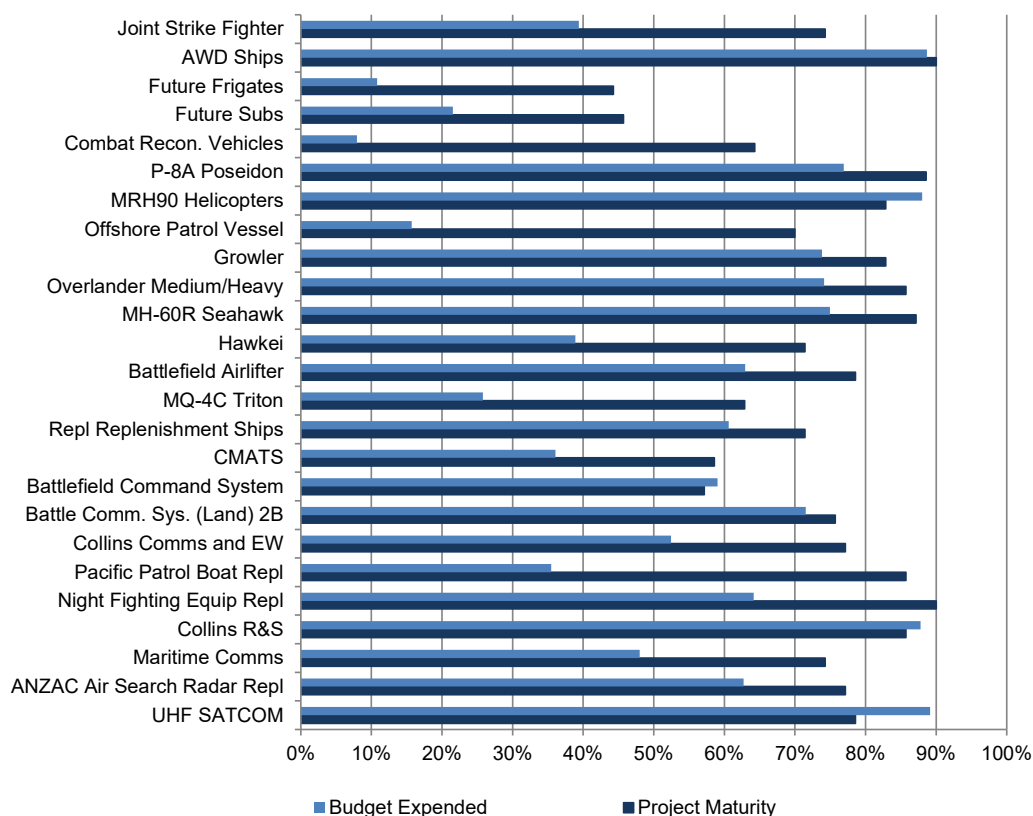
2.11 In both cases, the Budget Expended is expected to catch up to Project Maturity over the course of the project's life, with projects approaching closure expected to show Budget Expended and Project Maturity broadly in line with each other.

2.12 Budget Expended lags Project Maturity with a variance of 20 per cent or more in 12 projects. As expected, the majority of these projects are at a relatively early stage and have expended minimal budget while progressing through design and testing phases, or are waiting on significant amounts of equipment to be delivered. The exception to this is the Night Fighting Equip Repl project, where most Tranche 1 equipment has been delivered, leading to an advanced maturity score, while the evaluation of future Tranche 2 equipment is still in its early stages.

2.13 Where Budget Expended leads Project Maturity by a significant amount, this may indicate that the project is behind in development or achievement of its scope, or that the required scope is not affordable. There are no instances where Budget Expended leads Project Maturity by 20 per cent or more. The largest variance is for UHF SATCOM, where Budget Expended leads Project Maturity by 11 per cent. The project's maturity score has been affected by delays in software development, while the majority of budget has been expended and the project has funded further development with contingency.

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103 The JCPAA has observed that 'Defence remains behind the Committee's expectations on working to update Project Maturity Scores – the Committee recommended reform in this area several years ago, and changes remain slow and uncertain.' Joint Committee of Public Accounts and Audit, Parliament of the Commonwealth of Australia, *Report 473: Defence Major Projects Report (2016-17)*, (2018), p. 4. Refer to paragraph 1.71. The JCPAA has since agreed to the removal of Project Maturity Scores from PDSSs from the 2020–21 MPR. As discussed in paragraph 1.72, Defence has advised that the Project Maturity Score will no longer be required as an input to the management of project performance and that an alternative to replace the Project Maturity Score currently included in its PDSSs will not be implemented.

**Figure 3: Budget Expended and Project Maturity**

Source: ANAO analysis of the 2019–20 PDSSs.

## Second Pass Approval and 30 June 2020 approved budget

2.14 Figure 4, below, compares each project's approved budget at initial Second Pass Approval and its approved budget at 30 June 2020. Six projects have variations of \$500 million or more. The list below describes the components of these variations:

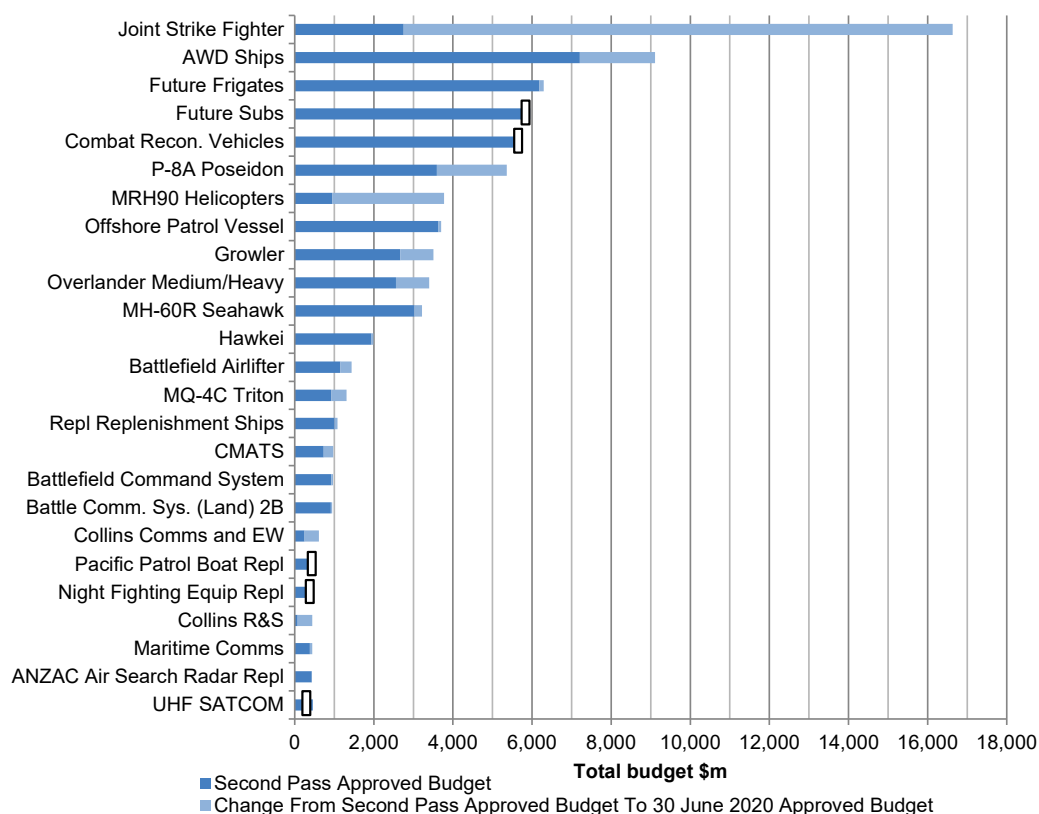
- Joint Strike Fighter — net increase of \$13.9 billion, comprising \$10.5 billion for 58 additional aircraft in 2013–14, \$3.0 billion for exchange rate variation and \$0.4 billion for price indexation.<sup>104</sup>
- AWD Ships — net increase of \$1.9 billion, comprising \$1.2 billion for a Real Cost Increase<sup>105</sup> in July 2015 to complete the project, \$1.2 billion for price indexation, offset by a \$0.4 billion decrease for exchange rate variation and a \$0.1 billion decrease for transfers to facilities projects in 2013–14.

<sup>104</sup> See also paragraphs 1.39 to 1.40.

<sup>105</sup> See Note 2 of Figure 4, below, for further information.

- P-8A Poseidon — net increase of \$1.8 billion, comprising \$1.3 billion for four additional aircraft in 2015–16 and \$0.5 billion for exchange rate variation.
- MRH90 Helicopters — net increase of \$2.8 billion, comprising \$2.6 billion for 34 additional aircraft in 2005–06 and other minor scope changes, and \$0.7 billion for price indexation, offset by a \$0.3 billion decrease due to scope transfers for facilities, and a \$0.1 billion decrease for exchange rate variation.
- Growler — net increase of \$0.8 billion, comprising \$0.9 billion for exchange rate variation, \$0.3 billion for the Mobile Threat Training Emitter System and weapons, offset in 2015–16 by a \$0.2 billion decrease for transfers to facilities projects and \$0.2 billion for the return to the Defence budget of surplus funds and contingency for reallocation.
- Overlander Medium/Heavy — net increase of \$0.8 billion, comprising \$0.7 billion ‘project supplementation’ to reduce cost pressures and \$0.1 billion exchange rate variation.



**Figure 4: Projects' initial Second Pass Approval and 30 June 2020 approved budget (\$m)**

Note 1: □ indicates that the budget for the project at 30 June 2020 is less than the original budgeted cost.

Note 2: On 22 May 2015, the Minister for Defence and the Minister for Finance announced there would be further delays to the delivery of the Air Warfare Destroyers (AWD) and an additional \$1.2 billion would be required to complete the project. The budget increase was incorporated into the approved project budget as at 30 June 2016.

Source: ANAO analysis of the 2019–20 PDSSs. Previous MPRs have reported that budget variances since initial Second Pass Approval have resulted from: increasing the scope of a project via revised Second Pass Approvals, programmatic decisions, Real Cost Increases/Decreases, transfers to/from other projects and budgetary adjustments. Project budgets may also be affected by price indexation<sup>106</sup> and foreign exchange variation.

2.15 The total budget for the 25 projects at 30 June 2020 was \$78.7 billion, a net increase of \$24.2 billion, when compared to the approved budget at initial Second Pass Approval of \$54.5 billion. A summary of budget variations is at Table 3 (page 13) and a more detailed analysis of budget variations is included in Table 7, below.

<sup>106</sup> Prior to 1 July 2010, projects were periodically supplemented for price indexation, whereas the allocation for price indexation is now provided for on an out-turned basis at Second Pass Approval.

**Table 7: Budget variation post initial Second Pass Approval by variation type as at 30 June 2020, and performance audits relating to Major Projects<sup>1</sup>**

Project	Initial Second Pass Approval Budget \$m	Variation	Explanation of Variation	Year/s of Variation	Total Amount of Variation \$m	Performance Audits
AIR 6000 Phase 2A/2B New Air Combat Capability <sup>2</sup>	2751.6 (Stage 1)	Scope increase/Budgetary Adjustments/Transfer	58 additional aircraft (Stage 2 Second Pass Approval) offset by minor transfers	2013–14 2017–18	10,504.1	Auditor-General Report No.14 of 2018–19: Joint Strike Fighter — introduction into service and sustainment planning  Auditor-General Report No.6 of 2012–13: Management of Australia's Air Combat Capability – F-35A Joint Strike Fighter Acquisition
SEA 4000 Phase 3 Air Warfare Destroyer Build	7207.4	Real Cost Increase/Budget transfers	Real Cost Increase of \$1.2b offset by minor transfers for facilities in 2014	2013–14 2015–16	1089.6	Auditor-General Report No.22 of 2013–14: Air Warfare Destroyer Program  Auditor-General Report No.57 of 2010–11: Acceptance into Service of Navy Capability
SEA 5000 Phase 1 Future Frigates	6183.9	Budget transfer	Funding transfer to Estate and Infrastructure Group to address funding shortfall with the Naval Capability Infrastructure Subprogram	2019–20	3.3	Auditor-General Report No.39 of 2017–18: Naval Construction Programs – Mobilisation
SEA 1000 Phase 1B Future Submarines Design Acquisition	5952.5	Budget transfer	Transfer to the Chief Information Officer Group component of SEA1000 Phase 1B for the Defence Secret Environment - International.	2019–20	(2.4)	Auditor-General Report No.48 of 2016–17: Future Submarine – Competitive Evaluation Process  Auditor-General Report No.39 of 2017–18: Naval Construction Programs – Mobilisation  Auditor-General Report No.22 of 2019–20: Future Submarine Program – Transition to Design
LAND 400 Phase 2 Combat Reconnaissance Vehicles	5762.7	N/A	N/A	N/A	0.0	Auditor-General Report No.18 of 2020-21: Defence's Procurement of Combat Reconnaissance Vehicles (LAND 400 Phase 2)

Project	Initial Second Pass Approval Budget \$m	Variation	Explanation of Variation	Year/s of Variation	Total Amount of Variation \$m	Performance Audits
AIR 7000 Phase 2B Maritime Patrol and Response Aircraft System	3577.7	Scope increase/Real Cost Decrease	Four additional aircraft \$1m transferred from Defence Science and Technology Group from 2017–18 surplus funds Offset by a \$20.3m Real Cost Decrease	2015–16 2017–18 2019–20	1276.1	N/A
AIR 9000 Phase 2/4/6 Multi-Role Helicopter <sup>3</sup>	957.2 (Phase 2)	Scope increase/Budget transfers	34 additional aircraft (Phase 4/6 Second Pass Approval), offset by minor transfers	2005–06 2018–19	2270.5	Auditor-General Report No.9 of 2015–16: Test and Evaluation of Major Defence Equipment Acquisitions (paragraph 4.54) Auditor-General Report No.52 of 2013–14: Multi-Role Helicopter Program Auditor-General Report No.57 of 2010–11: Acceptance into Service of Navy Capability
SEA 1180 Phase 1 Offshore Patrol Vessel	3632.8	N/A	N/A	N/A	0.0	Auditor-General Report No.39 of 2017–18: Naval Construction Programs – Mobilisation Auditor-General Report No.12 of 2020–21: Defence's Procurement of Offshore Patrol Vessels – SEA 1180 Phase 1
AIR 5349 Phase 3 EA-18G Growler Airborne Electronic Attack Capability	2641.4	Scope increase/Real Cost Decrease	Additional training devices offset by return of surplus funds and other minor transfers	2014–15 2015–16 2016–17	(91.6)	N/A
LAND 121 Phase 3B Medium Heavy Capability, Field Vehicles, Modules and Trailers <sup>2</sup>	2549.2	Real Cost Increase <sup>4</sup> /Scope/Budgetary adjustment	Project supplementation (\$684.2m) and additional vehicles, trailers and equipment (\$28.0m) at Revised Second Pass Approval Budgetary Adjustment (-\$30.0m)	2013–14 2018–19	682.2	Auditor-General Report No.52 of 2014–15: Australian Defence Force's Medium and Heavy Vehicle Fleet Replacement (LAND 121 Phase 3B)

Project	Initial Second Pass Approval Budget \$m	Variation	Explanation of Variation	Year/s of Variation	Total Amount of Variation \$m	Performance Audits
AIR 9000 Phase 8 Future Naval Aviation Combat System Helicopter	3029.6	Budget transfer	Transfer to Defence Support and Reform Group	2013–14	(39.2)	N/A
LAND 121 Phase 4 Protected Mobility Vehicle – Light	1945.0	N/A	N/A	N/A	0.0	Auditor-General Report No. 6 of 2018–19: Army's Protected Mobility Vehicle – Light
AIR 8000 Phase 2 Battlefield Airlift – Caribou Replacement	1156.5	Budget transfer	Transfer to Defence Science and Technology Group	2019–20	(1.0)	Auditor-General Report No. 3 of 2013–14: AIR 8000 Phase 2 – C-27J Spartan Battlefield Airlift Aircraft
AIR 7000 Phase 1B MQ-4C Triton Remotely Piloted Aircraft System	923.6	Scope increase/Budget Transfer/Real cost decrease	1 additional aircraft at Second Pass Approval – Tranche 2 and minor transfers from DSTG offset by a Force Structure Plan amendment	2017–18 2018–19 2019–20	320.3	N/A
SEA 1654 Phase 3 Maritime Operational Support Capability	1004.6	Budget Transfers	Transfer for training and additional expected costs and Contract Change Proposals	2015–16 2018–19 2019–20	81.4	N/A
AIR 5341 Phase 3 Civil Military Air Management System	731.4	Real Cost Increase/Budgetary Adjustment	Real Cost Increase offset by minor transfers	2017–18	240.7	Auditor-General Report No. 4 of 2019–20: OneSky: Contractual Arrangements Auditor-General Report No. 46 of 2016–17: Conduct of the OneSky Tender Auditor-General Report No. 1 of 2016–17: Procurement of the International Centre for Complex Project Management to Assist on the OneSky Australia Program
LAND 200 Tranche 2B Battlefield Command System	930.0	N/A	N/A	N/A	0.0	Auditor-General Report No. 40 of 2018–19: Modernising Army Command and Control – the Land 200 Program

Project	Initial Second Pass Approval Budget \$m	Variation	Explanation of Variation	Year/s of Variation	Total Amount of Variation \$m	Performance Audits
SEA 1439 Phase 5B2 Collins Class Communications and Electronic Warfare Improvement Program	247.7 (Stage 1)	Scope increase	Additional capability (Stage 2 Second Pass Approval)	2016–17	351.5	Auditor-General Report No.23 of 2008–09: Management of the Collins-class Operations Sustainment
SEA 1439 Phase 3 Collins Class Submarine Reliability and Sustainability	72.0	Scope increase/ Budget transfers/ Budgetary adjustments	Implementation of full scope, offset by minor transfers	2000–01 2001–02 2002–03 2004–05 2005–06 2006–07 2018–19	305.0	Auditor-General Report No.23 of 2008–09: Management of the Collins-class Operations Sustainment
SEA 1442 Phase 4 Maritime Communications Modernisation	385.7	N/A	N/A	N/A	0.0	Auditor-General Report No.30 of 2018–19: ANZAC Class Frigates - Sustainment
SEA 1448 Phase 4B ANZAC Air Search Radar Replacement	427.8	N/A	N/A	N/A	0.0	Auditor-General Report No.30 of 2018–19: ANZAC Class Frigates - Sustainment
JP 2008 Phase 5A Indian Ocean Region UHF SATCOM	460.9	Real Cost Decrease	Real Cost Decrease	2013–14	(18.0)	N/A
<b>Total</b>	<b>52,531.2</b>				<b>16,972.5</b>	

Note 1: Some projects have multiple Second Pass Approvals. This table reports on variations since the first, i.e. initial, Second Pass Approval.

Note 2: Projects that have had no Real Variations to their budget, and have not appeared in any performance audits, do not appear in this table. They are: Battle Comm. Sys (Land) 2B, Pacific Patrol Boat Repl, and Night Fighting Equip Repl. For a definition of 'Real Variations' see pages 381 to 382 in the 2019–20 MPR Guidelines in **Part 4** of this report.

Note 3: Described by Defence as 'project supplementation'. Refer to Note 3 of Table 3.

## Budget performance

2.16 The following figures and tables illustrate the budget performance of the 25 selected projects by way of:

- in-year budget variations by project (see Table 8, below); and
- expenditure forecasting performance against actual expenditure for 2019–20 (see Figure 5, on page 51).

### *In-year budget variance analysis*

2.17 Table 8, below, sets out the in-year budget variations for each project. Overall, the approved budget for the projects as at 30 June 2020 increased by \$74.8 million, or 0.1 per cent, compared to their approved budget as at 30 June 2019. This was driven by exchange rate variation increases of \$85.5 million and net real decreases of \$10.6 million.

2.18 Exchange rate variations result from projects' exposure to foreign currencies and movements in foreign exchange rates against the Australian dollar.<sup>107</sup> Budget adjustments aim to maintain the relative buying power of the project budget. Movements in the US dollar and the Euro are the main influences. Projects with larger movements in foreign exchange in 2019–20 included:

- Joint Strike Fighter — movement of \$108.7 million, or 0.7 per cent increase in budget.
- Combat Recon. Vehicles — movement of -\$50.7 million, or 0.9 per cent decrease in budget.

2.19 Real Variations<sup>108</sup> primarily reflect changes in the scope of projects, transfers between projects for approved equipment/capability and budgetary adjustments such as administrative savings decisions. In 2019–20, the two projects with more significant Real Variations were:

- Repl Replenishment Ships — variation of \$12.0 million reflecting budget transfers covering additional costs expected in Australian fit out activities, engineering and ILS costs associated with CCPs and additional project support costs to cover the period of delay.
- P-8A Poseidon — variation of -\$20.3 million reflecting the return of funds to the Integrated Investment Program.

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107 Australian Government arrangements for foreign exchange variation involve 'no win/no loss' supplementation. As a matter of policy, unless specifically approved, individual entities are not permitted to 'hedge' against foreign exchange risk.

108 Real Variations include 'Scope' changes attributable to changes in requirements by Defence and government; 'Transfers' which occur when a portion of the budget and corresponding scope is transferred to or from another approved project or sustainment product in Defence; 'Budgetary Adjustments' made to account for corrections resulting from foreign exchange or indexation accounting estimation errors; 'Real Cost Increases', where funds have been approved by government to increase the Project's budget (generally without a change in scope); and 'Real Cost Decreases', where funds have been handed back to the Defence portfolio.

**Table 8: In-year (2019–20) budget variations by project**

Project	Approved Budget 2018–19 \$m	Approved Budget 2019–20	In-year Exchange Variation \$m	In-year Real Variation \$m	Total Variance \$m	Total Variance (per cent)
Joint Strike Fighter	16,522.6	16,631.3	108.7	-	108.7	0.7
AWD Ships	9103.7	9,108.9	5.2	-	5.2	0.1
Future Frigates	-	6,291.8	23.4	3.3	26.7	0.4
Future Subs	-	5,925.8	(34.5)	(2.4)	(36.9)	(0.6)
Combat Recon. Vehicles	-	5,761.7	(50.7)	-	(50.7)	(0.9)
P-8A Poseidon	5375.7	5,362.4	7.0	(20.3)	(13.3)	(0.2)
MRH90 Helicopters	3771.1	3,773.9	2.8	-	2.8	0.1
Offshore Patrol Vessel	3724.3	3,701.4	(22.9)	-	(22.9)	(0.6)
Growler	3510.3	3,505.9	(4.4)	-	(4.4)	(0.1)
Overlander Medium/Heavy	3399.9	3,398.6	(1.3)	-	(1.3)	0.0
MH-60R Seahawk	3212.5	3,219.3	6.8	-	6.8	0.2
Hawkei <sup>1</sup>	1979.6	1,987.5	8.0	-	7.9	0.4
Battlefield Airlifter	1442.1	1,439.2	(1.9)	(1.0)	(2.9)	(0.2)
MQ-4C Triton	-	1,311.4	11.4	(2.2)	9.2	0.7
Repl Replenishment Ships	1070.6	1,084.7	2.1	12.0	14.1	1.4
CMATS	975.8	975.6	(0.2)	-	(0.2)	0.0
Battlefield Command System	-	969.7	8.8	-	8.8	1.4
Battle Comm. Sys. (Land) 2B	942.6	947.1	4.5	-	4.5	0.4
Collins Comms and EW	607.8	610.7	2.9	-	2.9	0.5
Pacific Patrol Boat Repl	504.0	504.3	0.3	-	0.3	0.1
Night Fighting Equip Repl	442.6	446.7	4.1	-	4.1	0.9
Collins R&S	445.3	445.8	0.5	-	0.5	0.1
Maritime Comms	440.0	444.0	4.0	-	4.0	0.9
ANZAC Air Search Radar Repl	428.7	429.4	0.7	-	0.7	0.2
UHF SATCOM	421.8	422.1	0.3	-	0.3	0.1
<b>Total <sup>2</sup></b>	<b>58,321.0</b>	<b>78,699.2</b>	<b>85.5</b>	<b>(10.6)</b>	<b>74.8</b>	<b>0.1</b>

Note 1: The Total Variance and components for this project do not add up due to rounding differences.

Note 2: The difference between the total approved budgets for 2018–19 and 2019–20 is partly due to the projects entering the MPR in 2019–20 (Future Frigates, Future Subs, Combat Recon. Vehicles, MQ-4C Triton, and Battlefield Command System) not contributing to the total budget figure for 2018–19.

Source: ANAO analysis of the 2018–19 and 2019–20 PDSSs.

### *In-year forecast and actual expenditure*

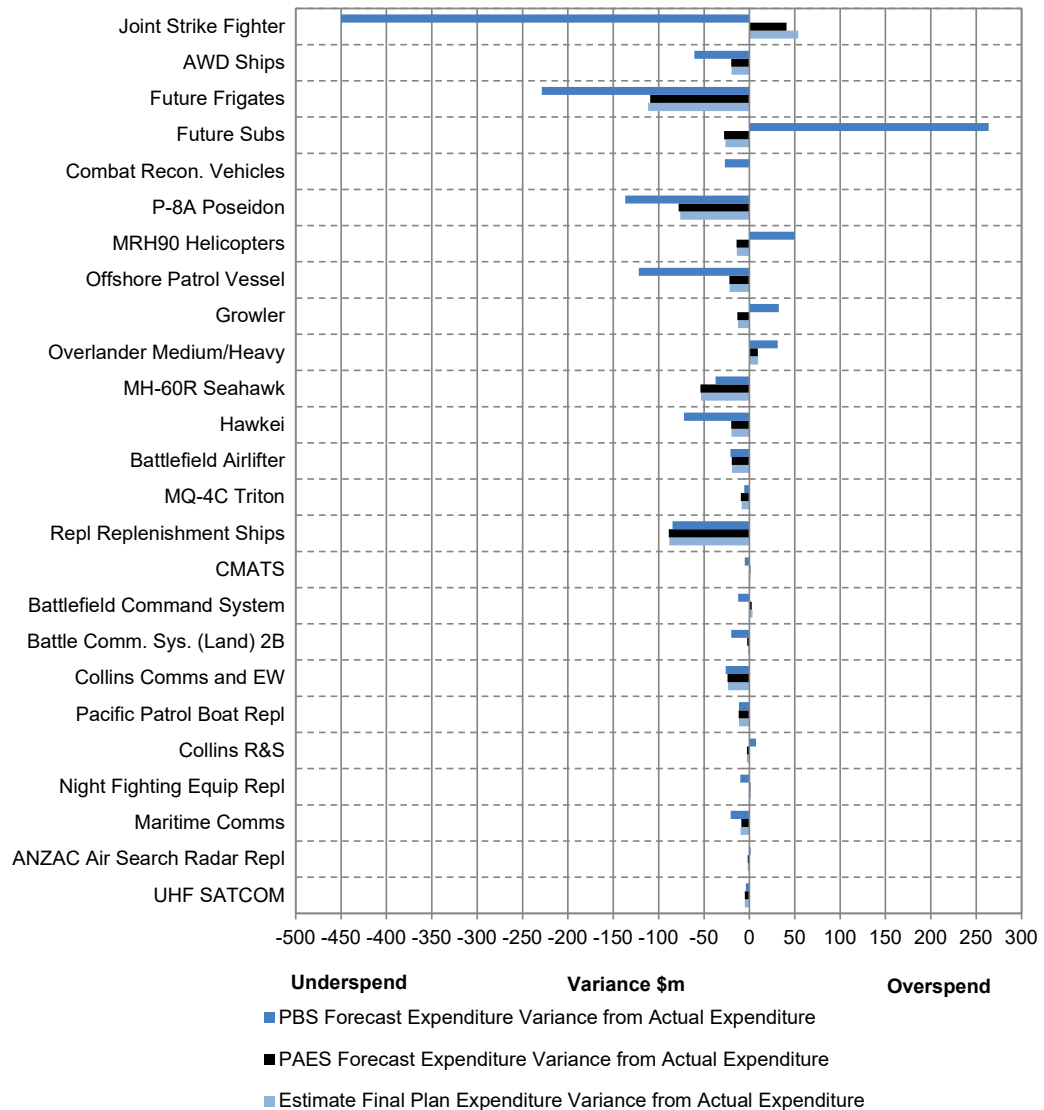
2.20 Accurately forecasting and managing budget expenditure is an important element in the management of a portfolio of projects. Figure 5, below, sets out the expenditure forecasting performance of each project against actual expenditure in 2019–20. In total, actual expenditure for the 25 projects at 30 June 2020 was \$5651.9 million. This is compared against an initial Portfolio Budget Statements (PBS) forecast expenditure of \$6621.6 million, a mid-year Portfolio Additional Estimates Statements (PAES) forecast of \$6171.7 million, and a final forecast of \$6110.2 million (Final Plan, approved during May 2020).

2.21 Figure 5 highlights the following in-year variances occurred in the following projects:

- Joint Strike Fighter (expenditure of \$1938.4 million compared to \$2388.6 million PBS, \$1897.6 million PAES and \$1884.6 million Final Plan estimates) – the variation reflects a refinement of the in-year budget based on improved forecast expenditure and schedule information from the US-based Joint Program Office.
- Future Frigates (expenditure of \$263.6 million compared to \$492.3 million PBS, \$372.9 million PAES and \$375.2 million Final Plan estimates) – the variation is due to delays against the Head Contract.
- Future Submarines (expenditure of \$553.1 million compared to \$289.3 million PBS, \$580.9 million PAES and \$579.5 million Final Plan estimates) – the variation is due to Government approval to enter into the Strategic Partnering Agreement and Submarine Design Contract with Naval Group, as well as reprogramming of contract activities.
- P-8A Poseidon (expenditure of \$223.5 million compared to \$360.3 million PBS, \$301.6 million PAES and \$299.8 million Final Plan estimates) – the variation is due to early payment for the final aircraft in 2018–19, and a deliberate approach by Air Force to manage acquisition budget requirements in 2019–20 by delaying a range of payments to future financial years.
- Offshore Patrol Vessel (expenditure of \$227.2 million compared to \$349.2 million PBS, \$249.2 million PAES and \$248.9 million Final Plan estimates) – the variation is due to the reprogramming of activities as well as delays in contractual milestones and underspend on Project Office costs and government furnished equipment.
- Repl Replenishment Ships (expenditure of \$107.1 million compared to \$191.8 million PBS, \$196.0 million PAES and \$195.3 million Final Plan estimates) – the variation is due to the closure of the naval shipyard in Spain and nationwide as a result of the COVID-19 pandemic, as well as Contract Change Proposals and delays in delivery of the Close In Weapon System.



**Figure 5: In-year (2019–20) projects' forecast expenditure performance compared to actual expenditure (\$m)**



Sources: ANAO analysis of the 2019–20 PDSSs and Defence Portfolio Budget Statements.

## Schedule performance analysis

2.22 Defence data continues to show that schedule performance is a key issue in delivering and sustaining equipment.<sup>109</sup> Project schedule slippage can have the effect of introducing or exacerbating a capability gap, or requiring an extension to the planned withdrawal date for those platforms being replaced.<sup>110</sup>

### Time Elapsed and Project Maturity

2.23 Based on the findings of the *Defence Procurement Review 2003*<sup>111</sup>, in 2005 Defence began to increase the proportion of MOTS acquisitions, which are generally lower risk projects and therefore more likely to meet schedule timelines. Analysis of the available performance information highlights that the selection of MOTS projects assists in reducing risk during project acquisition, where Project Maturity is more advanced at Second Pass Approval than developmental projects. For example, CMATS is a developmental project that has experienced significant schedule slippage; its maturity score at Second Pass Approval was 31 points, below the expected benchmark of 35 points for projects at Second Pass Approval. In contrast, MH-60R Seahawk is a MOTS project that has not experienced any slippage to date; its maturity score at Second Pass Approval was 37 points.

2.24 Figure 6, below, sets out each project's Time Elapsed against Project Maturity.<sup>112</sup> Time Elapsed lags Project Maturity for 16 of 23<sup>113</sup> projects. Similar to the analysis of Budget Expended and Project Maturity, at paragraphs 2.10 to 2.13, this pattern is expected as projects will generally score 50 per cent of their Project Maturity at Second Pass Approval, when Time Elapsed is zero (for the purposes of the ANAO's analysis in this report). The lag is most pronounced in MOTS and Australianised MOTS acquisitions, including the Offshore Patrol Vessel, Combat Recon. Vehicles, and Night Fighting Equip Repl projects. The exception is MQ-4C Triton, a developmental project where the lag in Time Elapsed against Project Maturity reflects the project's extensive schedule to FOC, driven by the aircraft production schedules.

2.25 For the 7 projects where Time Elapsed lags Project Maturity by 20 per cent or more, this generally reflects projects at relatively early stages of acquisition processes, including proceeding through design activities, or awaiting significant amounts of their major equipment to be constructed and delivered. There is one significant exception to this:

- Night Fighting Equip Repl, where this project's FOC date anticipates the purchase of a second tranche of equipment, which has not yet been approved. The currently approved tranche of equipment is MOTS products that were largely delivered at 30 June 2020, leading the maturity of the approved project scope to exceed the approved schedule.

2.26 For the seven projects where Time Elapsed leads Project Maturity, there were no instances where this difference was significant (20 per cent or more). The greatest variance was for the Battlefield Airlifter project, where Time Elapsed leads Project Maturity by 16 per cent. The project

109 See Table 2 in **Part 1** of this report.

110 Extensions to planned withdrawal dates may involve additional costs relating to the maintenance and servicing of equipment, and may give rise to consideration of life of type extensions (LOTE).

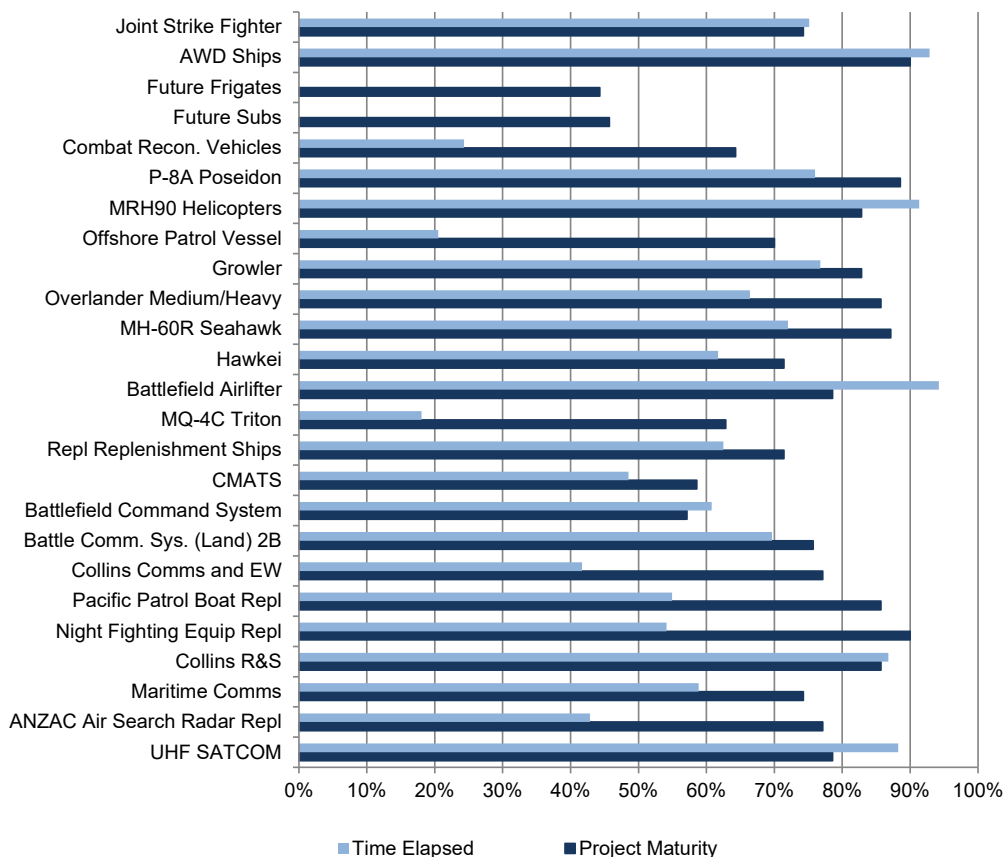
111 M Kinnaird, *Defence Procurement Review 2003*, Department of Defence, Canberra, 2003.

112 Refer to footnote 14 for more detail.

113 Future Frigates and Future Subs are excluded from this analysis as they do not yet have FOC milestones approved by Government.

anticipates delivery of some requirements after the achievement of the FOC milestone, including some training equipment, aircraft upgrades, the Structural Substantiation Program, and the Missile Approach Warning System. Defence is revalidating the business case and execution strategy for this acquisition activity during 2020.

**Figure 6: Time Elapsed and Project Maturity**



Note: Future Frigates and Future Subs are yet to have FOC milestones approved by Government.

Source: ANAO analysis of the 2019–20 PDSSs.

## Schedule slippage and acquisition type by approval date

2.27 As noted in paragraphs 35 to 37, the ANAO compares project slippage against the Defence classification of projects as Military Off-The-Shelf (MOTS), Australianised MOTS, or developmental, as these classifications are a general indicator of the difficulty associated with the procurement process. Prima facie, the more developmental in nature a project is, the greater the schedule risk and therefore the greater the need for more robust planning by Defence<sup>114,115</sup>.

### Project classification

2.28 Table 9 below provides information on the classification of all 54 Major Projects included in the MPR since its inception, and the year of approval (generally second pass) for each Major Project. The table indicates that of the 54 Major Projects:

- 13 projects (24 per cent) were developmental;
- 25 projects (46 per cent) were Australianised MOTS (AMOTS); and
- 16 projects (30 per cent) were MOTS.

**Table 9 – Project year of approval and acquisition type**

Project	Year of Approval	Acquisition type
HF Modernisation	1996	Developmental
Hornet Upgrade	1998	AMOTS
Bushmaster Vehicles	1998	AMOTS
ARH Tiger Helicopters	1999	AMOTS
FFG Upgrade	1999	Developmental
Collins R&S	2000	AMOTS
Wedgetail	2000	Developmental
Hw Torpedo	2001	MOTS
Collins RCS	2002	AMOTS
Armadales	2002	AMOTS
Hornet Refurb	2003	MOTS
Air to Air Refuel	2003	Developmental
ANZAC ASMD 2A	2003	AMOTS
SM-2 Missile	2004	AMOTS
MRH90 Helicopters	2004	AMOTS
ANZAC ASMD 2B	2005	Developmental

114 The *Defence Procurement Review 2003*, also known as the Kinnaird Review, observed that off-the-shelf equipment can usually be delivered faster than equipment requiring development, and proposed that off-the-shelf alternatives must be one of the options put to government when seeking approval to procure a capability. M Kinnaird, *Defence Procurement Review 2003*, Department of Defence, Canberra, 2003.

115 The 2015 *First Principles Review* identified technical risk as the major cause of post Second Pass Approval schedule slippage, and observed that schedule slippage causes cost escalation: D Peever, *First Principles Review: Creating One Defence*, Department of Defence, Canberra, 2015, p. 34 and p. 92. Defence's implementation of the Review was examined in Auditor-General Report No.34 of 2017–18 *Defence's Implementation of the First Principles Review*.

Project	Year of Approval	Acquisition type
Stand Off Weapon	2005	AMOTS
C-17 Heavy Airlift	2006	MOTS
Super Hornet	2007	MOTS
AWD Ships	2007	AMOTS
LHD Ships	2007	AMOTS
Overlander Light	2007	AMOTS
Next Gen Satellite	2007	MOTS
UHF SATCOM	2009	MOTS
155mm Howitzer	2009	MOTS
Joint Strike Fighter	2009	Developmental
Battle Comm. Sys.	2009	AMOTS
Additional Chinook	2010	MOTS
C-RAM	2010	MOTS
MH-60R Seahawk	2011	MOTS
LHD Landing Craft	2011	AMOTS
Battle Comm. Sys. (Land) 2A	2011	MOTS
Battlefield Airlifter	2012	MOTS
Growler	2013	AMOTS
Maritime Comms	2013	AMOTS
Overlander Medium/Heavy	2013	AMOTS
BMS	2013	AMOTS
P-8A Poseidon	2014	MOTS
HATS	2014	AMOTS
CMATS	2014	Developmental
Battle Comm. Sys. (Land) 2B	2015	Developmental
Collins Comms and EW	2015	MOTS
Additional MRTT	2015	AMOTS
Hawkei	2015	Developmental
Repl Replenishment Ships	2016	AMOTS
Pacific Patrol Boat Repl	2016	MOTS
Night Fighting Equipment Repl	2016	MOTS
ANZAC Air Search Radar Repl	2017	Developmental
Battlefield Command System	2017	Developmental
Offshore Patrol Vessel	2017	AMOTS
Combat Recon. Vehicles	2018	AMOTS
Future Frigates	2018	AMOTS
MQ-4C Triton	2018	Developmental
Future Subs	2019	Developmental

2.29 Table 9 (above) and Figure 7 (below) indicate that developmental projects became less common after 2005. Based on the findings of the Defence Procurement Review 2003 (Kinnaird Review)<sup>116</sup>, in 2005 Defence began to increase the proportion of MOTS acquisitions, which are generally lower risk projects and therefore more likely to meet schedule timelines.<sup>117</sup> Table 9 and Figure 7 also indicate a more recent trend, where developmental projects have become more common since 2014. Of the 17 Major Projects which have received government approval since 2014:

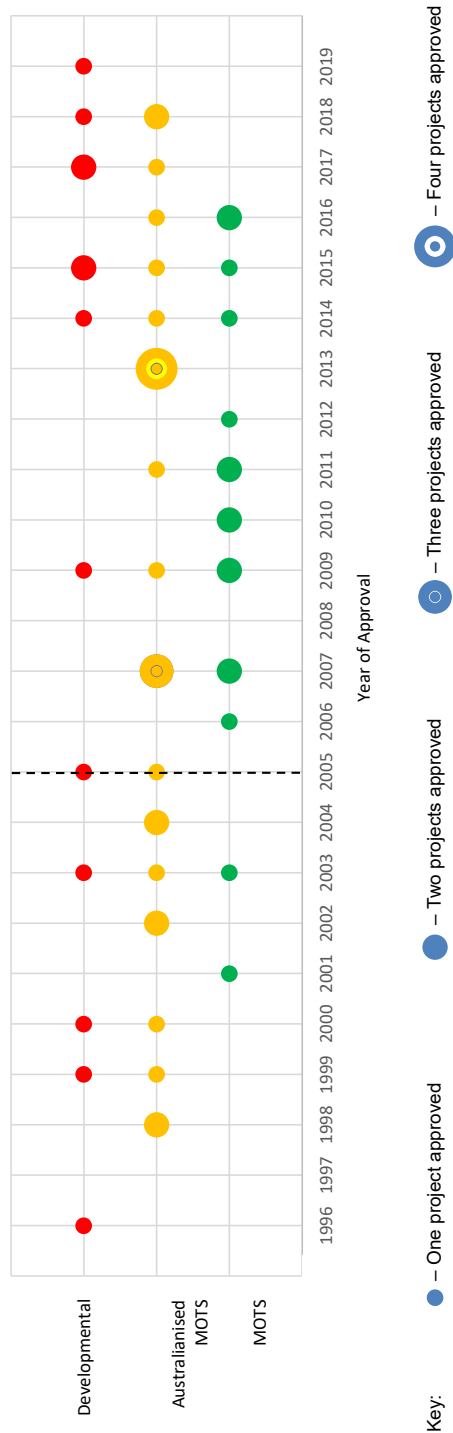
- 7 projects (41 per cent) were developmental;
- 6 projects (35 per cent) were Australianised MOTS; and
- 4 projects (24 per cent) were MOTS.

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<sup>116</sup> Discussed in footnote 114.

<sup>117</sup> Auditor-General Report No.19 of 2019–20 *2018–19 Major Projects Report*, paragraph 2.27.

Figure 7 – Acquisition type and year of approval



Note 1: Projects to the left of the dotted line (at 2005) were approved prior to implementation of the Kinnaird reforms in 2005. Projects to the right were approved following the reforms being implemented.

## *Schedule slippage and acquisition type*

2.30 The challenge of gaining a full understanding of the complexities of developmental aspects of projects at Second Pass Approval is evident by the extent of slippage over time. Figure 8, below, illustrates the total schedule slippage<sup>118</sup> since Second Pass Approval for 23 of the selected projects in this MPR.<sup>119</sup> It also depicts the acquisition type and places projects in order of government approval. Figure 9, below, illustrates the total schedule slippage for the 27 projects that have exited the review.<sup>120</sup>

2.31 Figure 9 shows that the inclusion of MOTS acquisitions contributed, prima facie, to a reduction in schedule slippage in the Major Projects portfolio. For projects that have exited the MPR, MOTS projects report an average of 14 months of slippage per project, while Australianised MOTS projects report an average of 39 months and developmental projects report an average of 97 months. Decisions on whether to undertake developmental projects should be considered on a risk basis.<sup>121</sup> In this context, the consideration of risk should be holistic and weigh up the level of capability to be acquired against potential risks relating to cost and schedule.

2.32 Figures 8 and 9 illustrate that older projects have experienced the most slippage. These projects tended to be more developmental (complex) in nature and typically experienced schedule slippage in the past, and have often continued to do so. This demonstrates an ongoing trend of slippage in historically late projects, which is more pronounced in older projects. This trend is also visible, but less prominent, in newer projects.

2.33 Two recent developmental projects, Hawkei and ANZAC Air Search Radar Repl, are yet to experience slippage to their FOC dates. However, these projects have experienced slippage to design reviews, test programs, or material release milestones. In the case of Hawkei, there was 24 months slippage to the Production Reliability Acceptance Test, leading to 17 months slippage to Initial Materiel Release, which was declared in May 2020 with four caveats.<sup>122</sup> In contrast, recent MOTS projects, Pacific Patrol Boat Repl and Night Fighting Equip Repl, have adhered more closely to their design and materiel release schedules with only minor variances. This indicates that although developmental projects currently in the MPR are not reporting significantly more slippage to FOC than MOTS projects, developmental projects still carry a higher level of technical risk.<sup>123</sup>

2.34 While it is not possible to predict the full extent of slippage a project will experience, Figure 9 analysis has been provided to highlight changes since the Kinnaird Review. Fifteen post Kinnaird and 12 pre Kinnaird projects have exited the MPR. Total slippage of the 15 post Kinnaird projects is 24.8 years. Total slippage of the 12 pre Kinnaird projects is 70.7 years. One of the 15 post Kinnaird projects was a developmental acquisition and four of the 12 pre Kinnaird acquisitions were developmental.

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118 Refer to footnote 24.

119 Future Frigates and Future Subs are excluded as they do not yet have FOC dates approved by Government.

120 Hornet Refurb and BMS are excluded as they did not have FOC dates approved by Government.

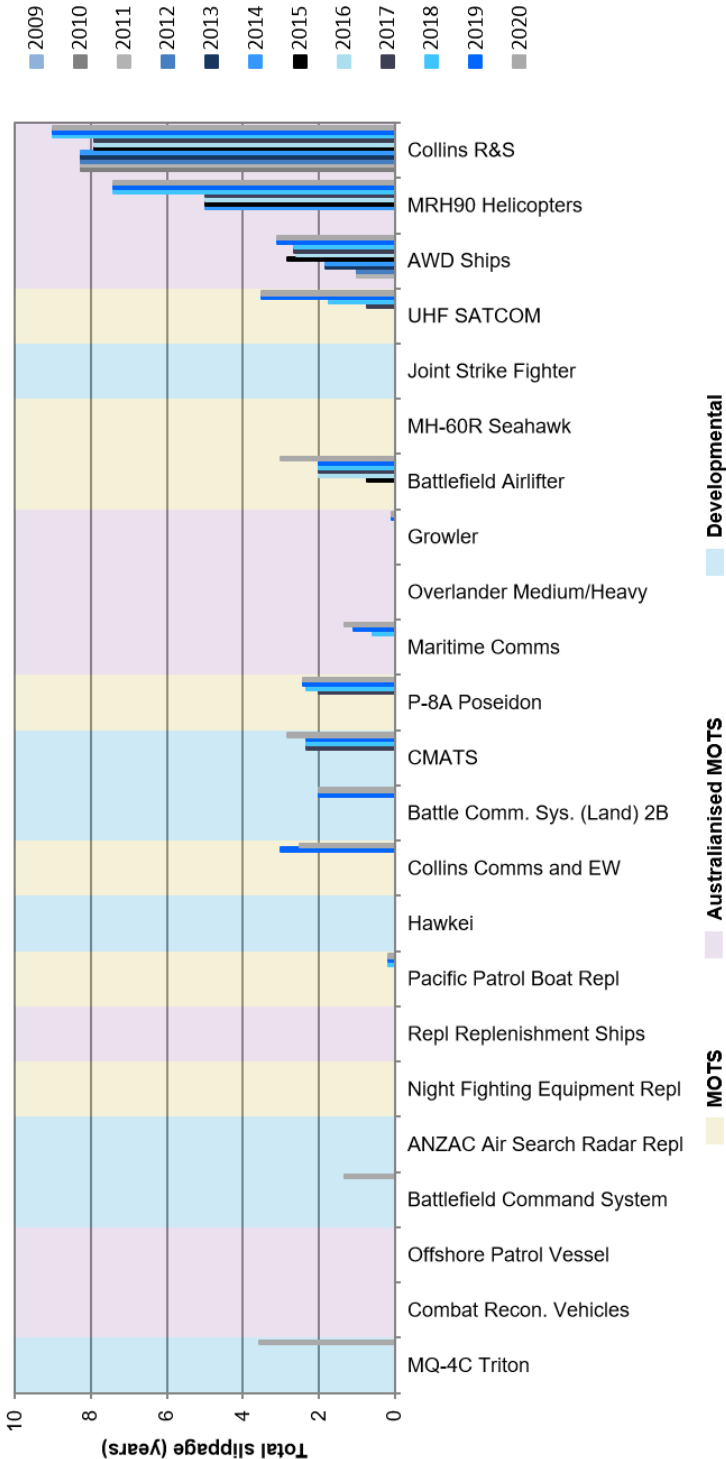
121 Of the five projects added to the MPR in 2019–20, three are developmental (Future Subs, MQ-4C Triton, and Battlefield Command System). Of these projects, MQ-4C Triton has experienced 43 months of schedule slippage and Battlefield Command System has experienced 16 months of schedule slippage. Future Subs does not yet have an FOC milestone approved by Government and is not shown in Figure 8.

122 See the Hawkei PDSS in **Part 3** of this report.

123 As discussed in paragraph 2.29, developmental projects have become more common since 2014.



Figure 8: Current Major Projects — Total slippage post Second Pass Approval and acquisition type by approval date (years)



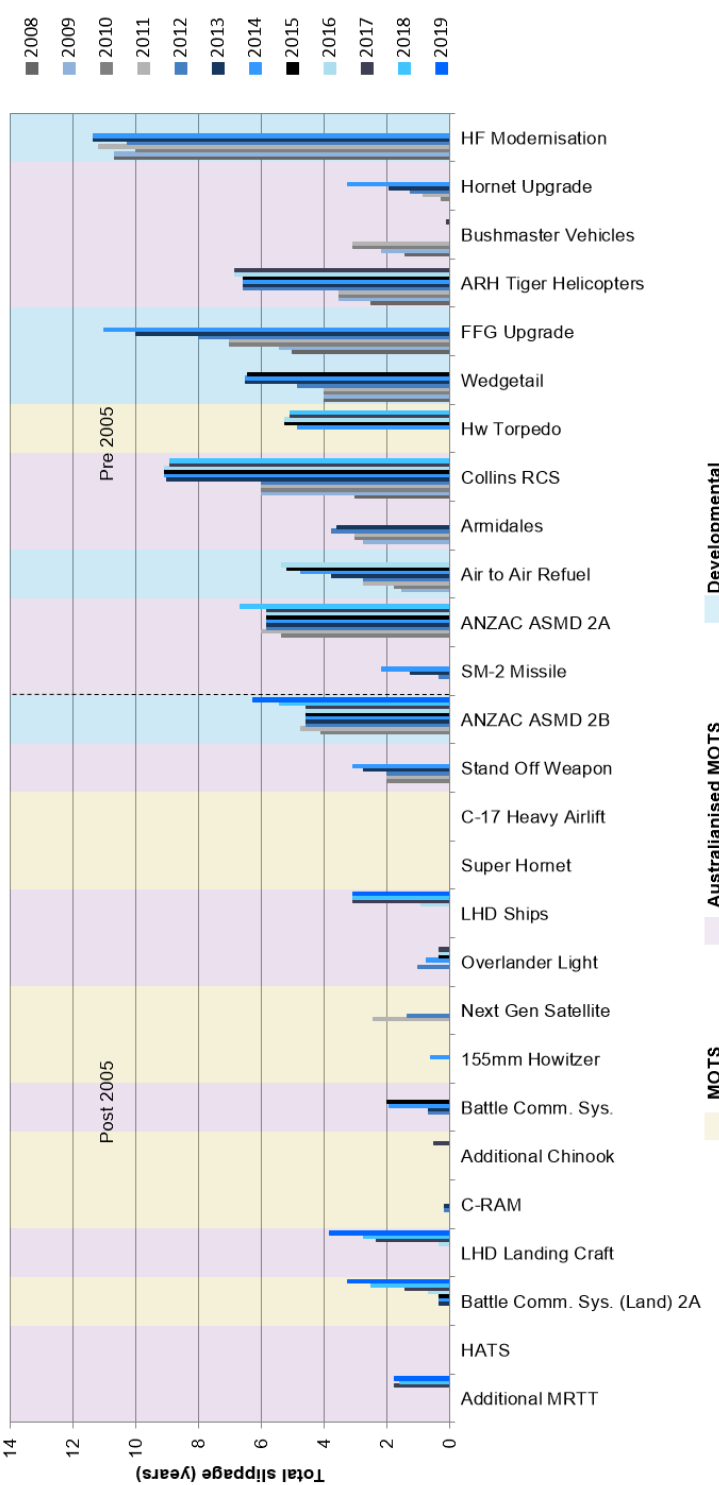
Note 1: The order of the projects is from latest to earliest approved. All project slippage relates to FOC dates. The Future Frigates and Future Subs projects do not yet have FOC dates.

Note 2: Additional scope approved following Second Pass Approval has caused slippage for: P-8A Poseidon (24 months), Collins Comms and EW (30 months), Pacific Patrol Boat Repl (2 months), and Collins R&S (13 months). The additional scope for these projects explains 69 months of the 507 months of total slippage reported in 2019–20.

Note 3: Only one project in the 2019–20 MPR, Collins R&S, was approved prior to the Kinnaird reforms in 2005.

Source: ANAO analysis of the PDSSs in Major Projects Reports.

Figure 9: Exited Major Projects — Total slippage post Second Pass Approval and acquisition type by approval date (years)



Note 1: The order of the projects is from latest to earliest approved. All project slippage relates to FOC dates. The Hornet Refurb and BMS projects did not have FOC dates.  
Note 2: The slippage shown for Next Gen Satellite relates to the final capability milestones at the time. By the time it reached FOC, a new final capability milestone had been introduced which reduced this slippage.  
Note 3: Projects to the left of the dotted line were approved following implementation of the Kinnaird reforms in 2005. Projects to the right were approved prior to the reforms being implemented.  
Source: ANAO analysis of the PDSSs in Major Projects Reports.

## Schedule performance

2.35 The figures and tables that follow illustrate:

- the original and 30 June 2020 forecasts for achieving FOC;
- in-year schedule changes to achieving FOC; and
- total schedule slippage across the Major Projects.

### *Original and 30 June 2020 Final Operational Capability forecasts*

2.36 Figure 10, below, presents information on the selected projects' original and 30 June 2020 forecasts for achieving FOC. The total schedule slippage<sup>124</sup> for the 25 Major Projects to date is 507 months compared to the initial prediction when approved by government. This represents a 21 per cent increase on the approved schedule. Of the 25 projects in the 2019–20 report, 14 have experienced schedule slippage and two do not have FOC dates approved by Government. A further three projects have experienced delays from earlier FOC forecasts, but have not slipped past the original FOC date approved by Government (Joint Strike Fighter, Overlander Medium/Heavy, and Repl Replenishment Ships).

2.37 Total schedule slippage across the Major Projects was 507 months in 2019–20. This is 144 months lower than the figure of 651 months reported for 2018–19 in the MPR. The difference is mainly due to the exit of projects with significant slippage — including ANZAC ASMD 2B, LHD Landing Craft, Battle Comm. Sys. (Land) 2A, and LHD Ships — which reduced the total accumulated slippage by 218 months. This was offset by in-year slippage for MQ-4C Triton (associated with changes in the planned aircraft delivery schedule) and Battlefield Airlifter (with Defence revalidating the business case for the delivery of this project's remaining scope). These two projects, combined, added 55 of the 68 months schedule slippage experienced in 2019–20. Additionally, Battlefield Command System added 12 months of slippage to the total of 507 months; the slippage occurred prior to its inclusion in the MPR in 2019–20.

2.38 The reasons for schedule slippage often require a deep understanding of project technical elements and a realistic assessment of the capacity of the private sector to deliver in the expected timeframe. A project office's ability to gain access to the platform for upgrading can also result in schedule delay (for example, Maritime Comms and Collins R&S).<sup>125</sup>

2.39 A closer examination of the reasons for schedule slippage demonstrates the importance of initial assessments of project complexity. Past experience indicates that a key factor is whether a project is MOTS, Australianised MOTS or developmental<sup>126</sup>, as discussed at paragraphs 2.30–2.34. One project, MRH90 Helicopters<sup>127</sup>, was originally misclassified as MOTS. The project was reclassified by Defence to Australianised MOTS (i.e. more developmental) subsequent to

124 Schedule slippage is defined in footnote 24.

125 See the ANZAC ASMD 2B and Collins R&S PDSSs in **Part 3** of this report.

126 Auditor-General Report No.6 2013–14 *Capability Development Reform*, paragraphs 9.1 to 9.4, pp. 198–199.

127 Further information on MRH90 Helicopters can be found in Auditor-General Reports No.48 2008–09, *Planning and Approval of Defence Major Capital Equipment Projects*, pp. 84, 90 and 133; No.52 2011–12 *Gate Reviews for Defence Capital Acquisition Projects*, pp. 86–87 and pp. 130–133; and No.52 2013–14 *Multi-Role Helicopter Program*.

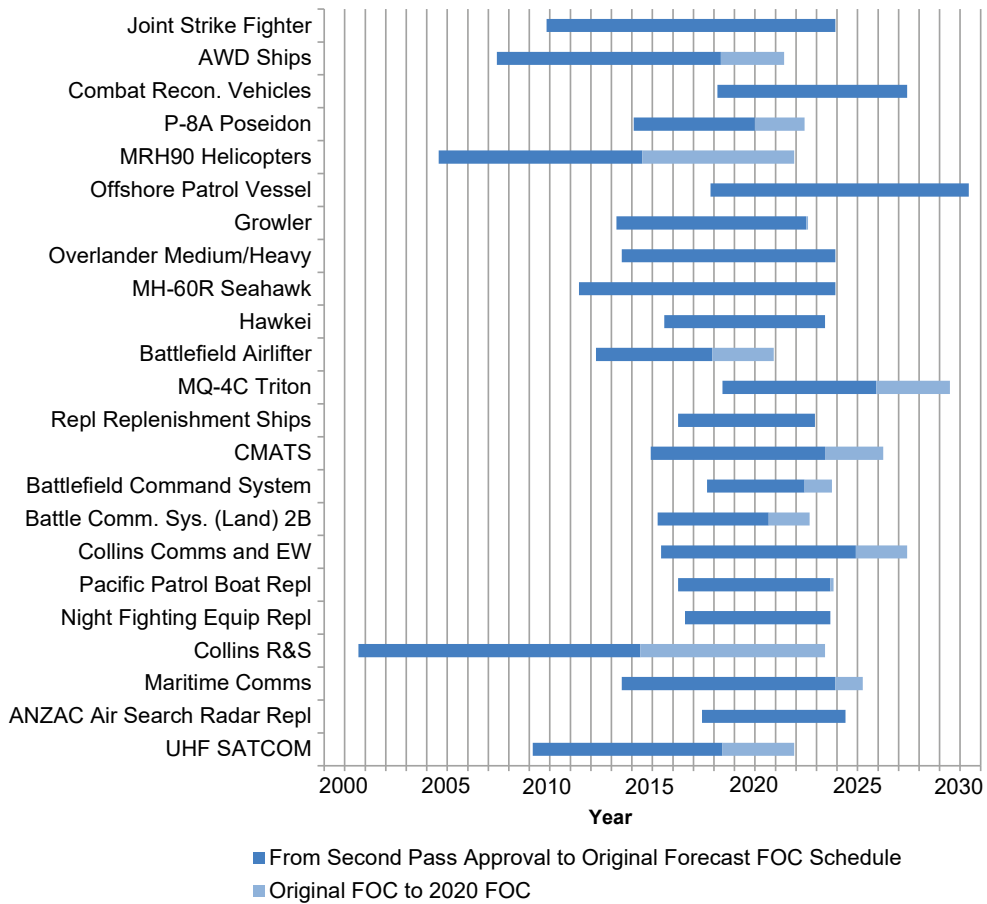
Second Pass Approval.<sup>128</sup> This project has experienced extended schedule slippage. Another project, UHF SATCOM, is still classified as MOTS but includes the development of significant amounts of software. Delays in software development have led to 42 months of slippage to the FOC milestone.

2.40 Figure 10 indicates that no projects are currently forecasting an FOC date earlier than originally approved. However, a number of projects have experienced both schedule recovery and schedule delay that has offset that schedule recovery. Projects fitting this pattern are Joint Strike Fighter, AWD Ships, Growler, Overlander Medium/Heavy, Repl Replenishment Ships, Collins Comms and EW, and Collins R&S. In the case of Joint Strike Fighter, Overlander Medium/Heavy, and Repl Replenishment Ships, their schedule recovery and schedule delay is equal such that all three projects are currently forecasting the achievement of FOC as originally approved by Government. In total, these seven projects have contributed 36 months of schedule recovery to the Major Projects. Previously, the ANAO's analysis (for example in Table 2 and Figure 8) has excluded this effect so as to report on the total slippage experienced by the Major Projects. This year the analysis has been adjusted to exclude delays to a project's recovered schedule that do not result in slippage past the original government approved date.

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128 Similarly, the ARH Tiger Helicopters project, which exited the Major Projects Report in 2016–17, was originally misidentified as MOTS by Defence and was subsequently reclassified as being more developmental. See Auditor-General Report No.11 2016–17 *Tiger—Army's Armed Reconnaissance Helicopter*, paragraphs 1.7 and 2.3.

**Figure 10: Projects' original and 30 June 2020 FOC forecasts**



Source: ANAO analysis of the 2019–20 PDSSs.

### *In-year schedule performance*

2.41 In 2019–20, there was schedule slippage of 68 months in the forecast achievement of FOC across the 23 Major Projects<sup>129</sup>, as shown in Figure 11 below. In-year project performance, measured by slippage over the last 12 months, may not reflect the project trend.

2.42 In-year schedule slippage occurred for the following 5 projects<sup>130</sup> (the explanation provided, drawn from the 2019–20 PDSSs, may also include the reasons for prior slippage):

- Battlefield Airlifter — FOC has been delayed while Defence re-evaluates the business case for delivery of this project's remaining capability.
- MQ-4C Triton— the variance reflects the alignment of the project's FOC schedule with the aircraft production schedule.
- CMATS — the variance reflects the incorporation of additional system automation requirements.
- Battlefield Command System — the variance reflects the time taken to establish platform integration contracts, availability of Government Furnished Materiel, delays to materiel and data from interdependent projects, and contractor performance.
- Maritime Comms — the variance reflects alignment of the project schedule with the maintenance schedule for the Anzac Class frigates.

2.43 Further, the Joint Strike Fighter project saw a delay of two months from the forecast reported in 2018–19. This has not been included as slippage in the number above or in Figure 11 below, as this delay did not see the project slip past the FOC date originally approved by Government. Rather, this project was previously forecasting an earlier date of achievement compared to the original approval.

2.44 Additionally, one project shows recovery of previously reported slippage:

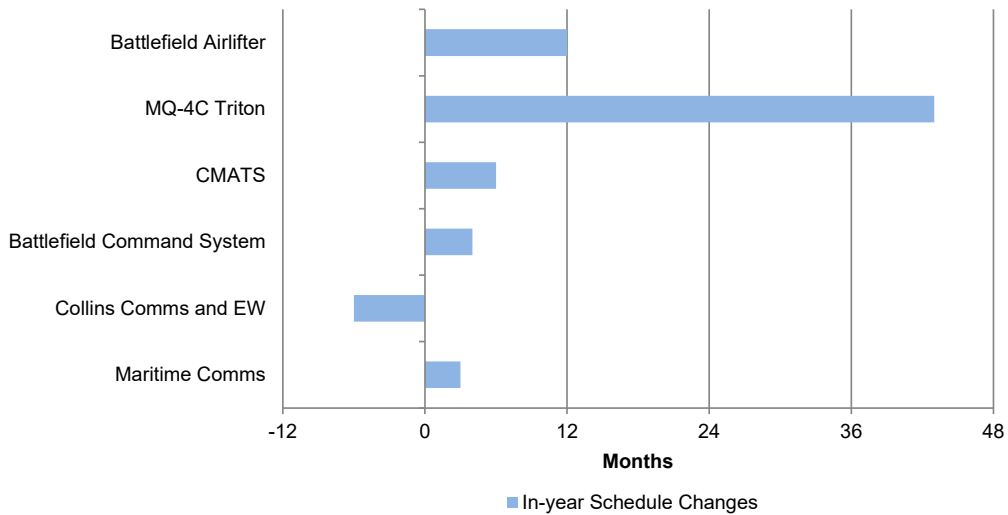
- Collins Comms and EW — this project's schedule is aligned with the docking schedule for the Collins Class submarines.

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129 Future Frigates and Future Subs are excluded from this analysis as they do not yet have FOC milestones approved by Government.

130 In the *Statement by the Secretary of Defence* found in **Part 3** of this report, the Secretary also makes reference to additional information on achieved milestone dates for the Future Subs, P-8A Poseidon, Hawkei, Repl Replenishment Ships, and Night Fighting Equip Repl projects.

**Figure 11: In-year (2019–20) schedule slippage and recovery**



Note: Defence's PDSSs indicate that 16 of the 25 Major Projects did not record changes to their FOC dates this year. The Joint Strike Fighter project changed its FOC date but without slipping past the date originally approved by Government, and has not been included in this figure. Future Frigates and Future Subs do not yet have FOC dates approved by Government.

Source: ANAO analysis of the 2019–20 PDSSs.

2.45 Project delays may indicate unanticipated problems with project progress or optimism in previous forecasting, regardless of whether the delay makes the project later than originally approved by Government. For example, in 2018–19 the Repl Replenishment Ships project delayed its FOC forecast by seven months based on integrated planning producing a more mature understanding of FOC activities, though the later FOC forecast remained within the window originally approved by Government. All delays should be monitored to ensure that a project remains on track and any issues can be managed.

#### *Schedule performance by year of entry to MPR*

2.46 Table 10, below, shows the accumulated schedule slippage of the Major Projects included in the 2019–20 MPR.<sup>131</sup> The table shows that over half the total schedule slippage across the Major Projects covered in the 2019–20 MPR (42.3 years or 507 months) comprises slippage from the four oldest projects, approved prior to 2010.

2.47 Table 10 also shows that 21 per cent (108 of 507 months) of the total schedule slippage across the 2019–20 Major Projects is attributed to the sole remaining project approved prior to the Kinnaird reforms, Collins R&S.

<sup>131</sup> Tables 4 and 5, on pages 15 and 16 respectively, report on the slippage for each project that has been in the MPR since 2007–08.

**Table 10: Project slippage**

Project	Second Pass Approval date	No. of months between approval and original FOC date	No. of months between approval and 30/6/20 FOC date	Slippage between original FOC and 30/6/20 FOC date (months)
Collins R&S	September 2000	165	273	108
MRH90 Helicopters	August 2004	119	208	89
AWD Ships	June 2007	131	168	37
UHF SATCOM	March 2009	111	153	42
Joint Strike Fighter	November 2009	169	169	0
MH-60R Seahawk	June 2011	150	150	0
Battlefield Airlifter	April 2012	68	104	36
Growler	April 2013	111	112	1
Maritime Comms	July 2013	125	141	16
Overlander Medium/Heavy	July 2013	125	125	0
P-8A Poseidon	February 2014	71	100	29
CMATS	December 2014	102	136	34
Battle Comm. Sys. (Land) 2B	April 2015	65	89	24
Collins Comms and EW	June 2015	114	144	30
Hawkei	August 2015	94	94	0
Repl Replenishment Ships	April 2016	80	80	0
Pacific Patrol Boat Repl	April 2016	89	91	2
Night Fighting Equip Repl	August 2016	85	85	0
ANZAC Air Search Radar Repl	June 2017	84	84	0
Battlefield Command System	September 2017	57	73	16
Offshore Patrol Vessel	November 2017	151	151	0
Combat Recon. Vehicles	March 2018	111	111	0
MQ-4C Triton	June 2018	90	133	43
<b>Total - All Projects With Slippage</b>		<b><u>2467</u></b>	<b><u>2974</u></b>	<b><u>507</u></b>

Note: The Future Frigates and Future Subs projects are not included as they do not yet have FOC dates approved by Government.

Source: ANAO analysis of the 2019–20 PDSSs.



## Capability performance analysis

2.48 Defence defines capability as the power to achieve a desired operational effect in a nominated environment, within a specified time, and to sustain that effect for a designated period.<sup>132</sup> An operational effect is achieved by combining the nine Fundamental Inputs to Capability — organisation, command and management, personnel, collective training, major systems, facilities and training areas, supplies, support, and industry<sup>133</sup> — and undertaking designated operations.

2.49 In acquiring Defence platforms and systems, a range of documentation (including capability definition, operational concept, function and performance specification, and Test and Evaluation Master Plans) is developed, which establishes the detailed requirements/performance attributes to be achieved.

2.50 The Defence PDSSs report that 19 projects in this year's MPR will deliver all of their key capability requirements. Defence's assessment indicates that some elements of the capability required may be 'under threat', but the risk is assessed as 'manageable'. The five project offices experiencing challenges with expected capability delivery (2018–19: five) are Joint Strike Fighter, MRH90 Helicopters, Hawkei, Battlefield Command System and Battlefield Airlifter. One project office (AWD Ships) reports that it is unable to deliver all of the required capability by FOC.

2.51 Since the 2009–10 MPR, capability reporting<sup>134</sup> has been based on Defence's prediction of the final capability that would be achieved on the basis of deliverables and/or activities completed. This assessment of capability performance (Expected Capability) is measured against the Materiel Release Milestones (MRMs) and Completion Criteria specified in each project's Materiel Acquisition Agreement (MAA). This is distinct from an assessment of whether milestones will be achieved on schedule. As the ANAO has previously noted, this data involves making certain assumptions in forecasting achievements and is therefore subjective in approach.<sup>135</sup>

2.52 For example, the Battlefield Airlifter project reported a 100 per cent Green capability prediction at its inclusion in the MPR in 2013–14. However, the 2013–14 PDSS also reported major risks relating to capability deficiencies arising from the US Government divesting from the program, with Australia no longer able to rely on the US Air Force processes. These risks have continued to affect the project, with a mature training system and a number of baseline capability requirements now not expected to be delivered until after FOC. These capability issues were reported in the PDSS Pie Chart for the first time in 2018–19, indicating that the earlier level of confidence in the ability to achieve the required capability may have been overly optimistic.<sup>136</sup>

2.53 The inherent subjectivity of the capability prediction is also apparent through a comparison of a platform's predicted hours in service (sometimes referred to as 'rate of effort')

132 Department of Defence, *Capability Life Cycle Manual*, Defence, Canberra, 2020, p. A-2.

133 *ibid* p. 13.

134 As per the 2019–20 MPR Guidelines, a project is defined as the acquisition or upgrade of Specialist Military Equipment, which normally excludes facilities and other Fundamental Inputs to Capability. The 2019–20 MPR Guidelines also note that the MPR may report on associated sustainment activities (where applicable).

135 Auditor-General Report No.17 2010–11 *2009–10 Major Projects Report*, p. 35.

136 The most recent PDSS references a number of issues that are expected to have an ongoing effect on sustainment. The aircraft has been affected by structural fatigue, difficulty obtaining spares, low availability, poor build quality and design limitations. See the Battlefield Airlifter PDSS in **Part 3** of this report.

and the actual hours achieved. For the 2019–20 financial year, Defence predicted that the MH-60R Seahawk helicopters would achieve 7200 flying hours.<sup>137</sup> In October 2020 Defence reported an estimated actual achievement of 4900 flying hours<sup>138</sup>, indicating that the platform flew for only 68 per cent of the time expected by Defence. The PDSS for the MH-60R Seahawk acquisition project reports that 100 per cent of capability is expected to be achieved. Similar discrepancies between the prediction of capability to be delivered by the acquisition project, and the actual performance of platforms in service, can be seen for other Major Projects, including the Joint Strike Fighter project (100 per cent of capability expected to be delivered with 1 per cent at risk but considered manageable, 68 per cent of planned flying hours achieved in 2019–20) and the Growler project (100 per cent of capability expected to be delivered, 70 per cent of planned flying hours achieved in 2019–20). This comparison further demonstrates that Defence's capability forecasts may be optimistic.

2.54 Over time, the JCPAA has sought the use of a more robust measure of capability performance.<sup>139</sup>

2.55 In October 2017, the JCPAA recommended that Defence 'review the procedure for the development of expected capability estimates for future Major Projects Reports. The outcomes of this review should be provided to the Committee within six months of the tabling of this report. Further, the Committee requests that Defence provide a progress report within three months of the tabling of this report.'<sup>140</sup>

2.56 Defence made a submission to the Committee in March 2018 regarding this recommendation, which advised that:

Defence will conduct a schedule baseline validation activity for the Major Projects Report projects to drive greater consistency in schedule reporting.

Once this activity is complete, Defence should be in a better position to investigate a more robust approach to measuring Capability estimates. Utilising the validated baseline data could inform:

- A simple percentage of schedule milestones *achieved* to measure progress to date. This is a quantitative assessment that relies on the maintenance of a robust project baseline, which is not dissimilar to the approach proposed by ANAO previously;
- CASG working with Force Design to identify how to measure capability, that considers all elements of Fundamental Inputs to Capability, and that is suitable for unclassified publication; and

137 Source: Department of Defence, *Defence Portfolio Budget Statements 2019–20*, Defence, Canberra, 2019, p. 60.

138 Source: Department of Defence, *Defence Portfolio Budget Statements 2020–21*, Defence, Canberra, 2019, p. 63.

139 Joint Committee of Public Accounts and Audit, Parliament of the Commonwealth of Australia, *Report 442: Inquiry into the 2012–13 Defence Materiel Organisation Major Projects Report*, (2014), pp. 37–39.

Joint Committee of Public Accounts and Audit, Parliament of the Commonwealth of Australia, *Report 458: Defence Major Projects Report (2014–15)*, (2016), pp. 48–49.

140 Joint Committee of Public Accounts and Audit, Parliament of the Commonwealth of Australia, *Report 468: Defence Major Projects Report (2015–16)*, (2017), Recommendation 1, p. vii.

- Defence is working towards a new whole of organisational reporting system (the Enterprise Resource Planning (ERP) System) which is expected to roll-out in Financial Year 2020-21. CASG will endeavour to incorporate the work conducted with Force Design on measuring capability.<sup>141</sup>

2.57 In September 2018, the JCPAA noted that ‘Materiel Capability Delivery Performance charts continue to be ambiguous in displaying actual current capability levels.’<sup>142</sup>

2.58 Defence advised the ANAO in November 2018 that partial progress had been made on its schedule baseline validation activity discussed in paragraph 2.56. The ANAO notes that a measurement of schedule milestones will not necessarily reflect a measurement of capability delivered.

2.59 The Deputy Secretary CASG advised the JCPAA in a public hearing on 27 May 2020 that:

I acknowledge the issues of the National Audit Office and would like to work with them, as we indicated in our submission, by perhaps reviewing the report and the way in which we articulate the information.<sup>143</sup>

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141 Department of Defence, written submission to the Joint Committee of Public Accounts and Audit, Inquiry into the 2016-17 Defence Major Projects Report, p. 1.

142 Joint Committee of Public Accounts and Audit, Parliament of the Commonwealth of Australia, *Report 473: Defence Major Projects Report (2016-17)*, (2018), p. 2.

143 Commonwealth, Public Hearing, Joint Committee of Public Accounts and Audit, 27 May 2020, Mr T Fraser, Deputy Secretary, Capability Acquisition and Sustainment Group, Department of Defence, p. 3.



## Part 2. Defence Major Projects Report



## Secretary's Foreword

I am pleased to provide the 2019-20 Major Project Report, which reports on 25 Defence major capability acquisition projects, delivered by the Capability Acquisition and Sustainment Group.

The 13th annual Major Projects Report provides transparency on the progress of Defence's most expensive and complex acquisition projects. The Major Projects Report is a valuable tool to inform the Parliament and Australian public on Defence capability and related expenditure.

The 2019-20 reporting year has been a challenging year for much of Australia. Defence is proud of the way in which the Australian Defence Force, Australian Public Servants and our Industry partners have responded in the face of unprecedented natural disasters and the COVID-19 pandemic. Collectively, Defence and Defence Industry have shown strong resilience and adaptability to maintain capability delivery at a high operational tempo, and remain postured to manage the risks associated with further COVID-19 impacts on supply chains.

On 1 July 2020, Defence released the *2020 Defence Strategic Update* and the *2020 Force Structure Plan*. The *2020 Defence Strategic Update* sets out the challenges in Australia's strategic environment and their implications for Defence planning. The *2020 Force Structure* includes adjustments to Defence capability investments and provides Government with more flexibility to deliver the new strategic objectives.

Defence is committed to acquiring major capabilities such as the Attack Class submarines, Hunter Class frigates and the Joint Strike Fighter. As of 30 June 2020, Defence was managing 192 major acquisition projects with a total acquisition value of \$130.5 billion. This significant investment in defence capabilities will flow to Australian industry, creating jobs and building skills. Defence is investing in an Australian Industry Capability (AIC) program to create a more durable supply chain and strengthened sovereign defence industrial base.

The 25 projects within the 2019-20 Major Projects Report have a combined total approved budget of \$78.6 billion and a total in-year budget of \$6.1 billion. The following 2019-20 project achievements support the delivery of important capability for the Australian Defence Force:

- Joint Strike Fighter – As at 30 June 2020, Australia's total Joint Strike Fighter fleet included 26 aircraft – 21 of which were in Australia, with the remaining five located in the Pilot Training Centre in the US. In the 2019-20 financial year, Australia accepted 12 aircraft. A further four aircraft have been accepted since 30 June 2020, bringing the total Australian fleet to 30.
- Pacific Patrol Boat Replacement program – in 2019-20, three vessels have been delivered to Samoa, Solomon Islands and Fiji. Since 30 June 2020 the program has delivered a vessel to Palau and a vessel to Tonga, bringing the total number of vessels so far gifted to Pacific Island partners to eight.
- In April 2020, HMAS *Sydney* was commissioned at sea and all three Hobart Class destroyers have now been delivered to Navy.

I would like to take the opportunity to thank the Auditor-General, Mr Grant Hehir, and his staff for their contribution to the report.

A handwritten signature in black ink, reading "G Moriarty". The signature is fluid and cursive, with the first letter "G" being large and stylized.

Greg Moriarty

Secretary

Department of Defence

20 November 2020



## Overview

As at 30 June 2020, Capability Acquisition and Sustainment Group (CASG) was managing 192 major and 14 minor acquisition projects at various phases in the Capability Life Cycle, worth a total acquisition cost of \$130.5 billion and a 2019-20 budget of \$8.7 billion. During this period eight major and minor acquisition projects were closed.

The Major Projects Report (MPR) outlines 25 projects, delivered by the Capability Acquisition and Sustainment Group (CASG), with a total acquisition cost of \$78.7 billion. This accounts for 60 per cent of CASG projects by total budget.

## Key Achievements

Despite a challenging second half of the 2019-20 period, major projects and their contractors have worked together to progress the delivery of important capability to the Australian Defence Force (ADF). There have been a number of key achievements for MPR projects including:

- The delivery of 12 F-35A Joint Strike Fighter aircraft.
- The announcement that Government had approved the acquisition of a third Triton air vehicle.
- A comprehensive response to Operation Bushfire Assist 2019-2020 that included six prime Australian Industry partners and numerous subcontractors to support the use of 14 ADF Aerospace platforms to support the activities in five Australian states and territories. Of note the MRH-90, P-8A Poseidon and C-27J Spartan aircraft were integral to the Defence Joint Task Forces conducting bushfire operations.
- The operational availability of the Collins Class submarines has been sustained at levels exceeding international benchmarks.
- Initial Operational Capability (IOC) has been declared for the Medium and Heavy fleet of next-generation logistics vehicles, modules and trailers.

Defence has demonstrated strong commitment to support Australian Industry affected by COVID-19 through the following:

- Establishing a dedicated Defence industry support cell to assist Industry manage COVID-19 related matters.
- Rapid invoice and accelerated payments to suppliers to help mitigate economic impacts of COVID-19 on defence industry, that in turn were flowed down through the supply chain, focussed on Australian businesses.
- Providing appropriate relief to contractors in circumstances of demonstrated adverse effects as a result of the COVID-19 crisis on the supply of labour, equipment, materials or services required to meet current contractual obligations.
- Migrating Australian Industry engagement for future programs and projects to online sessions.
- The engagement of 37 former Qantas and Virgin Australia staff by Northrop Grumman Australia in support of the C-27J Spartan capability.
- The first 18 shipbuilding apprentices will join the Hunter Class frigate program in South Australia's Osborne Naval Shipyard in Jul 20. These apprentices are the first of the estimated 1000 apprentices and graduates to be employed by ASC Shipbuilding over the life of the program.

## Governance, Audit and Continuous Improvement

Major capability acquisition and sustainment activities and their performance metrics are agreed upon between Capability Managers and CASG, and are subsequently documented in Materiel Acquisition Agreements and Materiel Sustainment Agreement Product Schedules. The effectiveness of the reporting relies on timely execution of these agreements and an annual review to ensure key performance measures remain fit for purpose.

Two Key Acquisition Projects, in the early stage of the Capability Life Cycle, have been included for the first time in the MPR at the request of the Joint Committee of Public Accounts and Audit (JCPAA). The Hunter Class Frigates (SEA 5000 Phase 1) and Attack Class Submarines (SEA 1000 Phase 1B) are both in the design stages with capability requirements being refined and as such no materiel scope delivery has been approved.

### Key Findings from Audits

Audit recommendations are proposed when a behaviour, process or system is found to not be working as intended or where an improvement to a behaviour, process or system has been identified. Achieving organisational goals is dependent on its capacity to manage risks, maintain compliance with regulations, and be open to continuous improvement and innovation.

In 2019-20, the Auditor-General published eight performance audit reports and one priority assurance review (2018-19 MPR). A number of themes have developed from recent ANAO audits that are relevant to Defence including:

- Reviewing lessons learned, specifically timeliness, objectivity, completeness and implementing necessary changes.
- The importance of having multiple bidders during the negotiation stage of an open tender process to encourage competition and drive Value for Money.
- Manage risks associated with conducting sole-sourced tenders and engaging with single tenderers, including ensuring contracts represent Value for Money.
- Whether performance measures are relevant, reliable and complete, and support accurate assessment of progress.
- Evaluation is a critical element of establishing accountability for project, program or activity performance against objectives, and providing insight to ensure ongoing improvement in program impact.
- Establish the evaluation approach and framework during the design phase.
- Planning and negotiating complex procurements and contracts.

### Entry to and exit from the 2019-20 Major Projects Report

Of the 25 projects included in this report, 20 projects have carried over from last year's report. Six projects have been removed because they achieved Final Operational Capability (FOC) or were considered low risk in achieving final deliverables:

- SEA 1448 Phase 2B – ANZAC Anti-Ship Missile Defence
- JP 2072 Phase 2A – Battlespace Communications System (Land)
- JP 2048 Phase 4A/4B – Amphibious Ships (LHD) (LHD Ships)
- JP 2048 Phase 3 – Amphibious Watercraft Replacement (LHD Landing Craft)
- AIR 7403 Phase 3 – Additional KC-30A Multi-role Tanker Transport
- JP 9000 Phase 7 – Helicopter Aircrew Training System

### Defence Major Projects Report

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2019–20 Major Projects Report

Five projects are new inclusions to the MPR:

- SEA 1000 Phase 1B – Future Submarine Design Acquisition
- SEA 5000 Phase 1 – Future Frigates
- AIR 7000 Phase 1B – MQ-4C Triton Remotely Piloted Aircraft System (Triton)
- LAND 400 Phase 2 – Mounted Combat Reconnaissance Capability
- Land 200 Tranche 2 – Battlefield Command System

The Australian Government is embarking on the largest ever peace time upgrade to our defence capabilities. A continuous ship building program will deliver 54 new vessels, including nine Future Frigates and 12 Attack class submarines. SEA 5000 Phase 1 and SEA 1000 Phase 1B are the largest naval ship building projects ever undertaken in Australia. Whilst following the principles of Defence's Capability Life Cycle, the complexity, longevity and staged nature of the projects require a unique approach to project management. These are extremely large and complex projects that are and will continue to generate interest.

Appendix 1 lists the projects that have been removed from the report since its inception including the reason for their removal, and expenditure to date as at 30 June 2020.

The project additions and removals are based on the MPR Guidelines that were endorsed by the JCPAA in September 2019 and are published in Part 4 of this report.

## Overall Annual Performance

Overall, performance of the Department's major capital equipment program in the 2019-20 financial year is commendable, particularly under such extraordinary circumstances.

Aside from the individual project performance, collectively Defence and Defence Industry have proven an exceptional level of resilience and adaptability to maintain capability delivery at a high operational tempo. The strong level of support given to Operation Bushfire Assist 2019-2020 and the ongoing mitigation of emerging risks and issues throughout the pandemic demonstrates the high calibre of the project management professionals in the organisation and the robust processes and controls that enable them.

In respect of the 192 major acquisition projects managed by CASG in 2019-20:

- achieved the budget of \$8.7 billion.
- Seven projects achieved IOC, six of these were on time or ahead of the delivery schedule.
- Twelve projects achieved FOC, four achieved on time delivery in accordance with second pass approval.

Where schedule slippage has occurred, CASG is working with the Capability Managers to manage any impacts.

Overall, performance of the Department's major capital equipment program in the 2019-20 financial year is strong. As at 30 June 2020, two of the 192 Government approved major equipment projects had issues with capability, schedule or cost which were significant enough to be managed as Projects of Concern. A further 15 projects were identified as Projects of Interest, with risk associated with capability, schedule or cost that warrant further attention from internal Defence line management and senior executives.

The performance of the 25 MPR projects over the 2019-20 period has been largely consistent with the overall performance of the 192 major equipment projects:

- One Project of Concern and seven Projects of Interest.
- Four projects report in year schedule slippage of between two and six months. Nine projects report on track to meet FOC by original forecast date.
- Most projects have largely met in year budget, with 14 projects reporting an over/underspend within 10% of the actual in year budget. The remaining 11 MPR projects reported variances of between 11 and 48 per cent.

### COVID-19 Impacts on MPR projects

The full COVID-19 impacts on Defence's contracts are still being assessed under the evolving COVID-19 circumstances overseas. For those projects impacted, current delay is in the order of three to six months. Defence has continued to respond to COVID-19 impact on industry through its implementation of Recovery Deeds to enable focus on delivery. For each contract affected by COVID-19, the Contractor will generate a Recovery Plan which will set out how they propose to address the COVID-19 impacts on the contract. These Recovery Plans will, in conjunction with any necessary evidence, be used to inform Defence about any contract changes that will need to be effected.

## Defence Strategic Environment

### 2020 Defence Strategic Update and 2020 Force Structure Plan

The *2020 Force Structure Plan* sets out adjustments to Defence capability plans. It builds on investments made in the *2016 Defence White Paper* in response to rapid changes in the global strategic environment. The Force Structure Plan is the product of a more regular review of Defence policy settings.

Concurrent with the development of the Force Structure Plan, the Department developed the 2020 Defence Strategic Update. The Strategic Update sets out the Government's new defence strategy, with three key objectives at its core: to **shape** Australia's strategic environment; to **deter** actions against Australia's interests; and to **respond** with credible military force, when required.

The 2020 Force Structure Plan sets out current and future Defence capability investments to ensure Australia can continue to deliver a potent, capable and agile Australian Defence Force. The capabilities outlined in the 2020 Force Structure Plan are designed to deliver on the strategic priorities, with a focus on responding to grey-zone challenges, the possibility of high-intensity conflict, and domestic crises. The Government will deliver this by maintaining alignment of strategy, capability and resources, underpinned by an ongoing reform program. As such, Defence is on its way to regenerating and expanding Australia's maritime platforms, delivering a fifth-generation air force, and enhancing the mobility and security of our deployed land forces.

The Government has sustained its commitment to long-term funding certainty by continuing the policy of providing a 10-year funding model for Defence, including a \$270 billion investment in Defence capability.

## Defence Assistance to the Civil Community: 2019-20 Bushfire Crisis & COVID-19 Pandemic

Defence provided both emergency and non-emergency support in accordance with Defence Assistance to the Civil Community arrangements as part of a whole-of-government response where state or territory capacity or resources did not exist or were not available quickly enough. Defence emergency assistance to civil agencies increased overall in 2019-20 due to major bushfires and the COVID-19 pandemic.

The Australian Defence Force provided significant support to Emergency Management Australia in firefighting and recovery efforts around the country. Defence assistance commenced on 6 September 2019, and with a deterioration in conditions Operation Bushfire Assist 2019-2020 was stood up on 31 December 2019 and continued until 26 March 2020. Operation Bushfire Assist established Joint Task Forces and the mobilisation of Reserves. Defence Industry provided outstanding support to Defence for this mobilisation.

All domains managed the rapid mobilisation of a number of capabilities including:

- C-17A Globemaster III, C-130J Hercules, C-27J Spartan and P-8A Poseidon aircraft conducting bushfire-related tasking under the three established Joint Task Forces.
- The Aviation response to Operation Bushfire Assist was a whole-of-capability effort which included support from CH-47F Chinook, MRH90 Romeo, EC135 (Helicopter Aircrew Training System) and Unmanned Aerial Systems (UAS). The assets were deployed across New South Wales, Victoria, and South Australia. The response also included the conduct of coalition operations with our international partners from the New Zealand and Singaporean Air Forces.
- Provision of additional satellite and communications equipment.
- Rapid mobilisation of fuel and water storage, supply vehicles, and logistics support.
- Deployment of HMA Ships *Choules* and *Adelaide* to provide support, particularly the provision of additional medical support to isolated towns and evacuation of stranded residents and holiday makers.

Significant industry contribution was integral to the success of Operation Bushfire Assist with industry partners being responsive in helping to deliver immediate supply options and surge capacity. Notably Airbus Australia Pacific, Boeing Defence Australia, and Sikorsky Aircraft Corporation (USA) recalled staff to assist with aircraft and equipment preparations. Shadboldt completed required repair work on the gas turbine engine uptakes on *Adelaide* in extended rolling shifts; working beside General Electric, as the Manufacturer of the Landing Helicopter Dock gas turbines who completed the required work and testing/trials of the gas turbine engine on the ship at sea earlier than expected. Both partners also combined with Lloyds Register to enable *Adelaide* to sail earlier whilst continuing to satisfy her seaworthiness obligations in order to respond to Operation Bushfire Assist.

Defence responded swiftly to the COVID-19 pandemic, establishing the COVID-19 Taskforce in March 2020 to coordinate Defence's contribution to the whole-of-government response. Operation COVID-19 Assist was subsequently established in April 2020 and provided assistance in reconnaissance, planning and contact tracing teams; medical assistance in north-west Tasmania; supporting mandatory quarantine arrangements; and supporting state and territory police border controls.

## Defence Review of Project Performance

### Cost

The Defence Chief Finance Officer provides overall financial assurance, on the actual cost and budget data of individual projects included in this report. Project budgets approved by Government take into account the estimated impact of inflation over the life of a project which is known as ‘out-turning’.

All financial data related to Defence’s capital projects and capital programs provided within the 2019-20 Defence Portfolio Budget Statements, Portfolio Additional Estimates Statements, and Annual Report, are presented on a cash basis. For consistency, Defence also reports its 2019-20 capital projects on a cash basis in the Major Projects Report. Defence will be managing and reporting expenses on an accruals basis from 2020-21

The total in-year budget (2019-20) for all the projects listed in the 19-20 MPR is \$6.1 billion and the total approved acquisition cost is \$78.6 billion. Table 1 lists the 25 projects by total Government approval from highest to lowest.

### Understanding Budget Variation

Real budget variations occur as a result of Government endorsed changes to scope, real cost changes, and scope transfers between projects.

Foreign exchange rate variations do not represent real cost variations as they are managed through funding adjustments on a “no-win/ no loss” basis to offset realised foreign exchange losses or gains. Similarly, in-year variations between Budget, Additional Estimates and Final do not necessarily in themselves represent real cost variations. Defence considers that the Final Budget Forecasts represent the baseline against which in-year Project financial performance should be measured.

Subsequent Government approvals leading to real project “budget variation” (outlined in Table 2A Column B) includes activities such as:

- Follow-on Second Pass approvals
- Tranched or rolling approval processes that have been agreed by Government
- Where projects have merged or transferred cost or scope to realise more efficient project management practices.

In some instances, Real Cost Increases (RCI) require a Government approved budget variation due to unplanned cost and/or scope variation. Historically, there has been minimal requirement to apply RCIs to the project budgets. These instances are outlined in Column E. There have been no RCI’s in this reporting year 2019-20, the listed RCI’s were approved in earlier years.

Table 2A gives a summary of life-to-date budget approvals from Second Pass Approval to current budget including variables such as price indexation, foreign exchange and scope change impacts. Percentages of the variances are also provided.

Table 2B and Table 2C provide a further detailed breakdown of the budget variance. This is to provide a more detailed breakdown of the Department’s performance in cost and scope management, and highlight the projects with unplanned cost and/or scope variation in the interests of transparency.

**Table 1 – 2019/20 MPR Projects by Total Approved Budget**

Project Number	Project Name	Project Name Abbreviation	2019-20 In-Year Budget \$m	Total Approved Project Budget \$m
AIR 5349 Phase 3	EA-18G Growler Airborne Electronic Attack Capability	Growler	173.6	3,505.9
AIR 5431 Phase 3	Civil Military Air Management System	CMATS	86.4	975.6
AIR 6000 Phase 2A/2B	New Air Combat Capability	Joint Strike Fighter	1,884.6	16,631.3
AIR 7000 Phase 1B	Multi-mission Unmanned Aircraft System	Triton Drones	104.3	1,311.4
AIR 7000 Phase 2B	Maritime Patrol and Response Aircraft System	P-8A Poseidon	299.8	5,362.4
AIR 8000 Phase 2	Battlefield Airlift – Caribou Replacement	Battlefield Airlifter	91.7	1,439.2
AIR 9000 Phase 2/4/6	Multi-Role Helicopter	MRH90 Helicopters	119.9	3,773.9
AIR 9000 Phase 8	Future Naval Aviation Combat System Helicopter	MH-60R Seahawk	128.7	3,219.3
JP 2008 Phase 5A	Indian Ocean Region UHF SATCOM	UHF SATCOM	10.8	422.1
JP 2072 Phase 2B	Battlespace Communications System Phase 2B	Battle Comm. Sys. (Land) 2B	188.9	947.1
LAND 121 Phase 3B	Medium Heavy Capability, Field Vehicles, Modules and Trailers	Overlander Medium/Heavy	259.9	3,398.6
LAND 121 Phase 4	Protected Mobility Vehicle – Light (PMV-L)	Hawkei	239.9	1,987.5
LAND 200 Tranche 2	Battlefield Command System	Battlefield Command System	247.0	969.7
LAND 400 Phase 2	Combat Reconnaissance Vehicles	Combat Recon. Vehicles	173.6	5,761.7
LAND 53 Phase 1BR	Night Fighting Equipment Replacement	Night Fighting Equip Repl	78.9	446.7
SEA 1000 Phase 1B	Future Submarines Design Acquisition	Future Subs	579.5	5,925.8
SEA 1180 Phase 1	Offshore Patrol Vessel	Offshore Patrol Vessel	248.9	3,701.4
SEA 1439 Phase 3	Collins Class Submarine Reliability and Sustainability	Collins R&S	15.9	445.8
SEA 1439 Phase 5B2	Collins Class Communications and Electronic Warfare Improvement Program	Collins Comms and EW	93.3	610.7
SEA 1442 Phase 4	Maritime Communications Modernisation	Maritime Comms	46.4	444.0
SEA 1448 Phase 4B	ANZAC Air Search Radar Replacement	ANZAC Air Search Radar Repl	74.5	429.4
SEA 1654 Phase 3	Maritime Operational Support Capability	Repl Replenishment Ships	195.3	1,084.7
SEA 3036 Phase 1	Pacific Patrol Boat Replacement	Pacific Patrol Boat Repl	78.1	504.3
SEA 4000 Phase 3	Air Warfare Destroyer Build	AWD Ships	315.1	9,108.9
SEA 5000 Phase 1	Future Frigates	Future Frigates	375.2	6,291.8
<b>Total</b>			<b>6,110.2</b>	<b>78,698.7</b>

Table 2A – Project Budget Status

Project Number and name	(a) Government Approved Budget at Second Pass \$m	(b) Subsequent Government Approvals \$m	(c) Price Indexation \$m	(d) Foreign Exchange Variation \$m	(e) Real Cost/ Scope Variation \$m	(f) Transfer s \$m	(g) Budgetary Adjustments \$m	(h) Budget Cost Savings \$m	(i) (a+b+c+d+e+f+g+h) Current Budget \$m	(a)/(i) Government Approved Budget at Second Pass %	(b)/(i) Subsequent Government Approvals %	(c+d)/(i) Price / Exchange e %	(e)/(i) RCI %	(f+g+h)/(i) Other %
AIR 6000 Ph 2A/B - Joint Strike Fighter	2,751.6	10,515.4	351	3,024	0	-8.4	-2.9	0	16,630.7	16.5	63.2	20.3	0	-0.1
SEA 4000 Ph 3 - AWD Ships	7,207.4	0	1,173.2	-363.3	1,198.5	-108.9	0	0	9,108.9	79.1	0	8.9	13.2	-1.2
SEA 5000 Ph 1 - Future Frigates	6,183.9	0	0	104.6	0	3.3	0	0	6,291.8	98.3	0	1.7	0	0.1
SEA 1000 Ph 1B - Future subs	989.4	5,021.7	0	-24.3	0	-34.0	-27.0	0	5,925.8	16.7	84.8	-0.4	0	-1.0
LAND 400 Ph 2 - Combat Reconnaissance	5,762.7	0	0	-1	0	0	0	0	5,761.7	100	0	0	0	0
AIR 7000 Ph 2B - P-8A Poseidon	3,577.7	1,295.4	20.5	488.1	-20.3	1	0	0	5,362.4	66.7	24.2	9.5	-0.4	0
AIR 9000 Ph 2A/B - MRH90 Helicopters	957.2	2,565.6	679.8	-133.6	31.5	-239.2	-87.4	0	3,773.9	25.4	68.0	14.5	0.8	-8.7
SEA 1180 Ph 1 - Offshore Patrol Vessel	3,639.1	0	0	62.3	0	0	0	0	3,701.4	98.3	0	1.7	0	0
AIR 5349 Ph 3 - Growler	1,155.3	1,789.0	0	956.1	0	0	-394.9	0	3,505.9	33.0	51.0	27.3	0	-11.2
LAND 121 Ph 3B - Overlander Medium/Heavy	2,549.2	735.5	0	143.9	0	-30.0	0	0	3,398.6	75.0	21.6	4.2	0	-0.9
AIR 9000 Ph 8 - MH-60R Seahawk	3,029.6	0	0.1	228.8	0	-39.2	0	0	3,219.3	94.1	0	7.1	0	-1.2
LAND 121 Ph 4 - Hawkei	1,945.0	0	0.4	42.2	0	0	0	0	1,987.6	97.9	0	2.1	0	0
AIR 8000 Ph 2 - Battlefield Airlifter	1,156.5	0	0	283.7	0	-1.0	0	0	1,439.2	80.4	0	19.7	0	-0.1
AIR 7000 Ph 1B - Triton	1,246.1	0	0.2	67.3	-2.2	0	0	0	1,311.4	95.0	0	5.1	-0.2	0
SEA 1654 Ph 3 - MDS	1,004.6	0	0	-1.3	0	81.4	0	0	1,084.7	92.6	0	-0.1	0	7.5
AIR 5431 Ph 3 - CMATS	731.4	0	0	3.5	247.5	-6.8	0	0	975.6	75.0	0	0.4	25.4	-0.7
LAND 200 T2 - Battlefield command	930.0	0	0	39.7	0	0	0	0	969.7	95.9	0	4.1	0	0
JP 2073 Ph 2B - Battle Comm. Sys. (Land) 2B	915.7	0	0	31.4	0	0	0	0	947.1	96.7	0	3.3	0	0
SEA 1439 Ph 5B2 - Collins Comms and EW	599.1	0	0.4	11.2	0	0	0	0	610.7	98.1	0	1.9	0	0
LAND 53 Ph 1BR - Night Fighting Equip Repl	460.3	0	0	-13.6	0	0	0	0	446.70	103.0	0	-3.0	0	0
SEA 3036 Ph 1 - PPB-R	504.5	0	0	-0.2	0	0	0	0	504.3	100	0	0	0	0
SEA 1439 Ph 3 - Collins R&S	72.0	344.0	74.4	-5.5	0	-38.3	-0.8	0	445.8	16.2	77.2	15.5	0	-8.8
SEA 1442 Ph 4 - Maritime Comms	385.6	0	0	58.4	0	0	0	0	444.0	86.9	0	13.2	0	0
SEA 1448 Ph 4B - ANZAC Air Search Radar Repl	427.8	0	0	1.6	0	0	0	0	429.4	99.6	0	0.4	0	0
JP 2008 Ph 5A - UHF SATCOM	460.9	0	18	-38.8	0	0	0	-18.0	422.1	109.2	0	-4.9	0	-4.3
<b>Total \$m / Average %</b>	<b>48,642.6</b>	<b>22,266.6</b>	<b>2,318.0</b>	<b>4,967.2</b>	<b>1,456.0</b>	<b>-421.1</b>	<b>-513.0</b>	<b>-18.0</b>	<b>78,698.7</b>	<b>78.0</b>	<b>15.6</b>	<b>6.1</b>	<b>1.6</b>	<b>-1.2</b>



**Table 2B – Breakdown of Subsequent Government Approvals**

Project Number	Project	Subsequent Government Approvals \$m	Explanation
AIR 6000 Phase 2A/2B	Joint Strike Fighter	10,515.4	Second Pass approval for Stage 2, acquiring an additional 58 aircraft. This figure also includes some budget corrections to keep the budget aligned with the Government approval.
AIR 7000 Phase 2B	P-8A Poseidon	1,295.4	Government Second Pass Approval to fund the acquisition of an additional four P-8A aircraft and associated support systems. Funding was provided under AIR7000 Phase 2D, but merged with AIR7000 Phase 2B for efficiencies.
AIR 9000 Phase 2/4/6	MRH90 Helicopters	2,565.6	Second Pass approval of Phase 4 (Black Hawk Upgrade Replacement) and Phase 6 (Maritime Support Helicopter).
LAND 121 Phase 3B	Overlander Medium/Heavy	735.5	A range of programmatic decisions have been made in relation to this project. This is aligned to the revised second pass approval.
AIR 5349 Phase 3	Growler	1,789.4	Government approval to change acquisition strategy to a new-build aircraft, rather than modification of existing aircraft. This also includes the Growler Enabling capabilities and the integration of CEA systems into the Mobile Threat Training Emitter System.
SEA 1439 Phase 3	Collins R&S	344.0	A range of programmatic funding decisions have been made with Collins-related projects to achieve optimum capability within the funding provided. For full details, please see the PDSS.
SEA 1000 Phase 1B	Future Subs	5,021.7	Approval by Government for activity under the Submarine Design to be conducted by Naval Group, design of the Combat System by Lockheed Martin Australia, activity to develop the concept design for the Future Submarine Construction Yard and Infrastructure business case, and program office costs.
<b>Total</b>		<b>22,267.0</b>	

**Table 2C – Breakdown of Real Cost / Scope Variation**

Project Number	Project	(e) Real Cost / Scope Variation \$m	Explanation
SEA 4000 Phase 3	AWD Ships	1,199.5	This was a real cost increase (RCI) approved by Government in 2015. Following a number of independent reports, it was evident that the existing budget would be insufficient to complete the full project scope.
AIR 9000 Phase 2/4/6	MRH90 Helicopters	31.5	A RCI was approved by Government in 2008 to fund the Full Flight Mission Simulator, not included in the original scope.
AIR 5431 Phase 3	CMATS	247.5	A RCI was approved by Government in February 2018 to cover additional costs related to the acquisition.
<b>Total</b>		<b>1,474.5</b>	

### In-Year Cost

A summary of in-year project budget expenditure against the Portfolio Budget Statements and the Portfolio Additional Estimate Statements is shown in Table 3.

The financial variation explanations for each project can be found within Section 2.2A – In-year Budget Estimate Variance of the Project Data Summary Sheets (found in Part 3 of this Report).

### Project Progress

The percentage of budget spent is dependent on the characteristics of the project and the levels of early investment required, so the relationship between budget and progress does not necessarily match. In addition, programs with multiple tranches and/or follow-on Final Operational Capability milestones may distort the per cent of budget expended data in the future.

Table 3 - Project In Year Status

Project Number	Project	Portfolio Budget Statements \$m	Portfolio Additional Estimate Statements \$m	Final Plan \$m	Actual Spend \$m	Variation \$m (PBS-Actual Spend)	Variation \$m (Final Plan- Actual Spend)
AIR 6000 Phase 2A/2B	Joint Strike Fighter	2,383.6	1,897.6	1,884.6	1,938.4	450.2	-53.8
SEA 4000 Phase 3	AWD Ships	355.9	315.4	315.1	295.3	60.6	19.8
SEA 5000 Phase 1	Future Frigates	492.3	372.9	375.2	263.6	228.7	111.6
SEA 1000 Phase 1B	Future Subs	289.3	580.9	579.5	553.1	-263.8	26.4
LAND 4000 Phase 2	Mounted Combat Recon Cap	200.3	173.7	173.6	173.2	27.1	0.4
AIR 7000 Phase 2B	P-8A Poseidon	360.3	301.6	299.8	223.5	136.8	76.3
AIR 9000 Phase 2/4/6	MRH90 Helicopters	56.0	120.1	119.9	106.0	-50.0	13.9
SEA 1180 Phase 1	Offshore Patrol Vessel	349.2	249.2	248.9	227.2	122.0	21.7
AIR 5349 Phase 3	Growler	128.6	174.3	173.6	160.9	-32.3	12.7
LAND 121 Phase 3B	Overlander Medium/Heavy	238.1	260.1	259.9	269.4	-31.3	-9.5
AIR 9000 Phase 8	MH-60R Seahawk	112.7	129.3	128.7	75.3	37.4	53.4
LAND 121 Phase 4	Hawkei	292.3	240.3	239.9	220.3	72.0	19.6
AIR 8000 Phase 2	Battlefield Airlifter	93.5	92.1	91.7	72.6	20.9	19.1
AIR 7000 Phase 1B	Triton	101.3	105.0	104.3	95.6	5.7	8.7
SEA 1654 Phase 3	MOSC	191.8	196.0	195.3	107.1	84.7	88.2
AIR 5431 Phase 3	CMATS	92.7	86.5	86.4	87.5	5.2	-1.1
LAND 200 Tranche 2	Battlefield Command System	263.0	247.9	247.0	250.5	12.5	-3.5
JP 2072 Phase 2B	Battle Comms Sys Ph2B	207.5	189.8	188.9	187.4	20.1	1.5
SEA 1439 Phase 5B2	Collins EW	95.8	93.7	93.3	69.7	26.1	23.6
LAND 53 Phase 1BR	Night Fighting Equip Repl	90.8	79.5	78.9	80.7	10.1	-1.8
SEA 3036 Phase 1	PPB-R	78.0	78.2	78.1	66.5	11.5	11.6
SEA 1439 Phase 3	Collins R&S	5.8	15.9	15.9	13.1	-7.3	2.8
SEA 1442 Phase 4	Maritime Comms	57.2	45.7	46.4	36.7	20.5	9.7
SEA 1448 Phase 4B	Anzac Air Search Rad Repl	71.2	74.5	74.5	72.7	1.5	1.8
JP 2008 Phase 5A	Indian Ocean UHF SATCOM	9.4	10.8	10.8	5.6	3.8	5.2
<b>Total</b>		<b>6,621.6</b>	<b>6,131.0</b>	<b>6,110.2</b>	<b>5,651.9</b>	<b>969.7</b>	<b>458.3</b>

## Schedule

CASG projects have continued to deliver successful capability outcomes, noting schedule remains the primary improvement focus and is being driven through the SmartBuyer process and early phases of the Capability Life Cycle. Where schedule slippage has occurred, project managers are working with Defence, Industry and the Capability Manager Representatives to manage the impacts without compromising capability.

Of the 20 projects carried over from the last report, there are five projects that reassessed their Final Operational Capability forecast date within 2019-20. Four extended their Final Operational Capability date by between two to six months and the fifth brought forward the milestones by six months.

The average Final Operational Capability variance of the 22<sup>144</sup> projects forecasting a Final Operational Capability date at 30 June 2020 is 19.8 per cent, which is significantly less than the 27.8 per cent average in 2018-19. The project schedule status of the 25 projects in this year's report is shown in Table 4 from Second Pass through to Interim Operational Capability and Final Operational Capability.

The schedule performance narrative in each Project Data Summary Sheet details specific activity for each of the projects included in this MPR.

## Schedule Variation in Context

When analysing schedule performance there can be a tendency to focus on the numbers of months slipped rather than the drivers of that slippage. Adding up the months of slippage for a group of distinct projects that are unique in nature and highlighting the total number does little to inform the reader about schedule performance. Such statements incorrectly assume that CASG manages projects sequentially not concurrently.

Schedule variation occurs for a number of reasons including late delivery, increase in scope, a force majeure event or a deliberate management decision. It also occurs because Defence set ambitious schedule targets to ensure it can provide the warfighter with leading edge capability. The projects listed in the MPR are generally the larger, more complex acquisition projects that contain inherent risk, and as such, are more likely to encounter schedule delay, compared to other projects.

Twelve projects recorded a schedule variation of between one and 108 months. The causes of these variations are shown in Figure 1 and summarised below:

- P-8A Poseidon received Government approval for the purchase of four additional aircraft resulting in a revision of FOC dates.
- Three projects were affected by other Defence programs or decisions such as the ANZAC Midlife Capability Assurance Program, changes to the docking maintenance schedule, and delays to other interdependent projects.
- Three projects were impacted by events outside the control of Defence or Government including US Government decision affecting project progress, availability of appropriate industry partners to subcontract, and remediation of an incident involving an in-service EA-18G aircraft in the US.
- Five projects have experienced unplanned real schedule variation due to factors such as technical, reliability and integration issues with essential components and increases in original scope of project.

<sup>144</sup> SEA 1000 Ph 1B and SEA 5000 Ph 1 are both currently in design phase and as a result do not yet have a FOC date. AIR 8000 Ph 2 is undergoing a capability reset which will identify a FOC date.

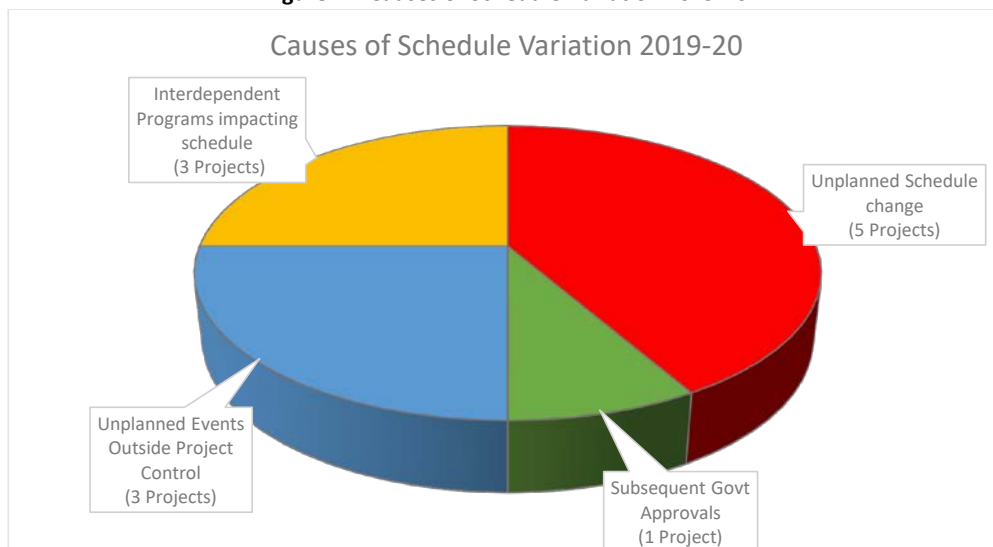
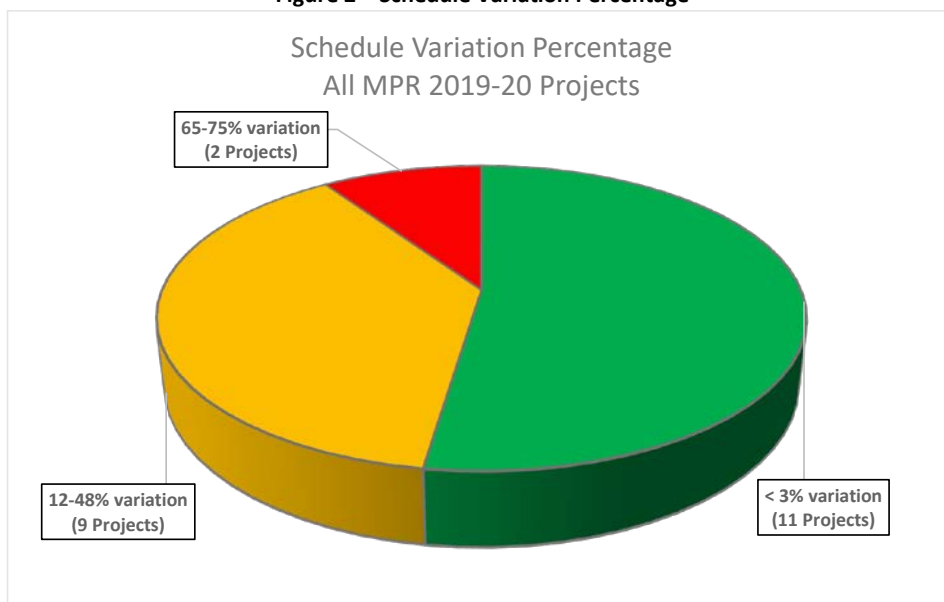
**Figure 1 – Causes of Schedule Variation 2019-20**

Figure 2 shows the percentage of schedule variation for all projects within this report. The chart shows that 52 per cent of the projects included in this report have a schedule variation of less than three per cent. Of these, nine projects have no variation to schedule at all<sup>145</sup>. This is further detailed in Table 4.

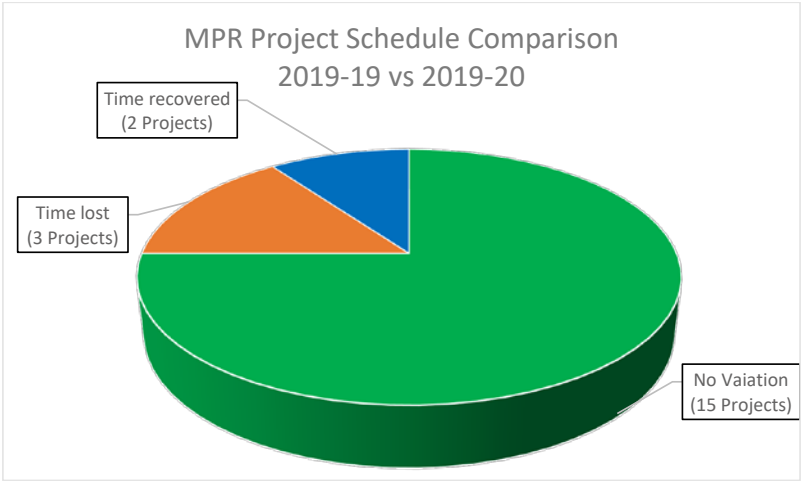
**Figure 2 – Schedule Variation Percentage**

<sup>145</sup> SEA 1000 Ph 1B and SEA 5000 Ph 1 are both currently in design phase and as a result do not yet have a FOC date. AIR 8000 Ph 2 is undergoing a capability reset which will identify a FOC date. These projects have not been included in the calculation.

Whilst many projects have already identified travel restrictions, supply chain disruptions and workplace capacity issues as a result of COVID-19, the full impact on project schedule due to COVID-19 is yet to be fully understood.

Figure 3 shows that between 2018-19 and 2019-20 the majority of MPR projects did not experience any schedule variation to forecast FOC declaration during the year. Two projects were able to recover time – SEA 1439 Phase 5B2 (Collins EW) recovered six months and SEA 1442 Phase 4 (Maritime Comms) recovered three months to their forecast FOC declaration. Whilst three projects experienced a slip in schedule of between two to six months, two of these projects, AIR 6000 Phase 2A/2B (Joint Strike Fighter, 2 months) and LAND 121 Phase 3B (Overlander Medium/Heavy, 6 months) are still within the Government approved FOC window. The average variation for those projects that lost time equals 4.6 months whilst the average variation across all MPR projects is less than one month<sup>146</sup>.

**Figure 3 – Schedule Comparison 2018-19 / 2019-20**



Schedule slippages are reported based on the achievement of FOC. In most instances the programs are providing highly effective capability to the ADF prior to FOC. For example, the MRH-90 is reporting 89 months delay to FOC, however it is operational and providing extensive support locally for natural disaster relief as well as support to Pacific Island nations. The P-8A Poseidon maritime patrol aircraft, which is reporting a 29 month delay to FOC has been deployed on multiple operational deployments and conducted reconnaissance flights over fire-affected areas in New South Wales, Victoria and South Australia as part of Operation Bushfire Assist.

<sup>146</sup> Five projects new to the MPR in 2019-20 have not been included in this comparison. AIR 8000 Phase 2 is currently undergoing a capability reset and does not have a FOC date – a comparison has not been done for this project.

Table 4 – Project Schedule Status

Project Number	Project	(a) 2nd Pass	(b) Originally Estimated IOC	Forecast IOC at 30 Jun 19	(c) Forecast IOC at 20 Jun 20	(c-b) IOC variation (months)	(c-a)/(b-a) Variation Percentage	(d) Originally estimated FOC	Forecast FOC at 30 Jun 19	(e) Forecast FOC at 30 Jun 20	(e-d) FOC variation (months)	(e-a)/(d-a) Variation Percentage
AIR 5439 Phase 3	Growler	Apr-13	Jul-18	Feb-19	Feb-19	7	11.22%	Jul-22	Aug-22	Aug-22	1	0.92%
AIR 5431 Phase 3	CMATS	Dec-14	Jun-20	Nov-22	Jun-23	36	54.50%	Jun-23	Oct-25	Apr-26	34	33.34%
AIR 6000 Phase 2A/2B	Joint Strike Fighter	Nov-09	Dec-20	Dec-20	Dec-20	0	0.00%	Dec-23	Oct-23	Dec-23	0	0.00%
AIR 7000 Phase 1B	Triton	Jun-18	Jul-24	/	Jul-26	24	32.85%	Dec-25	-	Jul-29	43	47.74%
AIR 7000 Phase 2B	P-8A Poseidon	Feb-14	Feb-18	Jan-18	Jan-18	-1	-2.12%	Jan-20	Jun-22	Jun-22	29	40.83%
AIR 8000 Phase 2	Battlefield Airlifter	Apr-12	Dec-16	Dec-16	Dec-16	0	0.00%	Dec-17	Dec-19	TBA	-	-
AIR 9000 Phases 2/4/6	MRH90 Helicopters	Aug-04	Apr-11	Dec-14	Dec-14	44	55.05%	Jul-14	Dec-21	Dec-21	89	74.84%
AIR 9000 Phase 8	MH-60R Seahawk	Jun-11	Aug-15	Sep-15	Sep-15	1	2.04%	Dec-23	Dec-23	Dec-23	0	0.00%
JP 2008 Phase 5A	UHF SATCOM	Mar-09	Jul-12	Jul-12	Jul-12	0	0.00%	Jun-18	Dec-21	Dec-21	42	37.85%
JP 2072 Phase 2B	Battle Comms Sys Ph2B	Apr-15	Sep-17	Mar-18	Mar-18	6	20.48%	Sep-20	Sep-22	Sep-22	24	36.87%
LAND 121 Phase 3B	Overlander Medium/Heavy	Jul-13	Dec-19	Dec-19	Dec-19	0	0.00%	Dec-20	Jun-23	Dec-23	0	0.00%
LAND 121 Phase 4	Hawkei	Aug-15	Dec-19	Dec-20	Dec-20	12	23.12%	Jun-23	Jun-23	Jun-23	0	0.00%
LAND 200 Tranche 2	Battlefield Command System	Sep-17	Sep-21	-	Apr-23	19	39.49%	Jun-22	-	Oct-23	16	28.09%
LAND 400 Phase 2	Mounted Combat Reconnaissance Capability (MCR)	Mar-18	Dec-26	-	Dec-26	0	0.00%	Jun-27	-	Jun-27	0	0.00%
LAND 53 Phase 1BR	Night Fighting Equip Repl	Aug-16	Nov-18	Dec-18	Dec-18	1	3.65%	Sep-23	Sep-23	Sep-23	0	0.00%
SEA 1180 Phase 1	Offshore Patrol Vessel	Nov-17	Dec-22	Dec-22	Dec-22	0	0.00%	Jun-30	Jun-30	Jun-30	0	0.00%
SEA 1439 Phase 3	Collins R&S	Sep-00	Oct-13	Jul-20	Jul-21	92	59.23%	Jun-14	Jun-23	Jun-23	108	65.47%
SEA 1439 Phase 5B2	Collins EW	Jun-15	Jun-21	Jun-21	Aug-21	2	2.78%	Dec-24	Dec-27	Jun-27	30	26.27%
SEA 1442 Phase 4	Maritime Comms	Jul-13	Dec-18	Jul-20	Jan-21	25	38.50%	Dec-23	Jan-25	Apr-25	16	12.80%
SEA 1448 Phase 4B	ANAC Air Search Radar Repl	Jun-17	Jun-20	Jun-20	Mar-21	9	24.91%	Jun-24	Jun-24	Jun-24	0	0.00%
SEA 1654 Phase 3	MOSC	Apr-16	Mar-21	Mar-21	Jul-21	4	6.80%	Dec-22	Dec-22	Dec-22	0	0.00%
SEA 3036 Phase 1	PPB-R	Apr-16	Oct-18	Nov-18	Nov-18	1	3.40%	Sep-23	Nov-23	Nov-23	2	2.25%
SEA 4000 Phase 3	AWD Ships	Jun-07	Dec-15	Dec-18	Dec-18	36	35.30%	May-18	Jun-21	Jun-21	37	28.27%
SEA 1000 Phase 1B	Future Submarine Program	Feb-19	IOC & FOC Dates have not yet agreed									
SEA 5000 Phase 1	Future Frigate - Design and Construction	Jun-18	IOC & FOC Dates have not yet agreed									
Average Variations						18	21.30%				21	19.80%
Median						3	2.80%				9	7.50%
Standard Deviation						26	35%				29	23%

## Materiel Scope and Capability

It is important to understand the difference between materiel scope and capability. Materiel scope is the delivery of the materiel element of capability and does not include other fundamental inputs such as workforce. Defence notes that programs are generally providing highly effective capability to the ADF prior to declaration of FOC. A capability in Defence terms is the power to achieve a desired operational effect in a nominated environment within a specified time and to sustain that effect for a designated period.

Materiel scope performance measures indicate a forecast of the materiel element of capability against the FMR milestones, identified in the MAA at 30 June 2020. It should be noted that this measure does not include the fundamental inputs to capability (such as workforce) and are not necessarily indicative of each project’s ultimate ability to deliver the final intended capability effect.

The subjective ‘traffic light’ assessment of each element is indicative of:

- Green – a high level of confidence that the capability outcome will be met.
- Amber – the capability outcome being under threat but still considered manageable and able to be met.
- Red – at this stage the capability outcome is unlikely to be fully met.

Of 25 projects in this year’s report:

- 17 projects had 100 per cent of the measure green.
- Five have measures which are under threat.
- One is reporting an element that is unlikely to be fully met.
- Two projects currently in the design phase are not included.

Details of amber and red portions included are outlined in Table 5 below. As outlined above this is not indicative of Defence’s expected capability delivery. Further information on individual project performance can be found in Section 4 of the PDSS.

Detail of the capital equipment assets to be delivered for projects (the materiel scope), is defined in the MAA, the Operational Concept Document and the Function and Performance Specification.

**Table 5 – Details of Projects Reporting Amber or Red Measures**

Project	Pie Chart Traffic Light	Narrative for Amber / Red Rating
AIR 6000 Phase 2A/2B - New Air Combat Capability	Amber (1%)	AIR 6000 Phase 2A/B has options to deliver Maritime Strike capabilities in a timeframe closely following that of the United States Navy. Phase 2A/B will also continue to invest in F-35A development toward advanced Maritime Strike options for consideration under AIR 3023 in the context of a Joint Maritime Strike strategy.
AIR 8000 Phase 2 - Battlefield Airlift – Caribou Replacement	Amber (6%)	AIR8000PH2 remains committed to the timely delivery of capabilities to support operational intent of the C-27J. AIR 8000 Phase 2 was unable to complete FMR in October 2019, however, achievement of the military type certification was achieved in June 2020 with minor limitations that are being progressed to be removed. Final spares delivery (less than 1% remaining) has been transitioned to sustainment for acceptance, and is not currently being reported as a significant shortfall to capability. Further work is required to achieve the Identification Friend or Foe (IFF) modification incorporation into the fleet; this will be achieved under supervision of the sustainment organisation and capability managers. The MAA identifies a requirement for Air Force to deliver a response on retention, replacement or



		upgrade of the Missile Approach Warning System (MAWS). Options have been considered by the project and Defence in 2019 and a remediation decision forms part of the overall project capability consideration by Defence and Government in 2020 for the execution strategy for all residual acquisition activity.
AIR 9000 Phase 2/4/6 - Multi-Role Helicopter	Amber (25%)	MRH Project Office continues to work with industry to contract, redesign and deliver outstanding role equipment including the Taipan Gun Mount, Common Mission Management System, Aero-Medical Evacuation – Mature (AME-M) capability.
LAND 121 Phase 4 - Protected Mobility Vehicle – Light (PMV-L)	Amber (5%)	IMR was declared with caveats due to an incomplete support system (some technical publications being in draft and a delay in the delivery of spares required for IMR) and a delay in the completion of Air, Sea and Rail Verification and Validation activities.
LAND 200 Tranche 2 - Battlefield Command System	Amber (3%)	Restriction on the access to interface data for the M1A1 Tank may limit the capability provided by the WINBMS on that platform.
SEA 4000 Phase 3 - Air Warfare Destroyer Build	Red (1%)	This project will not deliver a Radar - Electronic Attack capability. Funding will be used to help develop an indigenous Electronic Attack system for use in the Hobart Class and other Navy vessels.

## Acceptance into Service

Defence has updated the Integrated Project Management Plan template to ensure it states that deficiencies in the Fundamental Inputs to capabilities (FIC) are to be identified ahead of transition into service. This will be informed by a FIC Tracker in order to assist the Capability Manager in making a determination as they consider declaration of IOC, other Operational Releases, or FOC. This allows full flexibility for the Capability Manager to work with the Delivery Group on the preferred course of action when dealing with a FIC deficiency and then how they communicate it irrespective if it is technical, environmental, materiel, services, safety and or legislative related.

## Acquisition Governance

### CASG Independent Assurance Reviews

An initiative of the First Principles Review, Independent Assurance Reviews are conducted to identify the current status, risks and recommended management on the health and outlook of programs, acquisition projects and sustainment products across the capability life cycle. Review teams are selected for their independence from line management and their experience and expertise in a variety of disciplines relevant to the matter under consideration.

Reviews will typically include interviews with stakeholders such as the Project Manager, Program Sponsor and Capability Manager. Depending on the risks or issues identified during the course of the review, which in all cases will consider the key aspects of certainty of scope, credibility of schedule and adequacy of funding, a formal Board meeting may be held to better understand the positions of the various parties. The Board Chairperson may make recommendations or propose actions for senior management consideration regarding the ongoing conduct of the project or product under review, including whether it should be considered a candidate for Project of Interest or Project of Concern status by senior executives.

During FY 2019-20 there were 122 Independent Assurance Reviews covering 148 project phases or products. In addition to reviews of Capability Acquisition and Sustainment Group matters, the Independent Assurance Review process continues to be applied to Chief Information Officer Group

projects at the invitation of the CIO, and a range of projects delivered by the Australian Signals Directorate and the Australian Geospatial Organisation.

Independent Assurance Reviews are broken down by project phase in the Capability Life Cycle in Table 6 below.

**Table 6 – Independent Assurance Reviews**

Independent Assurance Reviews by project phase	No. held
Gate Zero	17
Gate One	13
Gate Two	18
Performance (during delivery)	76
Sustainment	24

Of these, 16 of the 25 projects listed in the Major Projects Report had an Independent Assurance Review conducted in 2019-20.

Historically approximately 12 IARs are conducted each month, however as a result of COVID-19, the throughput of the 2020 IAR program was reduced as follows:

- April 2020 – 2 IARs completed
- May 2020 – 3 IARs completed
- June 2020 – 8 IARs completed

Through the use of desktop reviews, virtual meetings, and prioritising pre-Government Second Pass Approval matters the overall IAR schedule has been recovered.

**Smart Buyer**

The Smart Buyer program has further matured over the last financial year. Surveys on the effectiveness have seen strong positive results with over 98 per cent of surveyed stakeholders confirming the process adds value and offers unique insights to Defence Projects and Programs.

Whilst the prime role of Smart Buyer is to set projects up for success, pre Government second pass, the methodology has been adapted to address a variety of issues that may arise in the execution of a project.

Smart Buyer supports key stakeholders to enable Defence and Industry clarity on capability, risks and drivers, and use that analysis to develop appropriate strategies – relating to projects or to other complex undertakings. Smart Buyer will continue to focus on Australian Industry Capability (AIC).

In 2019-20 the Capability Acquisition and Sustainment Group held a record 128 Smart Buyer workshops supporting projects and products. This is despite the challenges imposed by COVID-19 restricting face to face workshops and requiring new technology options to be explored, tested and implemented. The Capability Acquisition and Sustainment Group Smart Buyer workshop numbers are detailed by stage in the Capability Life Cycle in the Table 7 below. Of note, the Smart Buyer program has transitioned to a true One Defence program formally taking on the CIOG and more complex E&IG workshops while also supporting:

- Sustainment products such as AGSVA Psychological Services contract and the Defence Fuel Transformation Program to maximise the opportunities a sustainment re-tender offers Defence and Industry; and

- Other large capability procurements, such as the Navy Guided Weapons and the Space Situational Awareness Programs.

Table 7 - Smart Buyer Workshops Conducted 2019-20

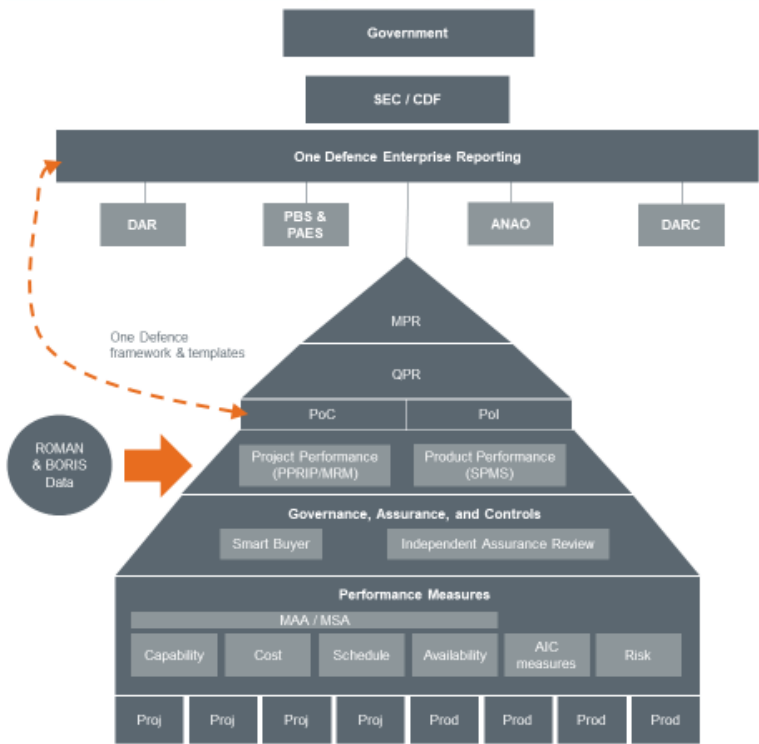
Smart Buyer Assessments	No. held
Gate Zero	30
Gate One	26
Gate Two	15
Other activities	47
CIOG	8
E&IG	2
<b>Total</b>	<b>128</b>

Enterprise Project Performance Framework

Enterprise Project Performance Reporting

Capital acquisition performance reporting developed and evolved over the last 15 years. Since First Principles Review, CASG is fully incorporated within the Enterprise level reporting framework consisting of the Portfolio Budget Statements, Portfolio Additional Estimates Statements and the Defence Annual Report, depicted at Table x below.

Table 8 – Enterprise Project Performance Reporting framework



## Agreements

Within CASG, Materiel Acquisition Agreements (MAAs) are the current project delivery agreements for monitoring and reporting on the current Government-approved scope, schedule and cost. While previous policy documents refer to Project Directives, the MAA is the foundational governance artefact in the Defence Enterprise Project Reporting Framework.

In recent years, Defence has undertaken a review of the MAA templates and updated them to improve the capture of information. In line with “One Defence” principles, the Agreements framework will continue to evolve as Defence project management reforms progress to provide a more holistic view of capability delivery while integrating with the latest corporate project reporting systems. Future versions of the Capability Life Cycle Manual may change the names of the governance artefacts, but Defence will still continue to capture project information through MAA-type constructions that provide project detail that can then enable more programmatic reporting.

## Quarterly Performance Report

The Capability Acquisition and Sustainment Quarterly Performance Report “QPR” provides the Department and the Ministers with insight into the performance of Defence’s major capital equipment acquisition and sustainment program. The QPR also fulfils Deputy Secretary Capability Acquisition and Sustainment’s obligation in accordance with the First Principles Review.

The QPR is a quarterly snapshot on performance of the key acquisition projects and sustainment products and contains sensitive information intended for internal departmental reporting. The QPR is comprised of the Top 30 projects and sustainment products listed in the Defence Portfolio Budget Statements and the projects featured in the Major Projects Report, Projects of Concern, and Projects and Products of Interest.

Through the QPR, the Defence Ministers and senior Defence stakeholders are provided with insight into the delivery of capability to the Australian Defence Force. The governance and reporting framework that underpins the QPR is core to the regular management of acquisition and sustainment activities.

The QPR contains some sensitive information provided by industry and Defence to enable the best cooperative approach to the delivery of highly complex Defence Projects. Respecting this sensitivity will retain the improved culture and Defence and Industry relationships.

A continuous improvement approach has benefitted both the monthly performance reporting and the QPR. These have included system enhancements to capture information more efficiently and increase consultation. Feedback on the content and format is regularly sought from all stakeholders including members of the Defence Investment Committee and the Defence Audit and Risk Committee.

## Projects of Interest

Projects (and products) showing heightened risks in the areas of cost, scope, schedule, capability, commercial strategy and/or other issues are monitored through a variety of sources. Consultation with senior stakeholders occurs before determining a Project of Interest. Once listed, reporting requirements are increased with a more detailed summary of issues, along with proposed remediation strategies to get the project/product back on track.

## Defence Major Projects Report

Auditor-General Report No.19 2020–21  
2019–20 Major Projects Report

The Projects of Interest ‘list’ is used for internal departmental and Ministerial reporting and management purposes. The broad goal is to provide senior management oversight, returning projects to satisfactory performance, and preventing projects from becoming Projects of Concern.

### Projects of Concern

Projects (or sustainment activities) identified as a Project of Concern have technical, cost or schedule challenges that benefit from additional support from senior executives and Ministers. Projects are removed from the list through project remediation or project contract cancellation with the approval of the Ministers. Projects of Concern receive a higher level of oversight and management and undertake more detailed reporting to Government.

As at 30 June 2020, MRH90 Helicopters (AIR 9000 Phase 2, 4 & 6) is the only project in this year’s Major Projects Report that is being managed under the Projects of Concern regime.

Since 2008, 25 projects, with a total value of \$32.4 billion, have been managed this way. As at 30 June 2020, the two active Projects of Concern had a total value of \$3.9 billion.

**Table 9 – Projects of Concern at 30 June 2020**

Project Number	Project Name	Date Added
AIR 9000 Phases 2, 4 & 6	MRH90 Helicopters	Nov 2011
AIR 5431 Phase 1	Deployable Defence Air Traffic Management and Control System	Aug 2017

### Defence’s consideration of Projects of Concern

Projects of Concern is an enduring framework that remains a valuable tool to escalate projects for more senior management of complex issues in collaboration with our Industry partners.

Defence’s senior committees have considered the effectiveness of the commercial mechanisms and the opportunity brought to achieve a successful outcome on elevation to a Project of Concern.

Defence has a well-regarded project assurance framework in place underpinned by Independent Assurance Reviews. The review Board Members are chosen for their experience and knowledge and ability to share lessons learned from past projects.

In July 2020 Defence closed out the two recommendations from the ANAO performance audit on Defence’s Management of its Projects of Concern list.

With the increasing complexity of the Integrated Investment Program potentially there is a higher probability of Projects of Concern or management ‘as if a Project of Concern’ for discrete elements of highly integrated and developmental activities.

### Enterprise Reform Program

A key component of Defence’s ongoing reform agenda is the improvement of our enterprise measurement and performance reporting practices. This will include improvements to how we establish performance measures, manage our reporting systems, and establish strong performance-based behaviours around clear accountabilities. Defence’s objective is to demonstrate in a clear and transparent fashion that the considerable investment made by the Australian Government in Defence is delivering value for money for taxpayers, is in alignment with Public Governance

Performance and Accountability Act 2013 requirements, and that we are achieving our delivery and operational outcomes.

### Cost of Producing the MPR

In support of the 2018-19 MPR Defence costed the effort involved in producing the MPR. The methodology used by the Defence Cost Estimation services involved:

- Estimates from nine projects in relation to their effort required to support the MPR process.
- The projects were selected based on their risk profile, as defined by the ANAO (three high risk, three medium risk, and three low risk projects).
- The results were averaged and extrapolated across the 26 projects from the 2018-19 MPR based on their ANAO risk assessment.
- Estimates were also assessed across the Department, based on the time taken to meet the Defence roles and responsibilities outlined in the MPR Guidelines.

This resulted in an estimated cost to Defence of \$2.4m to produce the 2018-19 MPR. Noting the similarities in 18-19 and 19-20 and due to the labour intensive effort to undertake the manual costing Defence did not undertake the activity for the 2019-20 MPR. It is anticipated the amount of effort will have increased as the projects that have come off the report for this year would have required less effort than the complex new projects that are participating in the MPR for the first time.

### Improvement Initiatives

#### Risk Reform

The Capability Acquisition and Sustainment Group (CASG) is continuing to reform its management of risk to align enterprise-level and specialist risk management practice within the One Defence Enterprise Risk Management Framework. A cultural and behavioural change to the way risk is managed in CASG will ensure the success of the Risk Management Framework.

CASG is committed to continuously improving its approach to risk management. The CASG Risk Management Framework recognises the need, at all levels, to align, integrate, interface and continuously improve a risk-based approach to managing shared risk with Government, Capability Managers, and Defence Industry.

The CASG Risk Management Framework, a component of the Capability Acquisition & Sustainment Risk Management System (CAS-RM System), was released in June 2020. The CAS-RM System standardises application of the ISO31000:2018 risk management process and defines the level and depth of risk planning for specific project applications, including a common risk language, risk analysis tools, standardised format for risk planning, selection of appropriate methods, techniques and approaches and an information system to enable enhanced risk-based decision making. Rollout of the CAS-RM System is in four tranches: Policy, Practice, Tools and Cultural Change. Rollout of the risk management tool Predict! has already commenced and is anticipated to be complete by February 2022.

It is expected that the CAS-RM System will take a number of annual cycles to reach maturity.

## Monthly Reporting Module & Project Performance Review

Defence continues to improve its business systems and data collection with the aim of consolidating processes and systems in order to provide a more manageable system environment..

During 2019–20 the Monthly Reporting System (MRS), which previously provided a majority of the data for the PDSSs, was transitioned to Monthly Reporting Module (MRM). Starting July 20 MRM will maintain the same reporting function as MRS along with the format of the Acquisition Performance Report (APR), to continue to facilitate the accurate, efficient and timely reporting of projects. MRM will eventually also provide traceable and transparent commentary features and will be an accurate source of CASG project reporting information for users in the chain of command. MRM has been integrated into the Project Performance Review Information Platform (PPRIP) addressing the requirement for a unified system.

PPRIP is a web-based tool to support discussions between Project Managers, Directors and Branch Heads in elevating risks and supporting informed decision making to improve project performance. It does this by sourcing data from Defence Enterprise systems to give Project Managers real time information to assist them to focus on key performance indicators and easily identify risks and concerns.

## Project Maturity Scores

Project Maturity Scores were initially established in 2010 as an assessment methodology used for quantifying, in a practical and communicable manner, the maturity of projects as they progress through the capability definition and acquisition cycle. The Project Maturity Score comprised a matrix of seven common project attributes that are assigned a score between one and 10. At specified project life cycle gates in the capability definition and acquisition life cycle, an assessment is made of the score for each of the seven project attributes, the total of which is the maturity score at that stage of the project. The policy was updated in 2018 to align with the First Principles Review recommendations, CASG Business Framework and the interim Capability Life Cycle Manual.

In 2019 a Project Performance Score policy was generated to provide a scoring matrix that addressed ANAO concerns with the Project Maturity Score process to incorporate both Capability Life Cycle changes and references to Smart Buyer. Testing of the Project Performance Score was unsuccessful and, like Project Maturity Scores, was found to be very difficult, if not impossible, to apply to mega projects. Results of the testing also highlighted that Project Performance Scores are not suitable for application in programs as they roll out. Project Maturity Scores and Project Performance Scores are not a reliable indicator of project maturity or performance as scores often remain static for a several years as the project progresses through key milestone events such as Critical Design Review, production (low rate and full rate), delivery, and testing programs.

The implementation of PPRIP, supported by the MRM enables rich conversations on a monthly basis between Project Managers and Branch Heads to take place based on contemporary project performance data. This empowers Branch Heads to make informed decisions and to implement corrective actions if projects begin to trend away from or exceed agreed tolerances across a range of metrics.

The ANAO have been engaged and provided a demonstration of PPRIP and MRM, and whilst this platform is unable to produce a maturity or performance score, it does provide a comprehensive monthly review of projects covering cost, risk, schedule and FIC, leading to managers having a good understanding of project performance. The ANAO have acknowledged Defence's position that

Project Maturity Scores and Project Performance Scores are not a reliable indicator of project maturity or performances and as such they have been removed from the Guidelines for the 2020-21 MPR.

### System Program Office Reform

Systems Program Offices (SPO) Reform is a mechanism for the CASG to implement the agreed outcomes following from the First Principles Review (FPR).

SPO reform enables CASG to deliver capability in a more efficient manner to Capability Managers. The core business of SPOs will change from a primarily transactional role to focus on contracting, assurance, planning and governance. Industry will play a key role in project execution, working in genuine partnership with CASG. For the SPOs this involves understanding and clearly articulating the requirements and allowing the suppliers to maximise efficiency and finding innovative solutions to deliver the required capability outcomes. The increased focus on governance will allow the SPO to rapidly identify problems in the business and work with industry to solve these problems in a responsive and agile manner.

This is achieved by designing each SPO to ensure that they have the right size workforce, with the right skills and the most appropriate commercial model to deliver improved capability, on time and within budget, within a complex environments. Currently, 92% of SPOs are aligned with the First Principles Review model, and the total number of SPOs has reduced from 78 to 61 through a consolidation process.

Restructures are complex because the process may depend on extant contracts. The full revision to a new commercial model will be realised when legacy contract arrangements have ceased. In addition, the timing of reform may be impacted by Industry's capacity to support the new approach, and the associated upskilling and professionalisation of staff. Where necessary a formal organisational change management process, including union consultation, is conducted in company with the reform activities.

Despite the impacts of the COVID-19 pandemic (including restrictions on industry and workplaces), the SPO reform program is on track to be finalised December 2023.

### Improved Contract Management

Defence is currently reviewing and further strengthening its Contract Management Framework (the Framework). The Framework provides the principles, processes, tools, templates, guidance and training to support Defence contract managers in achieving effective contracting outcomes. It also includes the contract governance and assurance requirements and processes for major projects. The Framework links into Defence's project and program management frameworks to integrate contract management with project and program management, scaled to the complexity, cost and risk of the project. It recognises that contract management directly contributes to Defence capability program outcomes, as well as supporting Defence to meet its legislative obligations in achieving value for money and managing risk to meet government expectations. The focus of the Framework review is to develop and provide Defence contract managers with strengthened practical guidance, tools and training to support them in their roles. This includes a review of the Defence Contract Management Handbook and the Defence Contract Management Toolkit.



### Australian Industry Capability

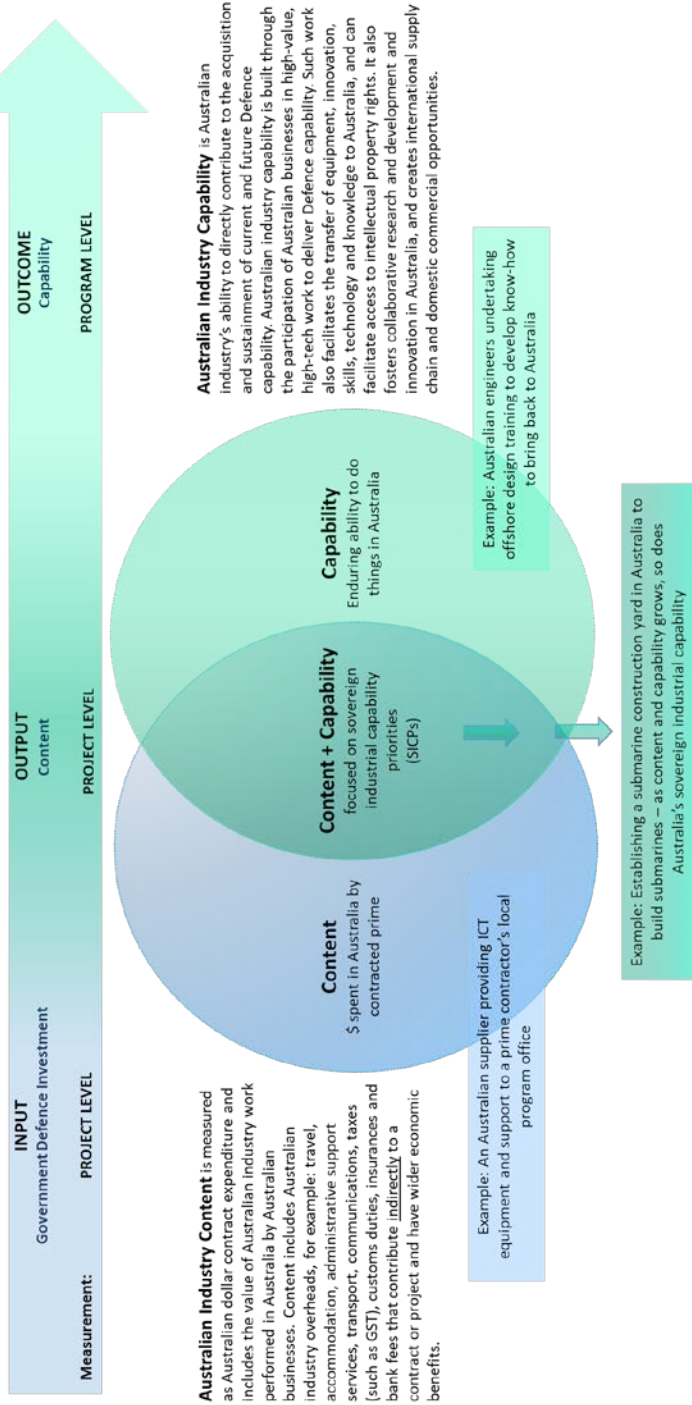
Defence industry is vital to Defence capability. The Australian Industry Capability (AIC) Program ensures Australian companies have greater opportunities to win work with Defence procurement and projects. This program plays a critical role in developing the agile and robust defence industrial base needed to deliver on the 2020 Defence Strategic Update and Force Structure plan.

Over the past twelve months, Defence has made progress in strengthening the AIC Program. Since the beginning of the COVID-19 outbreak in Australia, the Australian Government acted swiftly to increase engagement and strengthen the Defence and Industry partnership in order to safely sustain the ADF and continue with projects. Australia's defence industrial base quickly demonstrated its resiliency and agility, by responding with practical solutions in support of Defence's needs and the Whole-of-Government Response.

In March 2020, the Defence established the COVID-19 Taskforce Industry Support Cell as a central point of contact to engage with industry. Defence's support has meant that many defence industry businesses were able to continue to work through the pandemic and expand to offer more Australians job opportunities.

## Australian Industry Content and Australian Industry Capability

In equipping and sustaining the ADF we will broaden and deepen the defence industrial base, growing the level of Australian industry development and technology transfer over the life of major capital equipment projects to support sovereign industrial capability priorities and maximising opportunities for Australian industry to meet Australia's defence capability needs.



Ensuring alignment between ‘Australian Industry Content’ and ‘Australian Industry Capability’ requires a sustained collaborative effort between Government and Industry. Over the past twelve months, Defence has strengthened the implementation and enforceability of Australian Industry Capability Program with a suite of policy and contractual reforms. The Government is committed to developing an Australian Industry Capability assurance framework to improve the accountability and enforceability of contracted Australian Industry Capability Plans in procurement projects. Government has agreed to the development of enhancements to the Australian Industry Capability Program, through contractual and non-contractual mechanisms. These enhancements will give Australia’s small and medium businesses even more opportunities to win work with Defence.

For example, in August 2020, Government amended the guidance to the Commonwealth Procurement Rules so the value for money proposition can now include the broader benefit that procuring from Australian businesses can have on the economy. Value for money considerations will remain the main driver for Government procurement decisions, and integrating Defence’s Sovereign Industrial Capability Priorities as part of this process means Defence’s tender evaluations must now consider the benefit that Defence procurement can bring to Australian small businesses and jobs.

### Defence Finance Reform

In 2018, the then Chief Finance Officer Group was externally reviewed, with recommendations made to bring the group into line with the contemporary practices enacted across the Commonwealth. This was to ensure that we can keep up with the changes to our operating environment, increased stakeholder expectations and new technologies.

The resulting Defence Finance Reform is focused on Finance Reform for Defence as well as reforming Defence Finance Group in terms of its people, services and systems.

Some of the key changes are Defence’s transition from cash to accrual accounting on 1 July 2020, to get a more accurate picture of our budgetary position moving forward and standardising financial reporting across Defence to make it easier to understand across groups.

**Appendix 1 – List of Projects Removed from the Major Projects Report Since Inception**

Project Number	Project	First Reported in MPR	Last Reported in MPR	Government Approved Budget \$m	Expenditure to date \$m	Remaining Budget \$m	FMR Achieved/ Forecast	FOC Achieved/ Forecast	Reason for Exit
AIR 5376 Phase 3.2	F/A 18 Hornet Upgrade Structural Refurbishment (Hornet Refurb)	2008-09	2010-11	319.1	319.1	0.0	N/A	N/A	JCPAA Approval[1]
AIR 8000 Phase 3	C-17 Heavy Airlift	2008-09	2011-12	1,423.4	1,423.4	0.0	Dec-11	Dec-11	FOC achieved
AIR 5349 Phase 1/2	Bridging Air Combat Capability	2008-09	2012-13	3,661.4	3,045.9	615.5	Dec-12	Dec-12	FOC achieved
SEA 1444 Phase 1	Armidale Class Patrol Boat	2007-08	2012-13	537.2	530.3	6.9	Nov-07	Oct-12	FOC achieved
LAND 19 Phase 7A	Counter-Rocket Artillery and Mortar	2011-12	2012-13	265.7	186.1	79.6	Jan-13	Jan-13	FOC achieved
AIR 5376 Phase 2	F/A 18 Hornet Upgrade	2007-08	2013-14	1,882.5	1,663.8	218.7	Sept 12	Oct-14	FMR achieved
AIR 5418 Phase 1	Follow On Stand Off Weapon	2009-10	2013-14	319.0	287.1	31.9	Sept 13	Jan-14	FOC achieved
JP 2008 Phase 4	Next Generation SATCOM Capability	2009-10	2013-14	869.5	569.1	300.4	Jun-14	Jul-15	FMR achieved
JP 2043 Phase 3A	High Frequency Modernisation	2007-08	2013-14	580.2	498.1	82.1	Nov-17	Nov-17	JCPAA Approval[2]
LAND 17 Phase 1A	Artillery Replacement	2010-11	2013-14	158.5	158.5	0.0	Sept 13	Oct-14	FMR achieved
SEA 1390 Phase 2.1	Guided Missile Frigate Upgrade Implementation	2007-08	2013-14	1,453.8	1,374.7	79.0	Mar 16	Mar-16	JCPAA Approval[3]
SEA 1390 Phase 4B	SM-1 Missile Replacement	2010-11	2013-14	416.1	356.5	59.7	Feb 15	Jun-15	JCPAA Approval[4]
AIR 5077 Phase 3	Wedgetail	2007-08	2014-15	3,885.3	3,559.6	285.7	Feb 15	May-15	FOC achieved
LAND 75 Phase 3.4	Battlefield Command Support System	2010-11	2014-15	315.7	271.9	43.8	Mar-15	Apr-15	JCPAA Approval
AIR5402	Air to Air Refuel	2008-09	2015-16	1,818.7	1,764.3	54.4	May-16	Jul-16	FOC achieved
AIR 87	Armed Reconnaissance Helicopter	2007-08	2016-17	1,867.8	1,867.8	0.0	Mar-14	Apr-16	FOC achieved with Carveats
AIR 9000 PH5C	Additional Medium Lift Helicopter	2010-11	2016-17	637.8	448.2	189.6	Jul-17	Jul-17	FOC achieved
LAND 116	Bushmaster Protected Mobility Vehicle	2007-08	2016-17	1,250.6	1,036.1	214.5	Oct-17	Jan-17	FOC achieved

Project Number	Project	First Reported in MPR	Last Reported in MPR	Government Approved Budget \$m	Expenditure to date \$m	Remaining Budget \$m	FMR Achieved/ Forecast	FOC Achieved/ Forecast	Reason for Exit
LAND 121 Ph3A	Overlander Vehicles (Light)	2009-10 (Ph 3) 2012-13 (Ph 3A)	2016-17	1,017.6	900.5	117.1	Oct-16	Oct-16	FOC achieved
LAND 75 Phase 4B	Battlefield Command System	2015-16	2017-18	316.4	280.8	35.6	Dec-17	Dec-17	FOC achieved
SEA 1429 Phase 2	Replacement Heavyweight Torpedo	2009-10	2017-18	428.7	337.5	91.2	Oct-18	Dec-18	JCPAA Approval
SEA 1439 Phase 4A	Collins Replacement Combat System	2007-08	2017-18	438.8	438.8	0.0	Oct-18	Dec-18	JCPAA Approval
SEA 1448 Phase 2A	ANZAC Anti-Ship Missile Defence (2A)	2009-10	2017-18	386.7	379.6	7.1	Jul-18	Aug-18	JCPAA Approval
AIR 7403 Phase 3	Additional KC-30A Multi-role Tanker Transport	2015-16	2018-19	889.4	657.7	231.7	Oct-19	Dec-19	JCPAA Approval
JP 2048 Phase 3	Amphibious Watercraft Replacement	2013-14	2018-19	236.8	183.3	53.5	Dec-16	Nov-19	JCPAA Approval
JP 2048 Phase 4A/4B	Amphibious Ships (LHD)	2008-09	2018-19	3,092.2	2,861.9	230.3	Oct-19	Nov-19	JCPAA Approval
JP 2072 Phase 2A	Battlespace Communications Systems Phase 2A	2012-13	2018-19	438.2	376.2	62.0	Jan-19	Dec-19	JCPAA Approval
JP 9000 Phase 7	Helicopter Aircrew Training System	2015-16	2018-19	481.6	385.8	95.8	Apr-19	Dec-20	JCPAA Approval
SEA 1448 Phase 2B	ANZAC Anti-Ship Missile Defence (2B)	2009-10	2018-19	678.6	645.5	33.1	Nov-18	Jun-19	FOC achieved

#### Notes:

- Approval granted after project scope and budget were approved for transition to the in-service sustainment support system in 2010-11
- 3.4. Approval granted in 2014 based on a risk assessment performed by the then DMO and endorsed by the Capability Manager, which concluded the overall risk rating for remaining work was low
- 5.6.7. Approval granted in 2018 based on a risk assessment performed by CASG and endorsed by the Capability Manager, which concluded the overall risk rating for remaining work was low.

## Appendix 2: Acquisitions categories

Defence categorises its acquisition projects to enable it to differentiate between the complexities of business undertakings, focus management attention, provide a basis for professionalising its workforce and facilitate strategic workforce planning. Projects are graded into one of four acquisition categories (ACATs):

- ACAT I – These are major capital equipment acquisitions that are normally the ADF's most strategically significant. They are characterised by extensive project and schedule management complexity and very high levels of technical difficulty, operating, support and commercial arrangements.
- ACAT II – These are major capital equipment acquisitions that are strategically significant. They are characterised by significant project and schedule management and high levels of technical difficulty, operating, support arrangements and commercial arrangements.
- ACAT III – These are major or minor capital equipment acquisitions that have a moderate strategic significance to the ADF. They are characterised by the application of traditional project and schedule management techniques and moderate levels of technical difficulty, operating, support arrangements and commercial arrangements.
- ACAT IV – These are major or minor capital equipment acquisitions that have a lower level of strategic significance to the ADF. They are characterised by traditional project and schedule management requirements and lower levels of technical difficulty, operating, support and commercial arrangements.

As the complexity of a project will vary over its life cycle, Defence reviews project acquisition categories at defined milestones between entry into the Integrated Investment Program and project completion.

The ACAT framework provides a recognised, consistent and repeatable methodology for categorising projects and aligning project managers' certified experience and competencies to the complexity and scale of projects under management.

The ACAT level of a project is assessed against six project attributes:

- Acquisition cost - the approved budget for the project.
- Project management complexity - the complexity of project management necessary for its execution.
- Schedule complexity - the inherent complexity brought about by delivery pressures on the project.
- Technical difficulty - the complexities associated with technical undertakings such as design and development, assembly, integration, test and acceptance.
- Operation and support - the complexity associated with preparing the organisation and environment in which the system will be operated, supported and sustained.
- Commercial experience - the readiness and capability of industry to develop, produce and support the required capability, and the complexity of the commercial arrangements being managed.

## Appendix 3: Project Maturity

CASG's project maturity score quantifies the maturity of a project by way of a score based on the project managers' judgement at defined milestones in its capability development and acquisition phases. This score is then compared against an ideal or benchmark score for that milestone. A project's maturity is assessed on 16 milestones across its lifecycle and for each of these milestones the ideal or benchmark condition is represented by a benchmark score as shown in Figure A1.

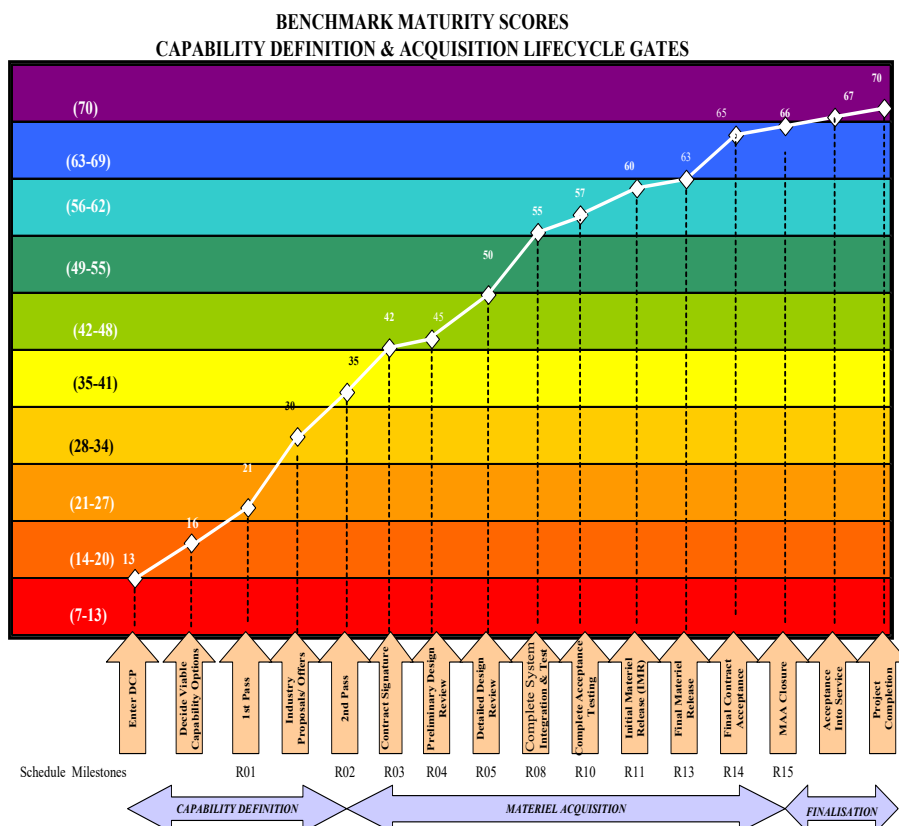
The project maturity score comprises a matrix of seven attributes:

- Schedule
- Cost
- Requirement
- Technical understanding
- Technical difficulty
- Commercial
- Operations and support

The project manager assesses the level of maturity that a project reaches at a particular milestone for each of these attributes on a scale of 1 to 10. Score assessment is made by selecting the most appropriate description that fits the question under the attributes columns.

Project maturity scores provide a means of communicating in a simple fashion an indicative 'as is' versus a 'should be' condition to inform decision making for each project. The scores are not precise and are not intended to enable exact comparisons across projects. Following is a description of the project maturity score attributes.

Figure A1 – Benchmark Maturity Scores





Project maturity score matrix						
Attributes	Schedule	Cost	Requirements	Technical understanding	Technical difficulty	Commercial
Delivery performance						
<b>Maturity Score</b>	How are the IMR & FMR milestones tracking against project approval?	How well is the cost tracking against project approval?	How well are the requirements defined in the MAA being realised?	Defence's understanding of the technical solution and arrangements to operate and support the capability.	How well are the design and its validation coming along?	How well is industry performing?
10	Achieved	Proven	Demonstrated	Fully understood	Proven	All delivered
9	Confident	Contingency remains	Tested	Transferred	Tested	Delivered
8	Acceptable	Confident	Designed	Arranged	Integrated	Delivering
7	In tolerance	Within contingency	Acceptable	Needs understood	Designed	Manages risk
6	Manageable	Negotiated	Contracted	Provided for	Planned	As Contracted
Process maturity						
<b>Maturity score</b>	How realistic is the schedule?	What is the quality of the project estimate?	How well are the requirements defined and understood?	How well are the solutions understood?	How difficult is to integrate the component parts?	Can industry deliver the solution?
5	Confirmed	Pre- endorsed capability	Endorsed	Understood	Manageable	Offered
4	Understood	Industry tested	Documented	Feasible	Feasible	Industry proposals
3	Feasible	Reasonable	Solution classes	Coalescing	Building blocks	Strategy developed
2	Drivers known	Plausible	Scenarios identified	Minimal	Conceptual	Possible
1	Speculative	Speculative	Deficiency	Not at all	Not defined	Not yet
						Is the impact on the existing operating and support environment understood?
						Planned
						Known
						Issues understood
						Conceivable
						Not identified

<i>Project life cycle gates<sup>147</sup></i>	<i>Represents</i>	<b>Benchmark maturity score</b>
Enter Defence Integrated Investment Program	The stage at which a project is recommended to Government for inclusion in the Defence Integrated Investment Program	13
Decide viable capability options	The stage in the capability definition/ development process when 1 <sup>st</sup> Pass options that will be put to Government are decided by Chief CDG	16
1 <sup>st</sup> pass approval	The stage at which 1 <sup>st</sup> Pass options to be put to Cabinet are endorsed by the Defence Integrated Investment Program Committee	21
Industry proposals/ offers	The stage at which formal responses from industry to a request for price or request for tender have been received and evaluated	30
2 <sup>nd</sup> pass approval	The stage in the capability definition/development process when 2 <sup>nd</sup> pass approval is sought from Cabinet	35
Contract signature	On completion of contract negotiations and on concluding contract signature of a contract that has maximum influence on the project	42
Preliminary design review(s)	On completion of system requirements reviews and when preliminary design reviews are completed	45
Detailed design review(s)	On completion of detailed design reviews	50
Complete system integration and test	On completion of verification and validation activities at the system and subsystem levels	55
Complete acceptance testing	On completion of all contractual acceptance testing and associated testing activities nominated in the Test and Evaluation Master Plan	57
Initial materiel release	Occurs when the materiel components that represents the CASG contribution to initial operational release are ready for transition to the capability manager	60
Final materiel release	Occurs when all the products and services within the MAA have been transitioned to the capability manager.	63
Final contract acceptance	On final acceptance as defined in the contract.	65
MAA closure	Occurs when all of the actions necessary to finalise the MAA have been completed, including completion of all financial transactions and records, completion of contracts and transfer of remaining fund.	66
Acceptance into service	The point at which the capability manager accepts the materiel system, supplies and services for employment in operational service <sup>148</sup>	67
Project completion	Project closure is achieved when the project is financially closed, support arrangements have been transitioned and all MAA requirements have been demonstrated and transitioned.	70

<sup>147</sup> Defence is in the process of replacing this as the Capability Life Cycle implementation progresses. This will still be relevant for the historical data presented in the 2016-17 Major Projects Report.

<sup>148</sup> Where multiple elements of a mission system are involved (e.g. three surface combatants) this date represents Initial Operational Capability (IOC) of the initial Subset, including its associated operational support, i.e. when the IOC is achieved.

## Appendix 4: Capability Life Cycle

The Capability Life Cycle commenced in April 2016 to address First Principles Review Recommendation 2, which called for Defence to ‘Establish a single end-to-end capability development function within the Department to maximise the efficient, effective and professional delivery of military capability’. The Capability Life Cycle is Defence’s response to this recommendation.

The Capability Life Cycle is an end-to-end delivery model, but has four key stages, as outlined in the Figure below. The projects in this year’s MPR are in the Acquisition stage, but refer to decisions made in the Risk and Requirement Setting stage. Details about the Gates and Passes are listed below.

**Figure A2: Capability Life Cycle Model**



- **Gate Zero:** is the decision point at which the Investment Committee considers an investment proposal developed by a Capability Manager. It may agree to a proposal to develop a range of options with agreed timeframes, requirements and financial commitments to proceed to a Gate 1 decision, or, agree a single option for accelerated proceed directly to Gate 2.
- **Gate One:** (if required) is the decision point where the Investment Committee considers the progress made since Gate 0. The Investment Committee either clears the proposal for Government consideration, or provides direction to remediate projects.
- **First Pass:** (if required) is the Government decision to select a specific option(s) and proceed with agreed timeframes, technical requirements and financial commitments to Gate 2
- **Gate Two:** is the stage where the Integrated Project Manager initiates formal engagement with industry, in accordance with the agreed delivery strategy. The Investment Committee considers the updated proposal and either clears the proposal for Government consideration, or provides direction to remediate projects.
- **Second Pass:** is the Government decision to acquire a fully defined and costed capability.
- **Initial Operational Capability:** is the capability state relating to the in-service realisation of the first subset of a capability system that can be employed operationally. Declaration of initial operating capability is made by the Capability Manager, supported by the results of operational test and evaluation and declaration by the Delivery Group(s) that the fundamental inputs to capability have been delivered.
- **Final Operational Capability:** is the capability state relating to the in-service realisation of the final subset of a capability system that can be employed operationally. Declaration of final operating capability is made by the Capability Manager, supported by the results of operational test and evaluation and declaration by the Delivery Group(s) that the fundamental inputs to capability have been delivered.

## Appendix 5: Glossary

Acquisition Categories	See Appendix 1.
Additional Estimates	Where amounts appropriated at Budget time are required to change, the Parliament may make adjustments to portfolios through the Additional estimates process.
Australianised Military-off-the-shelf	An adapted military-off-the-shelf product where modifications are made to meet particular ADF operational requirements.
Capability	The power to achieve a desired operational effect in a nominated environment within a specified time and to sustain that effect for a designated period. Capability is generated by the Fundamental Inputs to Capability.
Capability manager	A capability manager (CM) has the responsibility to raise, train and sustain capabilities. In relation to the delivery of new capability or enhancements to extant capabilities through the Defence Integrated Investment Plan, CMs are responsible for delivering the agreed capability to Government, through the coordination of the fundamental inputs to capability. Principal CMs are Chief of Navy, Chief of Army, Chief of Air Force, and Chief of Joint Capabilities.
Capital equipment	Substantial end items of equipment such as ships, aircraft, armoured vehicles, weapons, communications systems, electronics systems or other armaments that are additional to, or replacements for, items in the Defence inventory.
Contract change proposal	This is a formal written proposal by the Commonwealth or the contractor, prepared in accordance with the terms and conditions of the contract, to change the contract after the effective date. After agreement by the parties, the contract is amended in accordance with the processes established in the contract
Corporate governance	The process by which agencies are directed and controlled, and encompasses; authority, accountability, stewardship, leadership, direction and control.
Developmental	A product that is not available off-the-shelf and has to be developed specifically to meet the ADF's particular operational requirements.
Fixed price contract	A fixed price contract is unalterable in all respects for the duration of the contract, except where the parties agree to a contract amendment which alters that contract price.

Foreign Military Sales	The US Department of Defense's Foreign Military Sales program facilitates sales of US arms, Defense services, and military training to foreign governments.
Forward Estimates	The level of proposed expenditure for future years (based on relevant demographic, economic and other future forecasting assumptions). The Government requires forward estimates for the following three financial years to be published in each annual Federal Budget paper.
Function and performance specification	A specification that expresses an operational requirement in function and performance terms. This document forms part of the capability documentation.
Materiel Acquisition Agreement	An agreement between Defence and CASG which states in concise terms what services and products will be delivered, for how much and when.
Memorandum of understanding (MOU)	A memorandum of understanding is a document setting out an agreement, usually between two government agencies.
Minor Capital Acquisition Project	A Defence project in which the proposed equipment falls within the definition of capital equipment but does not meet the criteria in the definition of a major project.
Off-the-shelf	A system or equipment that is available for purchase, which is already established in-service with another military or government body or commercial enterprise and requires only minor, if any, modification to deliver interoperability with existing ADF assets.
Operational concept document	The primary reference for determining fitness-for-purpose of the desired capability to be developed. This document forms part of the Capability Definition Document.
Operational test and evaluation (OT&E)	Test and evaluation conducted under realistic operational conditions with representative users of the system, in the expected operational context, for the purpose of determining its operational effectiveness and suitability to carry out the role and fulfil the requirement that it was intended to satisfy.
Platforms	Refers to air, land, or surface or sub-surface assets that are discrete and taskable elements within the ADF.
Portfolio Budget Statement	A document presented by the Minister to the Parliament to inform Senators and Members of the basis for Defence budget appropriations in support of the provisions in Appropriation Bills 1 and 2. The statements summarise the Defence budget and provides detail of outcome performance forecasts and resources in order to justify agency expenditure.
Prime system integrator	The entity that has prime responsibility for delivering the mission and support systems.

<i>Public Governance, Performance and Accountability Act 2013</i>	<i>The Public Governance, Performance and Accountability Act 2013</i> came into effect on 1 July 2014 and superseded the <i>Financial Management and Accountability Act 1997</i> . It is a Commonwealth Act about the governance, performance and accountability of, and the use and management of public resources by, the Commonwealth, Commonwealth entities and Commonwealth companies, and for related purposes.
Test concept document	The basis for the development of the Test and Evaluation Master Plan for a project, and is the highest level document that considers test and evaluation requirements within the capability systems' life-cycle. This document forms part of the Capability Definition Document.
Variable price contracts	Variable price contracts provide for the contractor to be paid a fixed fee for performance of the contract, subject to certain variations detailed in the contract. Variable price contracts may allow for variations in exchange rates, labour and/or material costs.

## Appendix 6: Lessons learned

The 2019-20 Guidelines state that “for each project which has been removed, the lessons learned at both the project level and the whole-of-organisation level should be included as a separate section in the *following* Defence MPR”.<sup>149</sup>

**Table A6. Lessons learned**

Categories of systemic lessons	Project lesson	Project learned from
Contract management	Independent Assurance Reviews and Project Stakeholder Group meetings enable adjustment of project strategies and stakeholder input to balance schedule decisions against impacts to cost, schedule, performance, quality and stakeholder expectations. For example, cost, performance and supportability may be impacted by early acceptance of the supplies to meet schedule demands.	JP 20148 Phase 4A/4B - Amphibious Ships (LHD)
Contract Management	Prior to committing to the acquisition contract, use best endeavours to obtain high fidelity sustainment data and assess it against suitability (fitness for purpose). Senior engineering and logistic reviews are required prior to the delivery of the sustainment products to minimise sustainment risks	JP 20148 Phase 4A/4B - Amphibious Ships (LHD)
First of Type Equipment	When introducing new major capabilities into service, both operational tasks and maintenance tasks should be modelled and analysed in detail, before the training obligations under the acquisition contract are agreed.	JP 20148 Phase 4A/4B - Amphibious Ships (LHD)
First of Type Equipment	Ensure that technically complex developmental projects that have high levels of risk as part of the new system or integration of the new system into existing systems, demands that a prototype (lead platform) be agreed up-front and used for proving the capability before agreeing to additional platforms.	SEA 1448 Phase 2B – ANZAC Anti-Ship Missile Defence
Governance	Adequate communication between, and engagement of, critical stakeholders to ensure that a common understanding of Project status is maintained.	SEA 1448 Phase 2B – ANZAC Anti-Ship Missile Defence
Governance	Project budgets must be managed to avoid adverse impacts of program level changes to budget management practices.	SEA 1448 Phase 2B – ANZAC Anti-Ship Missile Defence
Governance	Seaworthiness policy changed the role of Regulators in the reviewing of the TI-338. Need to engage early with Policy and Procedure Owner to establish what ‘assurance’ is required and authorised	SEA 1448 Phase 2B – ANZAC Anti-Ship Missile Defence
Resourcing	JP 2072 is required to provide extensive support and advice to other projects procuring or integrating communications equipment via JP 2072 contracts. New project approvals need to include adequate resources for integration and support of communications systems within their own platforms. The sustainment organisation will need to be prepared to provide program, engineering and logistics support beyond the completion of JP 2072 phases.	JP 2072 Phase 2A – Battlespace Communications System

<sup>149</sup> 2018-19 Major Projects Report Guidelines, paragraph 1.13, emphasis applied.

Categories of systemic lessons	Project lesson	Project learned from
Requirements Management	Phase 2A delivery of More of the Same equipment required Design Acceptance under Phase 1, which was not achieved. Provisional Design Acceptance was put in place however some minor ancillary equipment defined in the capability baseline was withheld due to fitness for purpose issues. New project approvals should consider the necessary design inputs to ensure they are in place before projects proceed and engineering scope then resourced appropriately.	JP 2072 Phase 2A – Battlespace Communications System
Requirements Management	There was very limited detail on the levels of support agreed or articulated in the Capability Definition Documentation. Adequate support system was therefore not established in time for delivery of materiel. Future phases require the support system better defined prior to approval, and implemented earlier in the project lifecycle.	JP 2072 Phase 2A – Battlespace Communications System
Off-The-Shelf Equipment	The contracted Field Service Representative (FSR) teams have provided high quality service that has been well received by users and the Capability Manager. For example, in most cases it is more cost effective to locate/move FSR around to units than to send high volumes of equipment back to the Original Equipment Manufacturer facilities (domestic and international) for repairs or bulk upgrades. FSR have developed from an Introduction Into Service function into an increasing, ongoing support requirement for the foreseeable future.	JP 2072 Phase 2A – Battlespace Communications System
Governance	An observation from the Independent Assurance Review was the clarity of the Primary Systems Integrator role within Phase 2A and that it was a program level responsibility. Note that after earlier gaining Capability Manager and CIOG approval, ongoing development of the BCS(L) architecture continues via a standard systems engineering process with stakeholder representative input sought for major reviews; the Prime Systems Integration team is involved in other JP2072 phase reviews to ensure overarching alignment with the BCS(L).	JP 2072 Phase 2A – Battlespace Communications System
Requirements Management	Where a project has a long gestation period, for whatever reason, the Sponsor and Capability Manager must be closely engaged to ensure the requirements set maintains relevance over time.	JP 9000 Phase 7 – Helicopter Aircrew Training System
Off-the-Shelf Equipment	Tenderer/Contractor 'off-the-shelf' claims need to be tested as thoroughly as possible, as soon as possible in the project lifecycle. This requires the availability of, or access to, appropriate and engaged subject matter experts early.	JP 9000 Phase 7 – Helicopter Aircrew Training System
Schedule Management	Conduct of SCRAM activities during contract negotiation and again prior to IBR were first trialled in this Project, yet the schedule risks were realised very early in the Project. Early use of the SCRAM activity is valuable (risks identified early) and the process should be matured to support selection/negotiation and to baseline activities.	JP 9000 Phase 7 – Helicopter Aircrew Training System
Resourcing	This Project is one of the first to implement the Integrated Support Contractor (ISC) model to execute traditional Project Office roles. The ISC Contract structure was closely aligned to and reliant on the Prime Contractor's Contract Master Schedule (CMS). Initial CMS deliverables had quality issues manifesting significant second order effects on the ISC contract. Evolution of the ISC construct should recognise risks in lock-stepping the ISC delivery so closely to the Prime Contractor CMS.	JP 9000 Phase 7 – Helicopter Aircrew Training System

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Categories of systemic lessons	Project lesson	Project learned from
Contract Management	The ASDEFCON suite of contract templates are a good initiative for capturing lessons learned from years of project delivery. In endeavouring to capture all lessons the templates have become voluminous with significant inter-relationships. This can make contract execution, and in particular contract changes, very difficult as even a small change in one area may unravel other relationships within the contract suite.	JP 9000 Phase 7 – Helicopter Aircrew Training System
Schedule Management Resourcing	A dedicated Chief Information Officer Group/Information Communication Technology (ICT) subject matter expert assigned to the project through all stages of the acquisition would improve ICT delivery efficiency.	JP 9000 Phase 7 – Helicopter Aircrew Training System



### **Part 3. Assurance by the Auditor-General and the Secretary of Defence**





Auditor-General for Australia



## **PRIORITY ASSURANCE REVIEW – SECTION 19A(5) OF THE AUDITOR-GENERAL ACT 1997**

### **INDEPENDENT ASSURANCE REPORT DEPARTMENT OF DEFENCE PROJECT DATA SUMMARY SHEETS**

**To the President of the Senate**

**To the Speaker of the House of Representatives**

#### ***Conclusion***

Based on the procedures I have performed and the evidence I have obtained, nothing has come to my attention that causes me to believe that the information in the 25 Project Data Summary Sheets in Part 3 (PDSSs) and the *Statement by the Secretary of Defence*, excluding the forecast information, has not been prepared in all material respects in accordance with the *2019–20 Major Projects Report Guidelines* (the Guidelines), as endorsed by the Joint Committee of Public Accounts and Audit.

The purpose of the Major Projects Report is to report on the performance of selected major Department of Defence (Defence) equipment acquisition projects (Major Projects), since Second Pass Approval, and associated sustainment activities (where applicable), managed by Defence.

I have undertaken a limited assurance review of the PDSSs, reporting on the status of the projects selected by the Joint Committee of Public Accounts and Audit, and the *Statement by the Secretary of Defence*, for the year-ended 30 June 2020. The following forecast information was excluded from the scope of this engagement:

- (a) Section 1.2 Current Status—Materiel Capability Delivery Performance and Section 4.1 Measures of Materiel Capability Delivery Performance;
- (b) Section 1.3 Project Context—Major Risks and Issues and Section 5 – Major Risks and Issues; and
- (c) forecast dates where included in each PDSS.

The forecast information has not been included in the scope of the engagement, due to the lack of Defence systems from which to provide complete and accurate evidence, in a sufficiently timely manner to facilitate the review. Accordingly, my conclusion does not provide any assurance in relation to this forecast information. However, material inconsistencies identified in relation to the forecast information are required to be considered in forming my conclusion.

#### ***Basis for Conclusion***

I have undertaken a limited assurance review in accordance with the ANAO Auditing Standards, which include the relevant Standard on Assurance Engagements ASAE 3000 *Assurance Engagements Other than Audits or Reviews of Historical Financial Information*, issued by the Auditing and Assurance Standards Board.

I believe that the evidence I have obtained is sufficient and appropriate to provide a basis for my conclusion.

### ***Responsibilities of the Secretary of Defence for the Project Data Summary Sheets***

The Secretary of Defence is responsible for the preparation and presentation of the PDSSs for the 25 selected projects, and the *Statement by the Secretary of Defence*, in accordance with the Guidelines. This responsibility includes the design, implementation and maintenance of internal control that the Secretary determines is necessary to enable the preparation of PDSSs that are free from material misstatement, whether due to fraud or error. The Guidelines provide that the PDSSs and supporting evidence, provided to the ANAO for review, are complete and accurate.

### ***Independence and Quality Control***


I have complied with the independence and other relevant ethical requirements relating to assurance engagements, and applied Auditing Standard ASQC 1 *Quality Control for Firms that Perform Audits and Reviews of Financial Reports and Other Financial Information, Other Assurance Engagements and Related Services Engagements* in undertaking this assurance review.

### ***Responsibilities of the Auditor-General***

My responsibility is to express an independent limited assurance conclusion on the PDSSs and *Statement by the Secretary of Defence*, based on the procedures I have performed and the evidence I have obtained. ASAE 3000 requires that I plan and perform my procedures to obtain limited assurance about whether anything has come to my attention that the PDSSs and the *Statement by the Secretary of Defence* have not, in all material respects, been prepared in accordance with the Guidelines.

In a limited assurance engagement, the assurance practitioner performs procedures, primarily consisting of: making enquiries of managers and others within the entity, as appropriate; the examination of documentation; and the evaluation of the evidence obtained. The procedures selected depend on my judgement, including identifying areas where the risks of material misstatement are likely to arise. The procedures performed are detailed at paragraph 1.7 of **Part 1** of this report.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than those performed for, a reasonable assurance engagement. Consequently the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. Accordingly I do not express a reasonable assurance opinion on whether the PDSSs and the *Statement by the Secretary of Defence* are prepared in all material respects in accordance with the Guidelines.



Grant Hehir  
Auditor-General  
Canberra  
20 November 2020

## Statement by the Secretary of Defence

The attached Project Data Summary Sheets (PDSS) for the 25 major projects included in this report have been prepared in accordance with the Guidelines developed by Defence in consultation with the Australian National Audit Office and endorsed by the Joint Committee of Public Accounts and Audit.

### Project Status as at 30 June 2020

In my opinion, the Project Data Summary Sheets comply in all material respects with the Guidelines and reflect the status of the projects as at 30 June 2020.

### Significant Events Occurring Post 30 June 2020

In stating this opinion that the PDSSs comply in all material respects with the Guidelines, I acknowledge the following material events have occurred post-30 June 2020:

#### **AIR 6000 Phase 2A/2B - Joint Strike Fighter**

In September 2020, Australia's fifth-generation fighter jet capability continued to grow with the acceptance of the 30th F-35A Lightning II from prime contractor Lockheed Martin.

#### **SEA 1000 Phase 1B – Future Submarines Design Acquisition**

Since July 2020 there has been an update to the Design review progress. The Functional Ships Systems Requirements (SSR) review for the Definition (DEF) Phase was exited in August versus July. In August, Naval Group completed or had agreed plans in place to satisfy the SRR(DEF) exit criteria. This delay in exiting SRR(DEF) has not resulted in any further impacts on the overall SEA 1000 Phase 1B schedule.

#### **LAND 400 Phase 2 – Combat Reconnaissance Vehicles**

As at 5 October 2020, RDA has delivered six of 25 Block I Boxer 8x8 CRVs to Defence. A further 12 Boxer 8x8 CRVs have arrived in Australia and are undergoing final acceptance work and delivery at MILVEHCOE.

The first two Boxer 8x8 CRV driver training courses have been conducted in Queensland during September and October 2020. The third course will be conducted later in the year, from 9 to 29 November 2020.

#### **AIR 7000 Phase 2B – Maritime Patrol and Response Aircraft System**

In September 2020, the Capability Manager accepted the Project's declaration of the Materiel Release 3 milestone as at December 2019. Major elements of this milestone included delivery of an additional four P-8A aircraft, the third and final Mobile Tactical Operations Centre and all stocks of the Mk54 torpedo. MR3 was declared with three deficiencies: the permanent installation of one Mobile Tactical Operations centre (subsequently resolved in August 2020), delivery of the Objective Search and Rescue (SAR) store capability (UNIPAC III) (expected to resolve by March 2021) and delivery of all spares (expected to resolve by June 2022). The next milestone for the project is FMR/FOC in mid-2022.

#### **AIR 9000 Phases 2, 4, 6 – Multi-Role Helicopter**

Operational Test and Evaluation of the Taipan Gun Mount has been conducted. Work continues on this capability.

Service Release of the Enhanced Cargo Hook System was achieved on 15 Oct 2020.

### **LAND 121 Phase 4 – Protected Mobility Vehicle – Light**

Thales Australia was granted formal approval to exit Stage 2: Low-Rate Initial Production and enter Stage 3: Full-Rate Production on 30 September 2020.

### **SEA 1654 Phase 3 – Maritime Operational Support Capability**

NUSHIP *Supply* completed Sea Trials in Spain in August 2020.

NUSHIP *Supply* arrived at Fleet Base West, WA in October 2020, to commence its Final Fit-out period.

### **LAND 200 Tranche 2 – Battlefield Command System**

Contract Change Proposal No 4, which incorporated the use of the Mission Partner Environment instead of the Defence Secret Network for the Battle Management System contract with Elbit Systems Limited, was approved on 24 August 2020. This Contract Change Proposal changed the date for delivery of the Software Release Review 2 (SWRR-2) from 15 Mar 21 to 15 Aug 21, with a corresponding flow-on to the Final Acceptance date from 30 Jun 21 to 30 Nov 21.

### **JP 2072 Phase 2B – Battlespace Communications System Phase 2B**

Twelve External Network Access Points (ENAPs) and 12 Troposcatter systems were delivered to Army and Air Force Units as part of Release 2 Introduction Into Service.

COVID19 is a considerable risk that will impact the development, integration and delivery of the R3 product. This is due to supplier delays, travel restrictions and reduced productivity due to working from home requirements and limitations.

The true impact won't be known until the expiry of the Recovery Deed at the end of December 2020.

### **SEA 1439 Phase 5B2 – Collins Class Communication and Electronic Warfare Improvement Program**

SEA 1439 PH5B Materiel Release Stage 1 and Stage 2 (MR#5) and Microwave Electronic Support (MWES) Initial Capability (MR#4) have been delayed and will now be claimed in April 2021 instead of current approved schedule of December 2020.

COVID-19 travel / work restrictions have impacted MWES installation and set to work on First of Type leading to delay in obtaining objective quality evidence to support materiel release claim.

### **LAND 53 Phase 1BR – Night Fighting Equipment Replacement**

LAND 53 Phase 1BR has taken delivery of the final quantities of Night Fighting Equipment on 29 September 2020.

Materiel Release 4 was achieved on 08 September 2020.

Support Contract Change Proposal 008 was executed on 25 September 2020 and incorporates revised prices for current and future years as per the annual Escalation Notice approved by the Commonwealth.

### **SEA 3036 Phase 1 – Pacific Patrol Boat Replacement**

The project delivered a Guardian Class Patrol Boat to Palau on 18 Sep 20 and delivered a Guardian Class Patrol Boat to Tonga on 30 October 2020.



The delivery of a Guardian Class Patrol Boat to the Nation of Kiribati (NoK) has been postponed from 07 August 2020 to 18 June 2021. In the interim, the vessel will be laid up, stored and maintained in accordance to Original Equipment Manufacturer requirements for the vessel. This does not affect the overall budget for the Project and is being managed by CASG on a case-by-case basis.

#### **SEA 1442 Phase 4 – Maritime Communications Modernisation**

SEA 1442 Phase 4 did not achieve IMR in October 2020. Those drivers affecting the IMR schedule will have an effect on achieving IOC, with a new IOC date of October 2021.

Initial Materiel Release (IMR) is a precursor to Navy's Initial Operating Capability (IOC) and these milestones were expected to be achieved by October 2020 and January 2021 respectively. However, COVID-19 related delays have impacted on the availability of key resources to complete system testing on two ships, delaying IMR and subsequently impacting IOC. The main contributing delays to IMR and IOC relate to COVID-19 travel restrictions on international and domestic workforce required for testing, a lack of specialised local resources in Western Australia and changes to Navy's ship availability schedules. CASG has provided Navy with a status of the capability impact and presented options for the achievement of IMR to quantify a revised IOC date to Government. In parallel, CASG is working with the Prime Contractor Leonardo MW Ltd (UK) to ensure impact to Navy and CASG is minimised.

#### **SEA 1448 Phase 4B – ANZAC Air Search Radar Replacement**

In September 2020 Identification Friend or Foe (IFF) Certification testing commenced following the United States (US) based IFF certification team achieving approval to travel, previously delayed due to COVID-19 restrictions. By March 2021, this testing will obtain objective quality evidence to support IFF certification and declaration of Initial Materiel Release 2 (IMR2) with subsequent declaration of Initial Operating Capability (IOC).

A revised Materiel Acquisition Agreement is being developed with a staged TMR approach. Initial Materiel Release Stage 1 (IMR1) is on track for declaration in November 2020, covering those aspects not requiring IFF Certification. Initial Materiel Release 2 (IMR2) is forecast for March 2021, following the expected achievement of IFF Certification from the certification authority.

#### **JP 2048 Phase 4A/4B – Amphibious Ships**

Final Operating Capability was declared on 4 November 2019 with six notable deficiencies. The table below provides further detail on the deficiencies.

<b>Description of Deficiency</b>	<b>Status</b>
<b>Propulsion Pod Induced Vibration.</b> The propulsion pods exhibited some deficiencies.	The deficiencies will be rectified during the 2020 and 2021 docking schedule.
<b>PCRF Bed Configuration – Insufficient Space.</b> The design noted some deficiencies.	Immediate rectification complete. The long term solution is being managed through JP 2048 Phase 6.
<b>Excessive Noise in Accommodation Compartments.</b>	The remediation has been assigned to JP 2048 Phase 6.
<b>Integrated Logistic Support.</b> The system experienced some technical issues.	Immediate remediation complete. The outstanding issues are subject to engineering changes.
<b>Magazine Capacity for Embarked Force Ammunition.</b> The capacity experienced some deficiencies.	Mitigation is planned for inclusion in HMAS <i>Canberra</i> and HMAS <i>Adelaide's</i> docking schedule for 2020 and 2021.

<p><b>Sewage Treatment Plants (STP).</b> The system experienced some deficiencies.</p>	<p>One STP will be remediated during HMAS <i>Adelaide</i>'s docking schedule in 2021. Once the proposed solution has been installed in HMAS <i>Adelaide</i> and assessed as effective, remediation of the remaining three STPs will be undertaken on an opportunity basis.</p>
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### **AIR 7403 Phase 3 – Additional KC-30A Multi-role Tanker Transport**

Final Operating Capability was declared on 24 January 2020.

### **JP 9000 Phase 7 – Helicopter Aircrew Training System**

Final Operating Capability (FOC) is defined as successful completion of two cycles of training (Courses #2 and #3), which is currently on schedule (December 2020). Accordingly, the second consecutive courses were achieved as follows:

- Pilot course (Cse No. 5) was completed on 02 June 2020.
- Aviation Warfare Officer course (Cse No. 5) completed on 19 June 2020.
- Sensor Operator course (Cse No. 4) completed on 26 May 2020.
- Aircrewman course (Cse No. 5) completed on 30 June 2020.

All Fundamental Inputs to Capability (FIC) attestations provided in July 2020 have been in the affirmative for declaration of FOC.

### **JP 2072 PH2A – Tactical Combat Radio System Replacement Program**

Final Operating Capability was declared on 4 December 2019.

### **COVID-19 Impact Statement**

The full COVID-19 impacts on Defence's contracts are still being assessed under the evolving COVID-19 circumstances overseas. COVID-19 is expected to impact some projects schedule as the effects of supply disruption, national and international travel restrictions and city and state mandated lockdowns are realised.



Greg Moriarty  
Secretary  
Department of Defence  
20 November 2020

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Project Number	AIR 6000 Phase 2A/2B
Project Name	NEW AIR COMBAT CAPABILITY
First Year Reported in the MPR	2010-11
Capability Type	Replacement
Acquisition Type	Developmental
Capability Manager	Chief of Air Force
Government 1st Pass Approval	Nov 06
Government 2nd Pass Approval (or key Government pre-Second Pass Approval)	Nov 09 (Stage1) Apr 14 (Stage 2)
Budget at 2 <sup>nd</sup> Pass Approval (or key Government pre-Second Pass Approval)	\$13,264.1m
Total Approved Budget (Current)	<b>\$16,631.3m</b>
2019-20 Budget	<b>\$1,884.6m</b>
Project Stage	Integration and Test
Complexity	ACAT I



## Section 1 – Project Summary

## 1.1 Project Description

The AIR 6000 Phase 2A/2B project aims to introduce 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. The F-35 Partnership is currently working towards formal removal of Turkey.** Outside 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 2020 – The year-end overspend of 2.9% has been driven by COVID-19 accelerated payment terms for aircraft and propulsion contracts. This overspend was offset by delays in invoicing for training devices and contractual delays for facilities and regional capability procurements. There were also underspends in the Production, Sustainment and Follow-on Development Memorandum of Understanding, project management, Australian Capability and Australia, Canada and United Kingdom Reprogramming Laboratory procurements.**

Project Financial Assurance Statement

In consideration of risks disclosed at Section 5.1, as at **30 June 2020**, Project AIR 6000 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 AIR 6000 PH2A/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.

<sup>150</sup> 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.

<p><b>Schedule Performance</b></p> <p>Initial Operating Capability (IOC) is planned for December 2020, and is now at increased risk from COVID-19 impacts. The COVID-19 pandemic has increased the uncertainty and complexity of delivery of the F-35 Program. At this time, AIR6000PH2A/B 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 AIR6000PH2A/B have been mitigated to date, which includes restrictions on international travel, supply chain and workforce.</p> <p>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 2019-20 financial year Australia accepted 12 aircraft bringing the total Australian fleet to 26. As of the end of financial year 2019-20, 21 of these aircraft were in Australian custody with five located in the Pilot Training Centre in the US.</p> <p>Pilot and maintainer training were initially conducted in the US; both have now commenced in Australia. US and Australian based training will continue in parallel for a period of time before transitioning to an entirely Australian based training arrangement.</p> <p>The Australia Canada United Kingdom Reprogramming Lab (ACURL) Phase 1 system installation and testing 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.</p> <p>Facilities construction at RAAF Base Williamtown is largely complete. The land acquisition process had delayed the full length runway extension becoming operational, but this is now expected to be delivered in September 2020. Retail Warehouse at Williamtown is in the delivery phase. Construction work at RAAF Base Tindal is well underway.</p> <p>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. Sovereign sustainment requirements have been defined and JSF Branch is working closely with the F-35 Joint Program Office and industry on the planning and execution of these requirements.</p>
<p><b>Material Capability Delivery Performance</b></p> <p>The project expects that the F-35A JSF Air Vehicle will meet Initial Operating Capability (IOC) by or very close to the scheduled date of December 2020, depending on the extent of the COVID-19 impacts. Production delays are increasing for the last seven Australian aircraft due to be delivered by December 2020. Williamtown facilities are largely complete and support capabilities required for IOC are maturing. The Verification and Validation (V&amp;V) Program has progressed well, but has also been impacted by COVID-19, as it mitigates remaining risks to IOC and Final Operating Capability (FOC).</p> <p>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. AIR 6000 Phase 2A/B will continue to contribute to JSF Program developments to enable Australia to consider capability options and upgrades. AIR 6000 Phase 2A/B has options to deliver Maritime Strike capabilities in a timeframe closely following that of the United States Navy. AIR 6000 Phase 2A/B will also continue to invest in F-35A development toward advanced Maritime Strike options open for consideration under AIR 3023 in the context of a Joint Maritime Strike strategy.</p> <p>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 Joint Program Office (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 5th 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.</p>
<p><b>Note</b></p> <p>Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.</p>

### 1.3 Project Context

<p><b>Background</b></p> <p>Project AIR 6000 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 AIR 6000. The subsequent decision by Government to acquire the F-35A JSF has been taken progressively, including:</p> <ul style="list-style-type: none"> <li>Providing First Pass Approval in November 2006, which included agreement to join the next phase of the JSF Program and funded project AIR 6000 Phase 1B to conduct detailed definition and analysis activities to support Government Second Pass Approval for AIR 6000 Phase 2A/2B.</li> <li>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.</li> <li>AIR 6000 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.</li> <li>AIR 6000 Phase 2A/2B Stage 2 was approved by Government in April 14 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.</li> </ul>
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- In 2017 Defence advised Government of emerging issues associated with AIR 6000 Phase 2A/2B affordability. In 2018 and 2019 Government agreed to Defence proposals to defer elements of project scope to later, unapproved, AIR 6000 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 AIR 6000 program. As the changes have minimal impact on overall delivery schedule of the project, AIR 6000 Phase 2A/B 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 (JPO) 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 AIR 6000 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, with AUD\$21.9 million (GST exclusive) 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 allocated all funds by end 2020. To date over 50 Australian companies have, some with NACC-ISP support, directly shared in excess of AUD\$1.7 billion in global F-35 production contracts.

JSF Branch is working to establish the Joint Strike Fighter – Industry Support Program (JSF-ISP), planned to launch in Financial Year 2020-21, and initially funded from Phase 2A/B. 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.

**Other Current Related Projects/Phases**

**AIR JSF SDD – Participation in the JSF System Development and Demonstration (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.

**AIR 6000 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.

**AIR 6000 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 (JSF).

**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
<b>Project Budget</b>			
Nov 09	Original Approved ( <b>Government Second Pass Approval – Stage 1</b> )	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
	<b>Total at Second Pass Approval</b>	<b>13,264.1</b>	
Apr 18	Real Variation – Transfer	(8.4)	3
Jul 10	Price Indexation	351.0	4
Jun 20	Exchange Variation	<b>3,024.6</b>	
Jun 20	<b>Total Budget</b>	<b>16,631.3</b>	
<b>Project Expenditure</b>			
Prior to Jul 19	Contract Expenditure - US Government - LRIP 10 Production	(866.1)	5
	Contract Expenditure - US Government - LRIP 11 – Production	(825.7)	5
	Contract Expenditure - US Government (Block Buy Contract Production)	(771.8)	5, 6
	Contract Expenditure - US Government - PSFD MoU (FY14/15 – 22/23)	(279.7)	5
	Contract Expenditure - US Government - LRIP 10 Propulsion	(137.2)	5
	Contract Expenditure - US Government - LRIP 11 – Propulsion	(118.9)	5
	Contract Expenditure - US Government - Reprogramming Laboratory	(110.9)	5
	Contract Expenditure - US Government - LRIP 8 - Production and Non-Annualised Sustainment	(86.6)	5
	Contract Expenditure - US Government - LRIP 10 Non-Annualised Sustainment Contract	(73.3)	5
	Contract Expenditure - US Government - FMS Case AT-D-YAF, AT-P-AMN (Weapons)	(61.9)	5
	Contract Expenditure - US Government - FY17 Air Vehicle Initial Spares	(52.7)	5
	Contract Expenditure - US Government (Block Buy Contract Propulsion)	(26.6)	5, 6
	<b>Contract Expenditure - US Government-LRIP11 - Non-Annualised Sustainment</b>	(19.6)	5
	Other Contract Payments / Internal Expenses	(1,180.6)	7
		<b>(4,611.6)</b>	
FY to Jun 20	Contract Expenditure - US Government (Block Buy Contract Production)	(991.7)	5,6
	Contract Expenditure - US Government (Block Buy Contract Propulsion)	(312.1)	6
	Contract Expenditure - US Government PSFD MoU (FY14/15 - 22/23)	(80.2)	5
	Contract Expenditure - US Government - FMS Cases AT-D-YAF, AT-P-AMN (Weapons)	(76.5)	5
	Contract Expenditure - US Government - LRIP 11 Non-Annualised Sustainment	(54.4)	5
	Contract Expenditure - US Government - LRIP 11 - Production	(51.8)	5
	Contract Expenditure - US Government - LRIP 10 Non-Annualised Sustainment	(40.5)	5
	Contract Expenditure - US Government - LRIP 11 - Propulsion	(24.6)	5
	Contract Expenditure - US Government - FY 17 Air Vehicle Initial Spares	(22.8)	5
	Contract Expenditure - US Government - LRIP 10 Production	(9.6)	5
	<b>Contract Expenditure - US Government - LOT 12-14 Indefinite Delivery Indefinite Quality (IDIQ)</b>	(3.6)	5
	Contract Expenditure - US Government - Reprogramming Laboratory	(3.3)	5
	Contract Expenditure - US Government - LRIP 10 Propulsion	(1.9)	5
	Contract Expenditure - US Government - LRIP 8 - Production and Non-Annualised Sustainment	(1.1)	5
	Other Contract Payments / Internal Expenses	(264.3)	8
		<b>(1,938.4)</b>	
Jun 20	<b>Total Expenditure</b>	<b>(6,550.1)</b>	
Jun 20	<b>Remaining Budget</b>	<b>(10,081.3)</b>	

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Notes	
1	A May 12 budget adjustment (\$204.4m) was applied to AIR 6000 Phase 2A/2B based on an incorrect interpretation of the Government's decision to vary the New Air Combat Capability (NACC) Program. In September 12, 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 AIR 6000 Phase 2A/2B Stage 2 in April 14 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 10, 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 19 is associated with Mission Systems (\$445.8m) comprising of FMS cases, weapons & aircraft; Support Systems (\$386.7m) which comprises of software capability for the reprogramming lab, facilities, support & test equipment, spares, information communications technology and ALIS; Production Sustainment and Follow on Development Memorandum of Understanding (\$180.9m) for the 2009-10 financial year through to the end of the 2013-14 financial year; Project Office services (\$92.0m) comprising of Project Office services (travel, contract support services) & contract administration in relation to the Joint Project Office; NACC Operating Expenditure (\$72.6m) comprising of Project Office expenses, initial support & maintenance, US pilot training and NACC ISP Grants Program; monitoring (\$1.2m) which includes Diminished Manufacturing Supply (DMS) and non-standard mission system (\$1.4m) for the Ferry activities..
8	Other expenditure for the period July 19 to June 20 is associated with Support Systems (\$163.6m) 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 (\$62.2m) comprising of FMS cases, weapons and aircraft; Project Office services (\$25.9m) comprising of Project Office services (travel, contract support services) and contract administration in relation to the Joint Project Office NACC operating expenditure (\$10.1m) comprising of Project Office expenses, initial support and maintenance, US pilot training and the NACC ISP Grants Program; and non-standard mission system (\$2.5m) 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
2,388.6	1,897.6	1,884.6	PBS – PAES: The variance is due to a refinement of in-year budget for aircraft, diminishing manufacturing supplies, support and test equipment, initial spares, automatic logistics information systems, ancillary mission equipment, initial support and other procurements based on improved forecast expenditure and schedule information from the US based Joint Program Office. PAES – Final Plan: The acquisition is as now forecast in 2020-21 Pre-ERC.
Variance \$m	(491.0)	(13.0)	Total Variance (\$m): (504.0)
Variance %	(20.6)	(0.7)	Total Variance (%): (21.1)

## 2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
			Australian Industry	30 June 2020 – The year-end overspend has been driven by COVID-19 accelerated payment terms for aircraft and propulsion contracts. This overspend was offset by delays in invoicing for training devices and contractual delays for facilities and regional capability procurements. There were also underspends in the Production, Sustainment and Follow-on Development Memorandum of Understanding, project management, Australian Capability and Australia, Canada and United Kingdom Reprogramming Laboratory procurements.
		12.2	Foreign Industry	
			Early Processes	
		41.7	Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
1,884.6	1,938.4	53.9	Total Variance	
		2.9	% Variance	

## 2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 20 \$m			
US Government PSFD MoU (FY 14/15 – 22/23)	Dec 06	253.1	644.3	Various	MoU	1, 9, 10
US Government (LRIP 10 Production)	Dec 14	79.2	912.3	Fixed Price Incentive	USG Contract	2, 9, 10
US Government (LRIP 10 Propulsion)	Mar 15	13.4	146.4	Fixed Price Incentive	USG Contract	3, 9, 10
US Government (Reprogramming Laboratory)	Mar 15	119.0	139.5	Fixed Price Incentive	USG Contract	4, 9, 10
US Government (LRIP 8 Production and Non-Annualised Sustainment)	Jun 15	99.9	123.8	Fixed Price Incentive	USG Contract	5, 9, 10
US Government (LRIP 11 Production)	Dec 15	88.2	903.2	Fixed Price Incentive	USG Contract	6, 9, 10
US Government (AT-D-YAF)	Jun 16	111.9	117.1	Reimbursement	FMS	9, 10
US Government (LRIP 10 Non-Annualised Sustainment)	Jun 16	31.8	263.3	Various	USG Contract	9, 10, 13
US Government (AT-P-AMN)	Jul 16	132.3	146.7	Reimbursement	FMS	9, 10
US Government (LRIP 11 Propulsion)	Jul 16	14.2	170.3	Fixed Price Incentive	USG Contract	9, 10, 12
US Government (Block Buy Contract Production)	Feb 17	236.3	4,628.2	Various	USG Contract	7, 9, 10
US Government (FY17 Air Vehicle Spares & ACURL Spares)	Mar 17	114.4	117.3	Fixed Price Incentive	USG Contract	8, 9, 10
US Government (Block Buy Contract Propulsion)	Aug 17	39.6	886.7	Various	USG Contract	7, 9, 10
US Government (LRIP 11 Non-Annualised Sustainment)	May 18	57.5	196.0	Various	USG Contract	9, 10, 13
US Government (LOT 12-14 Indefinite Delivery Indefinite Quantity)	Jan 19	52.8	160.7	Various	USG Contract	9, 10, 14
US Government (LOT 15 Production)	Jan 20	125.3	124.3	Fixed Price Incentive	USG Contract	9, 10, 15
<b>Notes</b>						
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 06 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 14. 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.					

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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 Unfinalised 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. <b>The FY 17 Air Vehicle Initial Spares contract had US\$30,709,575.00 deobligated, as the eventual Finalised Contract value was lower than the 'not to exceed' value of the Unfinalised Contracting Action.</b>				
9	Contract value as at <b>30 June 2020</b> is based on actual expenditure to <b>30 June 2020</b> 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	<b>Lot 13 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 AME and PFE requirements on the IDIQ contract allows for more agile procurement for F-35 Enterprise, aligning delivery schedule with aircraft deliveries.</b>				
15	<b>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.</b>				
Contractor		Contracted Quantities as at		Scope	Notes
		Signature	30 Jun 20		
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 <b>awarded</b> 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 <b>awarded</b> 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.	
<b>US Government (Lot 12-14 Indefinite Delivery Indefinite Quantity)</b>	<b>N/A</b>	<b>N/A</b>	<b>Procurement of Lot 13 Ancillary Mission Equipment and Pilot Fit Equipment and HMDS Spares, Lots 12-14 Helmet Mounted Display System (HMDS), and FY 19 Air Vehicle Spares.</b>	
<b>US Government (Lot 15 Production)</b>	<b>N/A</b>	<b>N/A</b>	<b>Procurement of Advanced Acquisition items associated with the next nine F-35A aircraft procurement.</b>	
Major equipment accepted and quantities to 30 June 20				
<b>Twenty six</b> F-35A aircraft have been received by Australia, of which <b>five</b> remain in the USA to support training.				
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 04 to February 06 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

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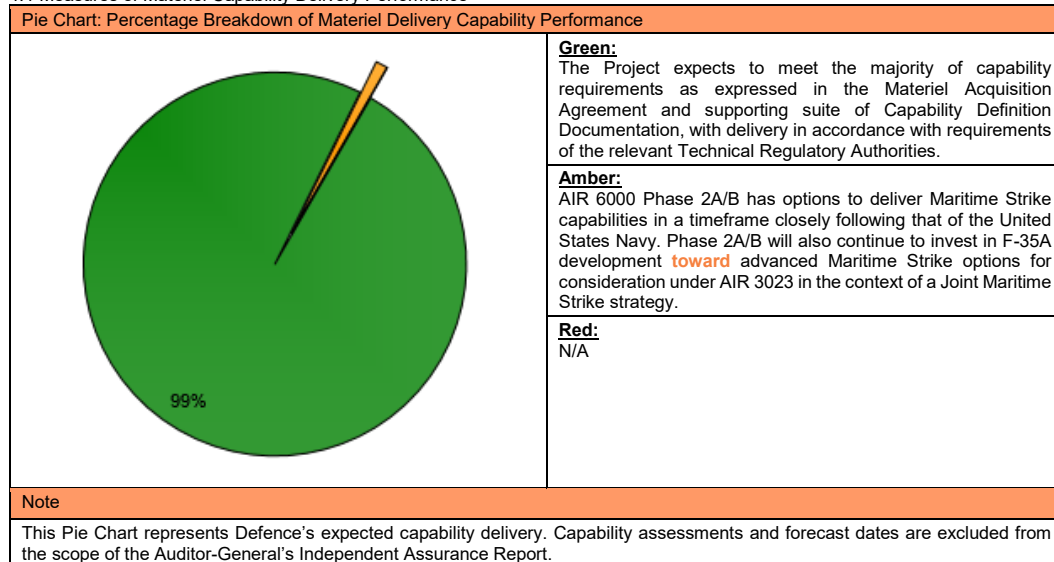
	Block 3F Fleet Release (against IMS7 Baseline) – for F-35A (full envelope with weapons)	Aug 17	Oct 17	Aug 17	0	3, 4, 5
Acceptance	Accept and deliver two (LRIP 6) aircraft to US Pilot Training Centre	Mar 14	Nov 14	Nov 14	8	6
	Accept and deliver aircraft 3-14	Dec 16	Jun 19	Jun 19	30	7
	Accept and deliver aircraft 15-72	Dec 23	Sep 23	Aug 23	(4)	8
<b>Notes</b>						
1	Block 2B supported the United States Marine Corps IOC declaration which occurred on 31 July 15.					
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 17 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 18. Acceptance, initially planned February 18 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 14 original delivery date was based on Australian IOC in December 18. The November 14 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 16 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 July 23, resulting in Aircraft 72 early acceptance and ferry to Australia in August 23.					

### 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)	
Final Operational Capability (FOC)	Dec 23	Dec 23	(0)	
Notes				
1	Subject to COVID-19 schedule impacts (see section 5.2 for more information).			
<p>Schedule Plan at Government Approval</p> <p>Schedule Plan at 30 June 2020</p> <p>Legend: Approval (Grey), IMR (Blue), IOC (Green), FMR (Orange), FOC (Red)</p> <p>X-axis: Jun-13, Jun-14, Jun-15, Jun-16, Jun-17, Jun-18, Jun-19, Jun-20, Jun-21, Jun-22, Jun-23, Jun-24</p>				
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



### 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 is expected to be achieved October to December 20.	Not yet 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 is expected to be achieved in December 2020.	Not yet 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 <b>December 2023</b> .	Not yet achieved

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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
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## Section 5 – Major Risks and Issues

### 5.1 Major Project Risks

Identified Risks (risk identified by standard project risk management processes)	
Description	Remedial Action
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.	JSF Branch 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 Lighting 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. JSF Branch and Air Combat Systems Program Office will continue to provide feedback on the GSS performance at F-35 JPO governance forums 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.	JSF Branch 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 accuracy and external budget constraints, leading to an impact on capability and schedule.	JSF Branch 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. Acquisition and Cost models will be refined with benchmarking against United States and Australian costs. Options may be developed for Capability Manager consideration to achieve project affordability by aligning project expenditure with the Defence Integrated Investment Program capacity in any specific year.



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.	JSF Branch 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 JSF Branch 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 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 5th 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.
The ongoing viability of the F-35A system to meet emerging Government direction and Air Force capability requirements may be impacted by the failure to adequately resource and manage the currently unapproved AIR6000 project phases including additional support elements and follow-on modernisation.	This risk is being managed at the Program level. Phase 2A/2B is contributing to management of this risk, but is not responsible for its management and does not own this risk. As such, the risk will no longer be reported in the PDSS.
Emergent Risks (risk not previously identified but has emerged during 2019-2020)	
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.
Note	
Major risks and issues in Section 5 are excluded from the scope of the Auditor-General's Independent Assurance Report.	

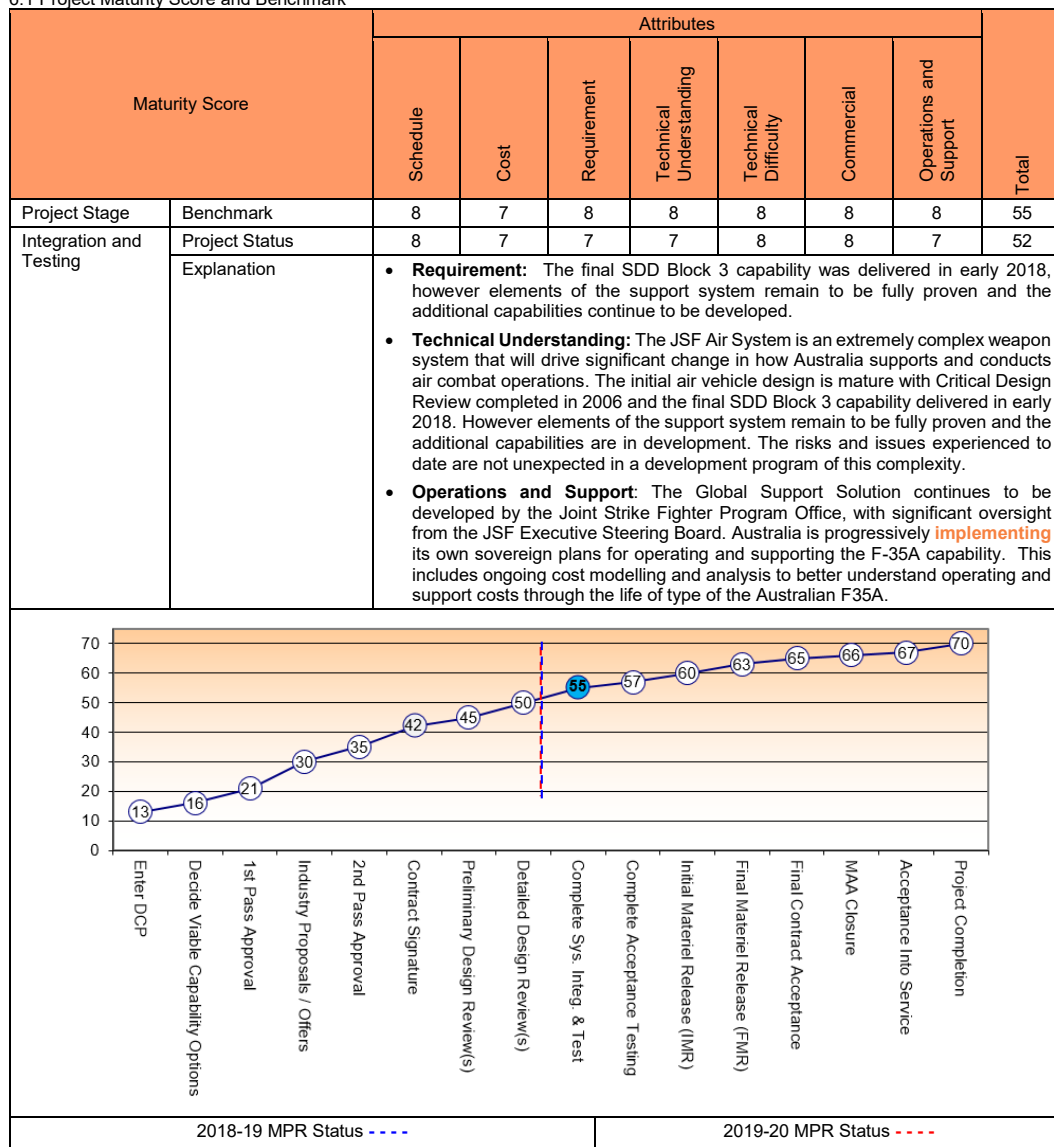
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## Section 6 – Project Maturity

## 6.1 Project Maturity Score and Benchmark



## Section 7 – Lessons Learned

### 7.1 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 (CLOG) 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 8 – Project Line Management

### 8.1 Project Line Management as at 30 June 2020

Position	Name
Division Head	<b>AVM Greg Hoffmann</b>
Branch Head	AIRCDRE Damien Keddie
Project Director	MR Steve Unwin
Project Director	GPCAPT Rodney Srinivasan

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## Project Data Summary Sheet<sup>151</sup>

Project Number	SEA 4000 Phase 3
Project Name	AIR WARFARE DESTROYER
First Year Reported in the MPR	2008-09
Capability Type	New
Acquisition Type	Australianised MOTS
Capability Manager	Chief of Navy
Government 1st Pass Approval	May 05
Government 2nd Pass Approval (or key Government pre-Second Pass Approval)	Jun 07
Budget at 2 <sup>nd</sup> Pass Approval (or key Government pre-Second Pass Approval)	\$7,207.4m
Total Approved Budget (Current)	\$9,108.9m
2019-20 Budget	\$315.1m
Project Stage	Final Materiel Release
Complexity	ACAT I



### Section 1 – Project Summary

#### 1.1 Project Description

This project has acquired three Hobart Class Air Warfare Destroyers (AWD) and their support system for the Australian Defence Force (ADF). The capability provided by the AWDs forms a critical element of the ADF's joint air warfare defence capability and will contribute to a number of other joint warfare outcomes.

#### 1.2 Current Status

##### Cost Performance

###### In-year

The AWD SEA04000PH3 Project was underspent by \$19.8m against the approved budget in FY 2019-20.

The underspend variation is due to lower payments against the AEGIS FMS case due to disbursements being lower than anticipated, resulting in a reduced March payment and a forecasted fourth quarter payment not required. There was also underspends against spares and engineering costs not charged to the Program by the DDG SPO, along with a lower than anticipated spend against various program management contracts.

The underspend has been offset by the deferral of the remaining Advance Account payments owed by ASC to the Program, and these are expected to be recovered in FY 2020-21.

###### Project Financial Assurance Statement

Notwithstanding the issues disclosed at Section 5.2, as at 30 June 2020, SEA 4000 Phase 3 has reviewed the approved scope and budget for those elements required to be delivered by the program. Having reviewed the current financial and contractual obligations of the program, current known risks and estimated future expenditure, Defence considers, as at the reporting date, and following the completion of the AWD Reform strategy in December 2015, which included a Real Cost Increase of \$1.2 billion to the AWD budget, being approved in July 2015 and provided in September 2015, there is sufficient budget remaining for the Project to complete against the agreed scope.

###### Contingency Statement

The project has not applied contingency in the financial year.

##### Schedule Performance

On 6 September 2012, following a stakeholder review of resource considerations and support for a schedule extension, the then Minister for Defence announced that the AWD schedule had been re-baselined. The revised AWD delivery dates were:

- HMAS Hobart (Ship 1) - March 2016
- HMAS Brisbane (Ship 2) - September 2017
- HMAS Sydney (Ship 3) - March 2019

These delivery dates represented delays of 15, 18 and 21 months respectively against the dates contracted in October 2007.

#### 151 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 Assurance Report by the Auditor-General in Part 3 of this report.

AWD Ships	<p>Following further concerns with AWD delivery, the delivery schedule has been further re-baselined as part of the AWD Reform. The post-Reform contracted delivery dates were:</p> <ul style="list-style-type: none"> <li>• HMAS <i>Hobart</i> (Ship 1) – June 2017</li> <li>• HMAS <i>Brisbane</i> (Ship 2) – July 2018</li> <li>• HMAS <i>Sydney</i> (Ship 3) – December 2019</li> </ul> <p>These delivery dates represent delays of 30, 28 and 30 months respectively against the dates contracted in October 2007.</p> <p>The AWD Alliance was contracted to undertake the AIR 9000 Aviation Upgrade Program for Ship 3 NUSHIP <i>Sydney</i> while in Adelaide. The increase in scope has moved the date for Provisional Acceptance to February 2020. This represents a <b>difference</b> of 32 months against the contracted dates in October 2007.</p> <p>Since July 2019 the following major events have occurred:</p> <ul style="list-style-type: none"> <li>• <b>October 2019</b> – Ship 3 commences CAT 5 Sea Trials</li> <li>• <b>October 2019</b> – HMAS <i>Brisbane</i> completes Combat System Ship Qualification Trials in the US</li> <li>• <b>December 2019</b> – Chief of Navy declares Operational Capability 2 for HMAS <i>Brisbane</i></li> <li>• <b>February 2020</b> - Ship 3 achieves Provisional Acceptance</li> <li>• <b>April 2020</b> – Chief of Navy approves Operational Release 3 for NUSHIP <i>Sydney</i></li> <li>• <b>May 2020</b> – HMAS <i>Sydney</i> was commissioned into service with the Royal Australian Navy</li> <li>• <b>June 2020</b> – Chief of Navy awarded Final Materiel Release (FMR)</li> </ul>
	<p><b>Materiel Capability Delivery Performance</b></p> <p>All significant government specified capability, with the exception of Radar-Electronic Attack, (R-EA) is currently planned to be achieved and in some warfare areas, the capability will be exceeded. Procurement of the R-EA sub-system has been deferred as currently available technology does not represent a cost-capability benefit. The R-EA budget has been preserved to support a more capable system being installed in the AWD when available.</p> <p>The Capability Manager has agreed to use part of the quarantined funds to accelerate technical feasibility and early development of an indigenous Electronic Attack system by another Program for potential use in the Hobart Class and other Navy vessels.</p>
	<p><b>Note</b></p> <p>Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.</p>

### 1.3 Project Context

<p><b>Background</b></p> <p>In May 2005 the Government granted first pass approval to the Program, allowing commencement of Phase 2, the Design phase. Phase 2 oversaw the development of two platform designs:</p> <ul style="list-style-type: none"> <li>• The 'Existing' design of the Platform System for the F104 warship as in service with the Spanish Armada, with certain modifications and significant enhancements identified by the Armada or Navantia and included in the design of the Platform System of the F105 warship, as chosen by the Commonwealth, as the Australianised military off-the-shelf option; and</li> <li>• The 'Evolved' design produced by Gibbs &amp; Cox developed from an in-house design utilising design features of the US Navy class of Aegis Guided Missile Destroyers.</li> </ul> <p>In May 2005, the Government selected ASC AWD Shipbuilder Pty Ltd as the shipbuilder for the AWD Program and determined that the ships should be built in Adelaide. Raytheon Australia Pty Ltd was chosen as the Combat System Systems Engineer.</p> <p>In October 2005, Defence sought and received Government approval to acquire three Aegis Weapon Systems to provide the core air warfare capability of the AWD. The Commonwealth subsequently entered into a United States (US) Foreign Military Sales (FMS) agreement for the acquisition of the Aegis weapons system and associated engineering services and integrated logistic support.</p> <p>In June 2007, at Second Pass, the Government granted approval to commence construction of the Hobart Class AWD utilising the existing design. This decision initiated the current phase of Project SEA 4000 Phase 3, the construction phase.</p> <p>Phase 3 includes detailed design, procurement, ship construction, and set to work of the Aegis Combat System and the F-100 based Platform Systems. This culminates in the delivery of three Hobart Class AWDs together with the ships support systems including initial spares and ammunition outfits, and initial crew training.</p> <p>Phase 3 concludes with the delivery to the Royal Australian Navy (RAN) of the third AWD, HMAS <i>Sydney</i>.</p> <p>At Second Pass, the Government approved Defence's proposal to close SEA 4000 Program Phase 2, Design, and Phase 3.1, Aegis acquisition activities, and combine the remaining Phase 2 and Phase 3.1 scope and funding with SEA 4000 Program Phase 3.</p> <p>The Government announced the implementation of an AWD Reform Strategy on 4 June 2014 following an Independent Review of the AWD Program and heightened concern regarding program schedule and forecast cost increases. These concerns resulted in the Program being designated a Project of Concern in June 2014.</p> <p>As part of the Reform strategy, the Commonwealth entered into agreements with both BAE Systems and Navantia to participate in the Reform Interim Phase from December 2014 until 31 July 2015.</p> <p>On 22 May 2015, the Minister for Finance and the then Minister for Defence jointly released a media statement suggesting that the project will require an additional \$1.2 billion. This funding was approved in July 2015 at the expense of other Defence acquisitions.</p> <p>A limited tender process was initiated on 29 May 2015 seeking proposals to either insert a managing contractor into ASC AWD Shipbuilder Pty Ltd for the remainder of the AWD build, or to further enhance ASC capability through a partnering agreement.</p> <p>After completion of the Reform Interim Phase the Departments of Finance and Defence conducted a Limited Tender for Shipbuilding Management Services (SMS) and jointly agreed that Navantia was the preferred company to provide an experienced shipbuilding management team for insertion into ASC AWD Shipbuilder Pty Ltd.</p> <p>The Departments of Finance and Defence worked together to implement Long-Term Arrangements (LTAs) (in the form of Shipbuilding Management Services) aimed at ensuring the successful completion of the AWD Program with greater efficiency and effectiveness and consistent with international productivity levels.</p>
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<p>The SMS contract was signed on 5 December 2015 and is a subcontract under ASC AWD Shipbuilder Pty Ltd.</p> <p>Concurrently with the AWD build program, the AWD Transition Support Period (TSP) arrangements strategy is underway. Contract signature was achieved in December 2016 and the TSP Managing Contractor is working onsite with the Commonwealth sustainment office.</p> <p>Minister for Defence and Minister for Defence Industry announced the removal of SEA 4000 Phase 3 from the Projects of Concern list on 1 February 2018.</p>			
<p><b>Uniqueness</b></p> <p>The SEA 4000 Air Warfare Destroyer Program is currently one of Australia's largest and most technically complex Defence projects.</p> <p>The AWDs have been designated by the RAN as Hobart Class Guided Missile Destroyers (DDGs) and will be the RAN's first Aegis capable ships.</p> <p>The AWDs are being delivered through an Alliance based contract arrangement involving ASC AWD Shipbuilder, Raytheon Australia, and the Commonwealth, represented by Defence.</p>			
<p><b>Contractual Framework</b></p> <p>The Alliance based contract arrangement was signed in October 2007. Key features of the AWD Alliance and the operations of the Alliance based contract arrangement include:</p> <ul style="list-style-type: none"> <li>The Alliance Industry Participants (Raytheon Australia and ASC AWD Shipbuilder) are jointly and severally responsible for the delivery of the three ships and their support system. Each party remains individually responsible for compliance with all statutory requirements.</li> <li>The Alliance is neither a legal body, nor a joint venture.</li> <li>The legal and commercial basis for the Alliance is established through the Alliance Based Target Incentive Agreement (ABTIA) contract signed by all three participants. This establishes a virtual organisation under the governance of the AWD Alliance Board.</li> </ul> <p>The Commonwealth entered into a Platform System Design contract with Navantia, the ship designer, in October 2007. This contract is managed by the AWD Alliance under the Alliance based contract arrangement.</p> <p>The Aegis combat system is being procured by the Commonwealth under the FMS agreement with the US Navy. This agreement is also managed within the AWD Alliance project team.</p> <p>While Navantia and the US Navy (and its equipment supplier, Lockheed Martin) are not part of the Alliance, they work closely with the Alliance and are treated in an alliance like manner.</p>			
<p><b>Major Risks and Issues</b></p> <p>The major <b>challenge</b> the project faces is:</p> <ul style="list-style-type: none"> <li><b>Providing support to DDG SPO and Maritime Systems Division in maintaining the Hobart Class;</b></li> </ul> <p><b>A number of risks and issues have been retired or downgraded during the last financial year:</b></p> <ul style="list-style-type: none"> <li><b>Completing the integration of the sonar system into the Hobart Class Combat System</b></li> <li><b>Certification requirements potentially delaying acceptance of Hobart Class ships</b></li> <li>Potential costs of remediating issues discovered during Combat System Ship Qualification Trials for Ships 2 and 3</li> <li>Supporting the shipbuilding workforce as it transitions to ASC Shipbuilding</li> <li>Ensuring knowledge and skills are retained as AWD Program Management Office transitions to Naval Construction Branch.</li> </ul>			
<p><b>Other Current Related Projects/Phases</b></p> <p>SEA 4000 Phase 3.2 – Standard Missile SM-2 Missile conversion and upgrade. The conversion of the missiles will allow them to be used in the AWDs and provide an enhanced anti-aircraft and anti-ship missile defence capability. This project is managed by Joint Systems Division within Defence.</p> <p>SEA 4000 Phase 3.3 – This project is to deliver a tailored 20 week United States Navy (USN) Combat System Sea Qualification Trials (CSSQT) activity for each of the three AWDs. The project is to deliver the services component of the Hobart Class CSSQT which requires use of USN range facilities, analysis and assets. The USN CSSQT is a component of the SEA 4000 Operational Test and Evaluation program being executed by the Royal Australian Navy.</p> <p>AIR 9000 Phase 8 – This project <b>funds</b> modifications of the Hobart Class for interoperability with the MH-60R Seahawk 'Romeo' helicopter. Modifications to HMA Ships <i>Hobart</i> and <i>Brisbane</i> will be completed in-service, while modifications to Ship 3 <i>Sydney</i> <b>were undertaken</b> during the build program and before delivery to Navy.</p>			
<p><b>Notes</b></p> <p>Major risks and issues are excluded from the scope of the Auditor-General's Independent Assurance Report.</p>			

## Section 2 – Financial Performance

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

Date	Description	\$m	Notes
<b>Project Budget</b>			
Jun 07	<b>Original Approved (Second Pass Approval)</b>	7,207.4	
Jan 14	Real Variation – Transfer	(109.9)	1
Sep 15	Real Variation – Real Cost Increase	1,199.5	2
		1,089.6	
Jul 10	Price Indexation	1,173.2	3
Jun 20	Exchange Variation	(361.3)	
Jun 20	<b>Total Budget</b>	<b>9,108.9</b>	

Project Expenditure			
Prior to Jul 19	Contract Expenditure – AWD Alliance	(5,730.5)	4
	Contract Expenditure – US Government	(1,200.1)	
	Contract Expenditure – Navantia	(444.0)	
	Contract Expenditure – NATO Consortium	(72.4)	
	Other Contract Payments / Internal Expenses	(338.3)	
		(7,785.3)	
FY to Jun 20	Contract Expenditure – AWD Alliance	(211.3)	4, 5
	Contract Expenditure – US Government	(27.2)	
	Contract Expenditure – Navantia	(16.8)	
	Other Contract Payments / Internal Expenses	(40.0)	
		(295.3)	
Jun 20	<b>Total Expenditure</b>	<b>(8,080.6)</b>	
Jun 20	<b>Remaining Budget</b>	<b>1,028.3</b>	
Notes			
1	In January 2014, a real cost decrease was approved to transfer project funds to Defence Estate and Infrastructure Group which has responsibility for AWD facilities related deliverables.		
2	In September 2015, following advice and approval from Government in July 2015, a revised Budget Approval Notice was provided authorising the Real Cost Increase to the AWD Budget. Included in the RCI was an estimated \$167.0m to cover indexation costs.		
3	Up until July 2010, indexation was applied to project budgets on a periodic basis. The cumulative impact of this approach was \$854.8m. In addition to this amount, the impact on the project budget as a result of out-turning was a further \$318.4m having been applied to the remaining life of the project.		
4	Other Contract Payments/Internal Expenses budget comprises: Operating, minor contract and other capital items not attributable to the listed contracts.		
5	Other Contract Payments/Internal Expenses expenditure comprises: Contractors (\$25.4m), Navy Staff costs (\$2.6m), Spares (\$5.9m) and other minor expenditure not attributable to the listed contracts (\$6.1m).		

## 2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
355.9	315.4	315.1	PBS-PAES: The variation is primarily due to the reprogramming of direct project costs, associated project management office expenditure and spares procurement into 2020-21. PAES-Final Plan: The variation is due to an update of budget exchange rates.
Variance \$m	(40.5)	(0.3)	Total Variance (\$m): (40.8)
Variance %	(11.4)	(0.1)	Total Variance (%): (11.5)

## 2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		31.9	Australian Industry	The AWD SEA04000 PH3 Project was underspent by \$19.8m against the approved budget in FY 2019-20.
			Foreign Industry	
			Early Processes	
		(34.2)	Defence Processes	The underspend variation is due to lower payments against the Aegis FMS case, with lower than anticipated disbursements resulting in a reduced March payment and a forecast fourth quarter payment not required. There were also underspends against spares and engineering costs not charged to the Program by DDGSPPO, along with lower than anticipated spend against various program management contracts.
		(17.5)	Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
315.1	295.3	(19.8)	Total Variance	The underspend was offset by the deferral of the remaining Advance Account payments owed by ASC to the Program and these are expected to be recovered in FY 2020-21.
		(6.3)	% Variance	

## Project Data Summary Sheets

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## 2.3 Details of Project Major Contracts

Details of Project Major Contracts						
Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 20 \$m			
US Government	Oct 05	842.7	1,105.8	FMS	FMS	1
AWD Alliance (ABTIA)	Oct 07	4,323.1	7,412.2	Variable with Pain/Gain Share	Alliance	3,4
Navantia (PSD)	Oct 07	373.6	626.1	Fixed with indices escalation	Alliance based	3
NATO Consortium	Dec 09	78.5	72.4	FMS (NATO)	FMS (NATO)	2
Notes						
1	<p>The FMS Case established pre-Second Pass involved three contractual steps (initial version and two amendments); October 2005 for initial engineering services, April 2006 for long lead items and July 2006 for three ship sets of core Aegis Combat System Equipment. The resulting scope was in accordance with Government approval of SEA 4000 Phase 3.1. Post-Second Pass, there have been five further amendments to the FMS Case for additional equipment and services for both the AWD Program and the AWD Alliance. These amendments are in accordance with Government approval at Second Pass for the full scope of SEA 4000 Phase 3. The Price at Signature excludes \$167.5m spent in previous phases of the project.</p> <p>The Price at <b>30 June 2020</b> includes an increase of USD \$20m as per Amendment 10 of the LOA and excludes a current Alliance cost of \$208.2m for the purchase of FMS equipment to be supplied under the ABTIA contract.</p> <p><b>Contract value as at 30 June 2020 for the FMS contract is based on actual expenditure to 30 June 2020 and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable).</b></p>					
2	<p>Contract value <b>for NATO Consortium is at 30 June 2020 with no further changes to occur for the life of the contract.</b></p>					
3	<p>As a result of the AWD Reform Strategy, the AWD Alliance (ABTIA) and Navantia (Platform System Design) contracts were renegotiated and <b>the ABTIA Deed of Settlement and Amendment and the Platform System Design Deed of Amendment were</b> signed in December 2015. The price is the value as per the new contract in out turned dollars (as at <b>30 June 2020</b>) using the Commonwealth cumulative escalation indices and includes ABTIA Direct Project Costs, Target Fee, Procurement Fee and the Shipbuilding Management Services costs.</p>					
4	<p><b>The AWD Alliance (ABTIA) contract contains several cost categories which are managed separately in the AWD budget. These relate to the ABTIA 'reserve budgets', such as management reserve, the interpretative change and warranty reserve which are not expected to be fully spent (as reported by the AWD Alliance industry participants). Any expenditure against these ABTIA 'reserve' budgets is shown against the AWD Alliance (ABTIA) contract expenditure line in section 2.1; whereas the remaining value of those reserves is being held in the overall AWD Program Management budget.</b></p>					
Contractor	Quantities as at		Scope	Notes		
	Signature	30 Jun 20				
US Government	3	3	Aegis Combat System			
AWD Alliance	3	3	Air Warfare Destroyer			
Navantia	N/A	N/A	Platform System Design and Services			
NATO Consortium	Classified	Classified	Evolved Sea Sparrow Missiles (ESSM)	1		
Major equipment accepted and quantities to 30 Jun 20						
<p>Ship 1, HMAS <i>Hobart</i>, was provisionally accepted by Defence in June 2017. Ship 2, HMAS <i>Brisbane</i>, was provisionally accepted in July 2018, and <b>HMAS Sydney was provisionally accepted in February 2020</b>. The Aegis Combat System for all three ships has been delivered. All ESSM procurement have been receipted and finalised by Maritime Explosive Ordnance Branch within Joint System Division (CASG).</p>						
Notes						
1	Quantity being acquired is classified.					

## 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	AWD Program	Mar 08	N/A	Apr 08	1	
Preliminary Design	AWD Program	Dec 08	N/A	Feb 09	0	1
Critical Design	AWD Program	Dec 09	N/A	Feb 10	0	2
Support System Detailed Design Review	AWD Program	Jun 10	N/A	Aug 10	0	3
<b>Notes</b>						
1	The Preliminary Design Review (PDR) was conducted as scheduled in December 2008 and resulting actions completed as scheduled by February 2009.					
2	The Critical Design Review (CDR) was conducted as scheduled in December 2009 and resulting actions completed as scheduled by February 2010.					



3	The Support System Detailed Design Review (SSDDR) was conducted as scheduled in June 2010 and resulting actions completed August 2010.
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### 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	Ship 1 – Complete Hull Integration	Dec 12	Mar 14	Mar 14	15	1,3
	Ship 1 – Start Combat System Light Off	Dec 13	Nov 15	Nov 15	23	2,3,4
	Ship 2 – Complete Hull Integration	Mar 14	Dec 15	Dec 15	21	3,4
	Ship 2 – Start Combat System Light Off	Mar 15	Apr 17	Apr 17	25	3,4
	Ship 3 – Complete Hull Integration	Jun 15	Aug 17	Jul 17	25	3,4
Acceptance	Ship 3 – Start Combat System Light Off	Jun 16	Sep 18	Sep 18	27	3,4
	Ship 1 – Commencement of Category 5 Trials	Aug 14	Sep 16	Jan 17	29	3,4
	Ship 1 – Provisional Acceptance	Dec 14	Jun 17	Jun 17	30	3,4,5
	Ship 2 – Commencement of Category 5 Trials	Nov 15	Dec 17	Mar 18	28	3,4
	Ship 2 – Provisional Acceptance (Materiel Release 2)	Mar 16	Jul 18	Jul 18	28	3,4,6
	Ship 3 – Commencement of Category 5 Trials	Feb 17	Oct 19	Oct 19	32	3,4,7
	Ship 3 – Provisional Acceptance	Jun 17	Feb 20	Feb 20	32	3,4,8

#### Notes

1	Complete Hull Integration was achieved when the last erection joint was completed and has been structurally inspected and accepted.
2	Start Combat System Light Off verified the readiness of the first set of installed combat system equipment for CAT 4 testing.
3	In 2010 difficulties were encountered in relation to the engineering and construction of some of the first AWD hull blocks. This resulted in the reallocation of block work between BAE, Forgacs and Navantia and a revision to the delivery schedule. On 6 September 2012, the then Minister for Defence announced, that the AWD schedule would be re-baselined and that the revised AWD delivery dates would be March 2016, September 2017, and March 2019.
4	In May 2015, following a Comprehensive Cost Review conducted by the AWD Alliance held in February, the then Minister for Defence announced that the delivery schedule had been changed to June 2017, September 2018 and March 2020 respectively. With the introduction by Navantia of an expert shipbuilding management team into the shipyard as part of the AWD Reform Long Term Arrangements for the AWD Reform, the delivery schedule for Ships 2 and 3 was brought forward by up to three months from prior schedule extension.
5	Ship 1 Provisional Acceptance was achieved on 16 June 2017, followed by Initial Materiel Release (IMR) in September 2017.
6	Ship 2 Provisional Acceptance was achieved on 5 July 2018, followed by Initial Operational Release 2 (IOR2) in October 2018.
7	Docking required to investigate and repair shaft vibration had delayed Ship 3 Category 5 sea trials by three months.
8	Chief of Navy approved the AWD Alliance to conduct the AIR 9000 upgrade program on Ship 3, <b>which moved</b> Provisional Acceptance from December 2019 to February 2020.

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

Item	Original Planned	Achieved / Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Dec 14	Sept 17	33	1, and see also Note 3 and 4 above
Initial Operational Capability (IOC)	Dec 15	Dec 18	36	1, and see also Note 3 and 4 above
Final Materiel Release (FMR)	Dec 17	<b>Jun 20</b>	<b>30</b>	2
Final Operational Capability (FOC)	May 18	Jun 21	37	2, 3

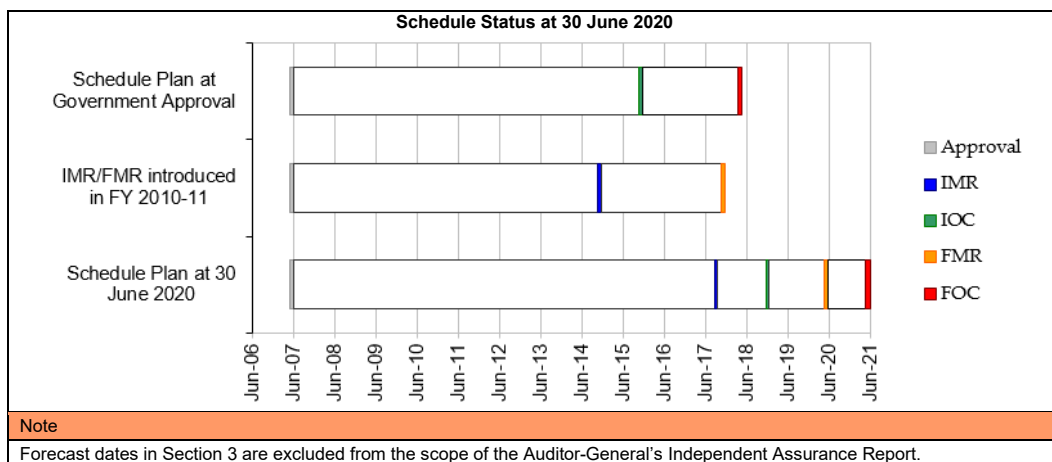
#### Notes

1	The IMR, FMR and FOC dates have been reviewed and have been approved with the release of a revised Materiel Acquisition Agreement 2.0 in March 2018. Variances are directly attributable to the revised AWD delivery dates that were agreed as a result of the AWD reform strategy.
2	Incorporation of AIR 9000 Aviation Upgrade Program scope in Ship 3 causes Provisional Acceptance to move from December 2019 to February 2020, and FMR from January 2020 to March 2020. <b>Chief of Navy awarded FMR on 29 June 2020.</b>
3	Declaration of FOC by Chief of Navy will occur after Combat System Ship Qualification Trials <b>for Ship 3. FOC was initially scheduled for first quarter 2021 and later changed to June 2021 as the incorporation of the AIR 9000 Aviation Upgrade moved Provisional Acceptance of Ship 3 by two months to February 2020, which in turn impacted the follow-on CSSQTs events in the United States, planned from March 2021.</b>

## Project Data Summary Sheets

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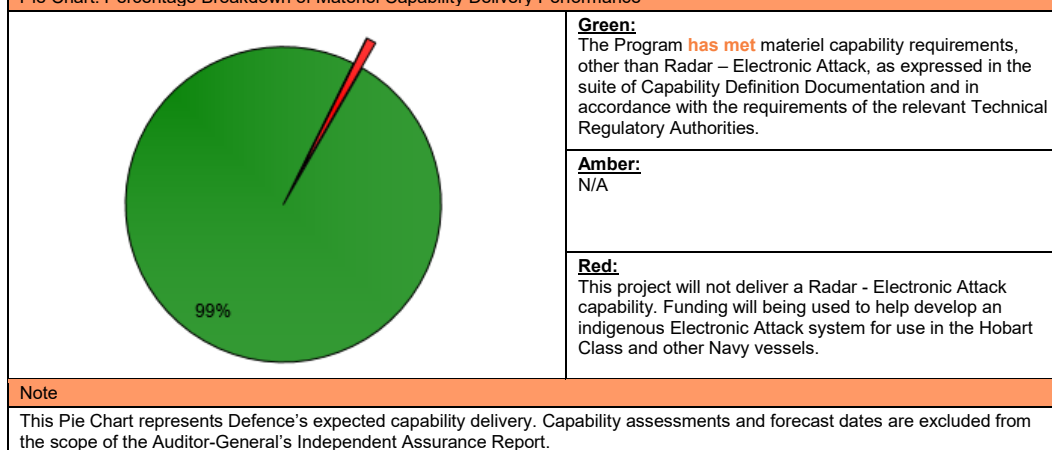




## Section 4 – Materiel Capability Delivery Performance

### 4.1 Measures of Materiel Capability Delivery Performance

**Pie Chart: Percentage Breakdown of Materiel Capability Delivery Performance**



### 4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	One Hobart Class Ship System with up to Category 5 (sea acceptance) trials, testing and certification completed. Initial sustainment arrangements in place to support IOC. Training of the Hobart Class Systems for the commissioning crew to support IOC. IMR was achieved in September 2017.	Achieved.
Initial Operational Capability (IOC)	Ship 1 <i>Hobart</i> can be employed operationally, realised on attainment of all capability release milestones. Completion of Navy Operational Test and Evaluation. Compliance with the Operational Concept Document. Completion of Combat System Ship Qualification Trials, and the declaration that all Fundamental Inputs to Capability have been delivered. IOC was achieved in December 2018.	Achieved.
Final Materiel Release (FMR)	All three Hobart Class Ship Systems with up to Category 5 (sea acceptance) trials, testing and certification completed. Combat System Through Life Support Facility delivered and ready for support. Training on the Hobart Class systems for the commissioning of crew 3. All sustainment arrangements in place to provide materiel support to the Hobart Class. FMR <b>was achieved in June 2020</b> .	<b>Achieved.</b>

Final Operational Capability (FOC)	Ships 01, 02 and 03 are assessed as capable of sustainably performing all the requirements detailed in the Operational Concept Document. FOC is expected to be achieved in June 2021.	Not yet achieved.
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## Section 5 – Major Risks and Issues

### 5.1 Major Project Risks

Identified Risks (risk identified by standard project risk management processes)	
Description	Remedial Action
1. There is a chance that the Integrated Sonar System Sonar will be affected by design issues leading to an impact on capability.	Actions to remediate the power supply design issue have been successful. Testing during NUSHIP Sydney CAT 5 sea trials has proven that the issue has been successfully treated. This has allowed the assessment of this risk to be downgraded to Medium.
2. Capability Acceptance: Certification requirements are unclear for some equipment, and treatment of non-conformances could delay ship acceptance.	This risk has been retired. Ship 3 Sydney has been provisionally accepted.
3. Requirement to remediate non-conformances on Ships 2 and 3 post Combat System Ship Qualification Trials.	This risk has been downgraded to a Medium risk. Ships 1 and 2 have completed the Combat System Ship Qualification Trials without issue and without the need for support from the PMO. Ship 3 Qualification Trials will be held in the second quarter 2021.
4. Increased costs of worker redundancies as period of obligation increased, with Government mandated sale of ASC Shipbuilding to BAE Systems.	This risk has been realised as a Medium issue. By offsetting redundancy provisions, the project is funding the professional development of some ASC Shipbuilding staff prior to commencement of future shipbuilding works.
Emergent Risks (risk not previously identified but has emerged during 2019-20)	
Description	Remedial Action
N/A	N/A

### 5.2 Major Project Issues

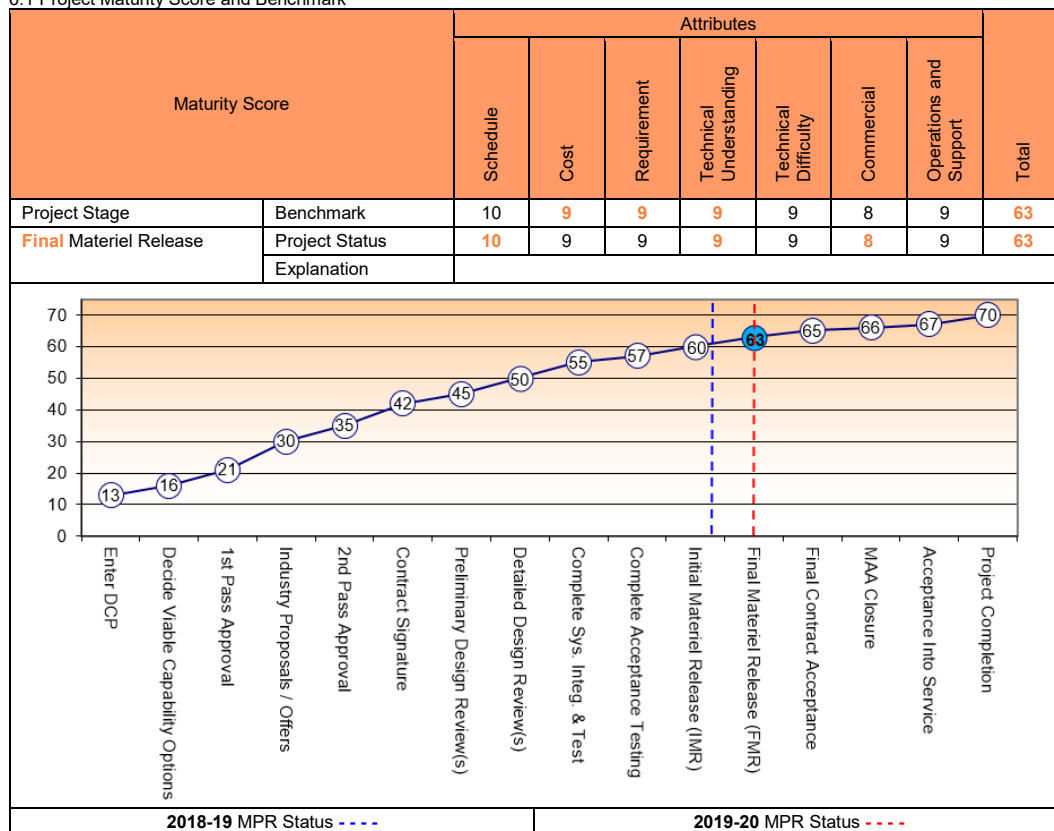
Description	Remedial Action
1. Maintenance of the Hobart Class ships is expected to be disrupted with the upcoming closure of the AWD program, with issues relating to sparring, data transfer, and the incorporation of engineering change post Acceptance.	The AWD project is providing support to mitigate issues not resolved during the set-up and management of the DDG SPO, to maintain operational readiness days.
2. Loss of skills and expertise as the AWD program closes.	This issue has been retired. The AWD Program office staff have transitioned to their new positions in Naval Construction Branch, and recruitment is underway to expand the Branch resources, which is effectively managing the issue.
Note	
Major risks and issues in Section 5 are excluded from the scope of the Auditor-General's Independent Assurance Report.	

## Project Data Summary Sheets

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## Section 6 – Project Maturity

### 6.1 Project Maturity Score and Benchmark



## Section 7 – Lessons Learned

### 7.1 Key Lessons Learned

Description	Categories of Systemic Lessons
The AWD Reform has been successful and the key reason is due to implementing an experienced Management Team into the Shipbuilding Program who have previously built and designed the ship. First of Class ship build programs should have this support when building the first ship, allowing the local Australian workforce to be better prepared and trained to build the remaining ships.	Governance
The Hobart Class Combat System operation and performance has been proven on HMAS <i>Hobart</i> and NUSHIP <i>Brisbane</i> through acceptance tests at sea. The first-time success of this complex integration is due to thorough design and architecture early in project, along with the extensive use of on-shore test facilities closely replicating the ship environment. Close cooperation and regular dialogue with United States Navy colleagues were also important to ensure integration with the AEGIS weapon system.	Contract Management
The interpretation of the requirements of fitness for purpose of drawings is different between contracting parties. A review of all product types prior to contract and interrogation of the delivery schedule to confirm sufficient time for reviews and incorporation of comments is necessary.	Contract Management
The shipbuilding capacity of shipyards involved in a project like AWD needs to be assessed in detail in terms of precise capacity to undertake production engineering as well as the workload constraints of facilities, production supervision and overall workforce numbers taking into consideration the total contracts conducted at the shipyard in parallel.	Resourcing First of Type Equipment
The schedule that plans the transition from design to production needs detailed evaluation by the designer(s) and the production shipyard(s) to ensure the balance between commencing production and completing very detailed design is appropriately balanced and agreed.	Schedule Management
The need to develop appropriate and sector wide tools and infrastructure, namely the Maritime Information Environment IT network, to facilitate Government policies in continuous naval shipbuilding.	Resourcing

Section 8 – Project Line Management

8.1 Project Line Management as at 30 June 2020

Position	Name
Division Head	Ms Sheryl Lutz
Program Manager	CDRE Steven Tiffen, RAN
Deputy Program Manager	Mr Greg McPherson

## Project Data Summary Sheet<sup>152</sup>

Project Number	SEA 5000 Phase 1
Project Name	FUTURE FRIGATES
First Year Reported in the MPR	2019-20
Capability Type	Replacement
Acquisition Type	Australianised MOTS
Capability Manager	Chief of Navy
Government 1st Pass Approval	Apr 16
Government 2nd Pass Approval	Jun 18
Budget at 2 <sup>nd</sup> Pass Approval	\$6,183.9m
Total Approved Budget (Current)	\$6,291.8m
2019-20 Budget	\$375.2m
Project Stage	Contract Signature
Complexity	ACAT I



### Section 1 – Project Summary

#### 1.1 Project Description

SEA 5000 Phase 1 – Future Frigate Design and Construction will deliver nine *Hunter* Class Frigates optimised for anti-submarine warfare to maintain the Navy's Surface Combatant capability and replace the current *Anzac* Class Frigates.

When operating as part of a Navy task group, the *Hunter* Class Frigate will contribute to air and surface warfare defence, as well as its primary mission of anti-submarine warfare.

The Project is currently approved for the Design and Productionisation Stage which includes the conduct of detailed design, procurement of some long lead time items, and commencement of prototyping. The Head Contract is with ASC Shipbuilding, a subsidiary of BAE Systems Australia.

#### 1.2 Current Status

##### Cost Performance

###### In-year

As at 30 June 2020, financial year 2019-20 expenditure is \$263.6m against the forecast budget of \$375.2m. The year to date variance is primarily due to the reprogramming of activities against the Head Contract, and lower than planned payments against FMS cases.

###### Project Financial Assurance Statement

As at 30 June 2020, project SEA 5000 Phase 1 has reviewed the project's approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial contractual obligations of Defence for this project, current known risks and estimated future expenditure, Defence considers as at the reporting date, there is sufficient budget remaining for the Project to complete against the agreed scope.

###### Contingency Statement

The Project has not applied contingency in the financial year.

##### Schedule Performance

Government approval has been granted for Design and Productionisation and prototyping and procurement of Long Lead Time Items for Batch 1 Build. This allows the design of the Mission and Support Systems to proceed together with mobilisation of ASC Shipbuilding to the Greenfield elements of the Osborne South Shipyard ahead of the commencement of prototyping by end 2020.

In the current year (2019-20), the project achieved completion of the System Requirement Review.

The submission for Government consideration of Approval of Batch 1 Build is expected to be made in 2021, allowing for contractual arrangements for the Batch 1 Build to be finalised and proceeding work undertaken to enable Ship 1 construction to commence before the end of calendar year 2022.

While there are significant risks and challenges, as would be expected for a project of this complexity, the Project remains on track to commence prototyping and Ship 1 construction on schedule.

Defence continues to work with ASC Shipbuilding on managing risks and the associated impacts to the Project. However, some of the impacts associated with the issues identified may yet be further exacerbated by the effects of the COVID-19 pandemic. As such, senior management oversight will continue to be required as the Project progresses.

##### Materiel Capability Delivery Performance

The current scope of the Head Contract addresses the detailed Design and Productionisation, prototyping, and procurement of long lead time items (LLTI's) of the *Hunter* Class Frigate. SEA 5000 Phase 1 is expected to return to Government in 2021 to seek approval of the scope and funding required for the Batch 1 Build.

#### 152 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.

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

### 1.3 Project Context

<p><b>Background</b></p> <p>The SEA 5000 Program is a large and complex program tied into the National Naval Shipbuilding Plan. The Program is in the early design and productionisation stage, and has multiple Government decision-making points.</p> <p>In June 2014 an Initial Pass was approved by Government to commence capability development activities, which included conducting studies through to Interim Pass regarding the feasibility of utilising the <i>Hobart</i> Class Guided Missile Destroyer (DDG) platform as the basis for the SEA 5000 Phase 1 capability. The project was directed to return to Government in March 2015 when further decisions on SEA 5000 Phase 1 would be taken in the context of the planned 2015 Defence White Paper (DWP) and subject to successful implementation of the Air Warfare Destroyer (AWD) Reform Program.</p> <p>In August 2015, the Government announced bringing forward the Future Frigate program to replace the <i>Anzac</i> Class (FFH) Frigates as part of a continuous onshore build programme to commence in 2020. The Future Frigates are to be built in South Australia based on a Competitive Evaluation Process (CEP).</p> <p>In September 2015, an Interim Pass was approved by Government for CEA Radar Development activities to complete the development of radar technology demonstrators, and remaining supporting activities through to 2018.</p> <p>In November 2015, an Interim Pass was approved by Government for SEA 5000 Phase 1 to progress the CEP and other activities through to First Pass consideration scheduled for the second quarter of 2016. Government approval was given for the High Level Capability Requirements (HLCRs) for the Future Frigate and the criteria by which frigate designs would be shortlisted for further development through the CEP.</p> <p>In April 2016, Government provided First Pass was approval for SEA 5000 Phase 1 to complete the CEP (based on tenders received from the three ship designers that had been shortlisted), conduct combat system related activities that support integration of the CEA Technologies suite of radars, and develop capability proposals to support Gate 2 consideration in 2018.</p> <p>In October 2017, the Government announced the decision to select the Aegis Combat Management System together with an Australian Interface developed by SAAB Australia as the Combat Management System solution for the Future Frigate. This further interim pass included approval for SEA 5000 Phase 1 to provide funds to progress combat system work ahead of Gate 2 in addition to providing for workforce and schedule protection up to April 2018.</p> <p>In June 2018, the Government announced BAES Global Combat Ship - Australia (GCS-A) as the capability best suited to Defence needs. A Smart Buyer assessment was not conducted for this project as a similar risk review process had already been conducted as part of the CEP. The platform system is based on the existing Type 26 Global Combat Ship (GCS) design, with changes to meet the High Level Capability Requirements (HLCR's) as prescribed by Government. The nine frigates were classed as the <i>Hunter</i> Class FFG.</p> <p><b>Uniqueness</b></p> <p>The SEA 5000 Phase 1 <i>Hunter</i> Class Frigate Project delivering nine Anti-Submarine Warfare Frigates to the Royal Australian Navy is the largest naval ship building project ever undertaken. In terms of size and complexity the project is second only to the SEA 1000 Future Submarines.</p> <p>As such, SEA 5000 Phase 1 will be delivered in a number of stages to achieve the objectives of Continuous Naval Shipbuilding (CNS). Each stage requiring separate approvals by Government to ensure the project remains within cost constraints.</p> <p>While the principles of Defence's Capability Life Cycle will be applied to this project, due to the longevity, and staged nature of the project, a unique approach will be required to manage the nine <i>Hunter</i> Class Frigates through the life cycle.</p> <p><b>Major Risks and Issues</b></p> <p>The Project is currently managing risk at both a strategic and tactical level. Strategic risks identified within Section 5 broadly fall under a number of key areas being:</p> <ul style="list-style-type: none"> <li>• Design maturity;</li> <li>• Capability delivery to Navy;</li> <li>• Contractor performance;</li> <li>• Australian Industry Capability;</li> <li>• Overall budget affordability; and</li> <li>• System Integration.</li> </ul> <p>In addition, the Project is managing one issue relating to information sharing with international users.</p> <p><b>Other Current Related Projects/Phases</b></p> <p>SEA 5000 Phase 2 (Future Frigate - Weapons) – is scoped to deliver guided and non-guided munitions required by the <i>Hunter</i> Class Frigates.</p> <p><b>Note</b></p> <p>Major risks and issues are excluded from the scope of the Auditor-General's Independent Assurance Report.</p>
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## Section 2 – Financial Performance

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

Date	Description	\$m	Notes
<b>Project Budget</b>			
Jun 14	Original Approved (Initial Pass Approval)	62.8	
Sep 15	Interim Pass Approval	52.6	1
Jan 16	Pre 1st Pass Approval	22.1	2
Apr 16	Government 1st Pass Approval	208.2	
Oct 17	Interim Pass Approval (Combat System)	55.5	3
Jun 18	Government 2nd Pass Approval	5,782.7	
	<b>Total at Second Pass Approval</b>	<b>6,183.9</b>	
Aug 19	Real Variation - Transfer	3.3	
Mar 20	Exchange Variation	104.6	4
		<b>107.9</b>	
Jun 20	<b>Total Budget</b>	<b>6,291.8</b>	
<b>Project Expenditure</b>			
Prior to Jul 19	Contract Expenditure - ASC Shipbuilding Pty Ltd	(65.7)	
	Contract Expenditure - BAE Systems Ltd	(56.8)	
	Contract Expenditure - Navantia	(36.2)	
	Contract Expenditure - CEA Technologies Pty Ltd	(35.1)	
	Contract Expenditure - Fincantieri S.P.A.	(29.7)	
	Contract Expenditure - US Government FMS Case	(20.6)	
	Other Contract Payments / Internal Expenses	(172.9)	5
		<b>(417.0)</b>	
FY to Jun 20	Contract Expenditure - ASC Shipbuilding Pty Ltd	(172.5)	
	Contract Expenditure - US Government FMS Case	(26.9)	
	Contract Expenditure - CEA Technologies Pty Ltd	(2.9)	
	Other Contract Payments / Internal Expenses	(61.3)	6
		<b>(263.6)</b>	
Jun 20	<b>Total Expenditure</b>	<b>(680.6)</b>	
Jun 20	<b>Remaining Budget</b>	<b>5,611.2</b>	
<b>Notes</b>			
1	CEA Technologies Radar Development Program.		
2	Initiating the Competitive Evaluation Process (CEP), Stage 1 of the SEA 5000 Phase 1 Project, for Future Frigates.		
3	Conduct further combat system development activities and to secure critical support staff.		
4	Funding transfer between CASG and E&IG to address funding shortfall with the Naval Capability Infrastructure Subprogram.		
5	Shipyards Infrastructure requirement studies, strategic advice and specialist engineering services; Odense Maritime Technology \$23.1m, Deloitte Touche Tohmatsu \$15.2m, Jacobs Australia Pty Ltd \$13.7m, SAAB Australia Pty Ltd \$14.3m, BMT Design & Technology Pty Ltd \$9.4m, Ernst & Young \$8.3m, DMTC Ltd \$8.1m, BECA Consultants Pty Ltd \$7.3m, QinetiQ Pty Ltd \$7.2m, RAND Corporation \$5.9m, KPMG \$5.6m, SME Gateway Pty Ltd \$5.2m, GHD Pty Ltd \$4.6m, Ashurst Australia \$4.2m. Other remaining Contract Payments totals to \$40.8m.		
6	Strategic advice and Specialist Engineering; Deloitte Touche Tohmatsu \$9.1m, Raytheon Australia Pty Ltd \$8.5m, SAAB \$5.2m, DMTC Ltd \$4.8m, BMT Design & Technology Pty Ltd \$3.3m, Jacobs Australia Pty Ltd \$3.0m, SME Gateway Pty Ltd \$2.9m, Ernst & Young \$2.6m, Gibbs & Cox (Australia) Pty Ltd \$2.4m, QinetiQ Pty Ltd \$2.3m, Freebody Cogent Pty Ltd \$1.7m, Odense Maritime Technology A/S \$1.7m, The Dumonde Group Pty Ltd \$1.7m, Centrix - Pm (Aust) Pty Ltd \$1.5m, Ashurst Australia \$1.3m, and the Rand Corporation (Australia) \$1.0m. Other remaining Contract Payments totals to \$8.3m.		

### 2.1A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
492.3	372.9	375.2	PBS to PAES: The variation between the Budget and Revised estimates is primarily due to the reprogramming of activities against the Head Contract. These adjustments are not anticipated to impact on key milestones including the commencement of prototyping by end 2020, and commencement of construction by end 2022. PAES to Financial Plan: The variance is due to foreign exchange supplementation during Pre-ERC build.
Variance \$m	(119.4)	2.3	Total Variance (\$m): (117.1)
Variance %	(24.3)	0.6	Total Variance (%): (23.8)

### 2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(72.1)	Australian Industry	The main drivers for this underspend include delays associated with activities against the Head Contract, and delays in contracting CEA for
		(39.5)	Foreign Industry	
			Early Processes	
			Defence Processes	

375.2	263.6		Foreign Government Negotiations/Payments	acquisition of test equipment for the Land Bases Test Site. Plus the existing Foreign Military Sales case being delayed for payment from June to July 20, and the delay in receiving the new FMS Case which has put a stop to the payment of the Initial Deposit. Other drivers for this underspend include Maritime Information Environment In-Service Support contract, WAMA, other contracted services associated with Combat Management System, Nulka and delay in finalising the agreement for Shipyard licenses.
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
		(111.6)	Total Variance	
		(29.7)	% Variance	

### 2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 20 \$m			
CEA Technologies Pty Ltd	Nov 14	0.943	44.0	Fixed	AUSDEFCON (Complex)	1,7
Navantia	Oct 14	8.8	36.2	Fixed	AUSDEFCON (Complex)	2
US Government (AT-P-GSC)	Jan 16	5.46	265.1	Reimbursement	FMS	3,7
Fincantieri S.P.A.	Aug 16	10.9	29.7	Fixed	AUSDEFCON (Complex)	4
BAE Systems Ltd	Jul 16	10.9	56.8	Fixed	AUSDEFCON (Complex)	5
ASC Shipbuilding Pty Ltd	Dec 18	1,904.1	2,275.7	Variable	AUSDEFCON (Complex)	6,7
Notes						
1	Continuing Risk Reduction radar development activities.					
2	Design Studies, Risk Reduction activities and Participant Services Contract during CEP. This contract was closed on 4 July 2018.					
3	US Government Initial MOU was for SEA 5000 Feasibility and Technical Integration Study. Contract value was increased for additional Feasibility and Technical Risk Reduction Studies including CEAFAR/Cooperative Engagement Capability (CEC) and integration of CEAFAR into the Aegis Combat System. Contract value also includes acquisition of Long Lead Time Items for Development Sites.					
4	Participants Services Contracts during CEP. This contract was closed on 4 July 2018.					
5	Participants Services Contracts during CEP and Advance Work Arrangement following CEP. This contract was closed on 4 February 2019.					
6	Design and Productionisation for Hunter Class Frigates.					
7	Contract values as at 30 June 2020 is based on actual expenditure to 30 June 2020 and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable).					
Contractor	Contracted Quantities as at		Scope			Notes
	Signature	30 Jun 20				
CEA Technologies Pty Ltd	N/A	N/A	Risk Reduction Studies and Radar Development.			
Navantia	N/A	N/A	Risk Reduction Design Studies and Participant Services during CEP.			
US Government	N/A	N/A	Feasibility and Integration studies and acquisition of LLTIs.			
Fincantieri S.P.A.	N/A	N/A	Participants Services Contracts during CE.			
BAE Systems Ltd	N/A	N/A	Participants Services Contracts during CEP and Advance Work Arrangement following CEP.			
ASC Shipbuilding Pty Ltd	N/A	N/A	Design and Productionisation for Hunter Class Frigates.			
Major equipment accepted and quantities to 30 Jun 20						
N/A						
Notes						

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### Section 3 – Schedule Performance

#### 3.1 Design Review Progress

Review	Major System / Platform Variant	Original Planned	Current Contracted	Achieved / Forecast	Variance (Months)	Notes
System Requirements	Mission System	Sep 19	N/A	Sep 19	0	1
System Definition	Mission System	Nov 20	N/A	May 21	6	1,4
Preliminary Design	Mission System	N/A	N/A	Aug 22	N/A	1,2
Critical Design	Mission System	Nov 22	N/A	Sep 23	10	1,5
	Combat System	Feb 23	N/A	Dec 23	10	3,5
	HCF Platform	Jun 24	N/A	Mar 25	9	1,5
<b>Notes</b>						
1	Current Contracted dates as forecast in the Contractor Master Schedule are maturing prior to the Initial Integrated Baseline Review (IBR1). Exit from IBR1 will set the Initial Performance Measurement Baseline.					
2	The Preliminary Design Review does not have a contracted date, but will be included in the baseline schedule at the Initial Integrated Baseline Review (IBR1).					
3	Previous design reviews for the Combat System are outside the scope of SEA 5000 Phase 1.					
4	Additional design work is required before the System Definition Review can commence.					
5	The later forecast for the System Definition Review has driven delays to subsequent 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	Prototyping commencement	N/A	N/A	Dec 20	N/A	1
	Ship 1 Build commencement	TBA	N/A	Dec 22	N/A	1
Acceptance	Ship 1	TBA	TBA	TBA	N/A	2
<b>Notes</b>						
1	While these milestones are yet to be contracted, the forecasts refer to the timeframes being worked to by the project.					
2	SEA 5000 Phase 1 has approval to procure long lead time items (LLTIs), and perform prototyping, detail Design and Productionisation of the Hunter Class Frigate. This milestone is expected to be defined by Government in subsequent Second Pass Approvals.					

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

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	TBA	TBA	N/A	1,2
Initial Operational Capability (IOC)	TBA	TBA	N/A	1,2
Final Materiel Release (FMR)	TBA	TBA	N/A	1,3
Final Operational Capability (FOC)	TBA	TBA	N/A	1,3
Notes				
1	SEA5000 Phase 1 has approval to procure long lead time items (LLTIs), perform prototyping and detail Design and Productionisation of the Hunter Class Frigate.			
2	These milestones are expected to be defined by Government in in 2021 when approval for Batch 1 Build is sought.			
3	These milestones are expected to be defined by Government in subsequent Second Pass Approvals.			
Schedule Status at 30 June 2020				
Not Applicable				
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	
<b>Not Applicable</b>	<b>Green:</b> The project does not currently have any materiel capability delivery approved. The project is currently approved for detailed design and productionisation, prototyping, and procurement of Long Lead Time Items for the <i>Hunter</i> Class Frigate. Capability requirements continue to be refined and assessed against the Second Pass approved scope, cost and schedule. SEA 5000 Phase 1 is expected to return to Government in 2021 to seek approval of the scope and funding required for Batch 1 Build.
	<b>Amber:</b> N/A
	<b>Red:</b> N/A
	<b>Note</b> This Pie Chart represents Defence's expected capability delivery. Capability assessments and forecast dates are excluded from the scope of the Auditor-General's Independent Assurance Report.

### 4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	Note 1	Not yet achieved
Initial Operational Capability (IOC)	Note 1	Not yet achieved
Final Materiel Release (FMR)	Note 1	Not yet achieved
Final Operational Capability (FOC)	Note 1	Not yet achieved
<b>Note</b>		
1	SEA 5000 Phase 1 has approval to procure long lead time items (LLTIs), perform prototyping and detailed Design and Productionisation of the Hunter Class Frigate. These milestones are expected to be defined by Government in subsequent Second Pass Approvals.	

## Section 5 – Major Risks and Issues

### 5.1 Major Project Risks

Identified Risks (risk identified by standard project risk management processes)	
Description	Remedial Action
Due to the level of design maturity of the reference ship design there is a risk that the Hunter Class Frigate design may not meet intended service life expectations.	The Hunter Class Frigate program in cooperation with the UK Ministry of Defence and ASC Shipbuilding has initiated a program in order to fully quantify both the design and management aspects of the Hunter Class Frigate.
The Type 26 is designed to UK Ministry of Defence Standards for Royal Navy's needs. There is a Risk that design changes for the Royal Australian Navy are not identified in sufficient time to allow their implementation resulting in costly rework.	The SEA5000 Phase 1 project has initiated an analysis of the impact of any differences between the Standards applied on the T26 and that used by the RAN. It is also intended to conduct a Capability Requirements Review to understand if there are any differences between Hunter Class and the RAN's functional requirements.
Acquisition of the Hunter Class Frigate maybe affected by overall funding or programming issues arising from internal cost growth / forecasting accuracy and external budget constraints, leading to an impact on capability and schedule.	The SEA5000 Phase 1 project uses a process of progressive Government approval. The approved scope of the project is limited to the design, productionisation and contracting of limited equipment which have long production timelines. The project conducts on-going engagement with the Head Contract and other major providers to facilitate improved cost management. Acquisition and cost models are refined through the execution of discrete contract scopes and design reviews to enable the project to meet budgeting and programming expectations along with proactive management of cost risk.
There is a risk that when production commences the design may not be sufficiently mature necessitating design changes, causing rework and resulting in additional costs and possible schedule overruns.	The project is conducting assurances on high resource demand risk areas to understand exposure. ASC Shipbuilding is implementing a workforce management plan to address workforce shortages. BAE Systems' UK is recruiting additional designers to ensure the Type 26 design is mature prior to design separation for the <i>Hunter</i> Class Frigate specific design.
The workforce requirements for the SEA5000 Phase1 capability are not fully funded within Navy's approved guidance.	The Directorate of Navy Workforce Requirements is analysing the Scheme of Complement and Shore Enabler requirement to ensure it accurately captures the workforce required to sustainably crew the Hunter Class Frigate. Positions will be prioritised to ensure a requisite workforce capability is available to support the Hunter Class Frigate introduction into service.
The Commonwealth does not provide adequate assurance over ASC Shipbuilding's performance in executing the Head Contract leading to less optimal value for money outcomes.	An Integrated Baseline Review (IBR) is being undertaken which will set a performance management baseline which enables the Commonwealth to accurately measure cost and schedule performance. IBR's are planned to be conducted periodically during the Design and Productionisation phase, and during Batch 1 Build ramp up.

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	The Head Contract has data access plans which ensures the Commonwealth obtains unfettered access to relevant Contractor data, information and systems. Audit plans are being developed to manage ASC Shipbuilding's delivery of their Plans and obligations.
The Prime may not have access to the required industrial base (infrastructure, supply chain, workforce) to support prototyping and construction activities.	The Head Contract deliverables, such as the Continuous Naval Shipbuilding Strategy and Plan, Workforce Management Plan and Supply Chain Management Plan are to be progressively delivered by ASC Shipbuilding ensuring access to and obligations to develop further the workforce and supply chains required to deliver the Hunter Class Frigates. Australian Naval Infrastructure (ANI) was stood up in 2017 to deliver infrastructure in the Osborne Naval Shipyard and is negotiating a licence for occupation and use of these facilities with ASC Shipbuilding.
The sustainment of the Hunter Class frigate may be affected by overall funding or programming issues arising from internal cost growth / forecasting accuracy and external budget constraints, leading to an impact on capability and schedule.	The project uses a process of progressive Government approval. Discrete funding scopes are approved by Government for the execution of limited contract scopes as required. Benchmarking and lessons learnt from the sustainment of the existing fleet is used to refine cost. Cost is updated through a Life Cycle Costing model to forecast sustainment requirements to maximise cost quality for subsequent Government approval of the next stage of activity.
The project may not be able to fully deliver Government Furnished Material to meet key milestones impacting cost and schedule.	The Program is currently developing plans and processes to acquire and manage the delivery of Government Furnished Material to support the Program design time frames.
There is a chance that the technical complexity of incorporating combat system and sensors with the selected ship design may delay capability milestones.	Ships Division will lead ongoing technical engagements between the shipbuilder and suppliers to share relevant information to enable efficient incorporation of combat system and sensors into the platform.
Competing Project objectives may impact the Hunter Class Frigates ability to maximise Australian Industry Content.	Commonwealth to work with ASC Shipbuilding to better understand the Australian industrial base and identify more opportunities to invest in, and develop local industry capability and capacity. AIC obligations are built into the Head Contract via the AIC Strategy and Plans.
Combat Systems integration is complex and may not support timely achievement of capability requirements.	Ships Division will lead an ongoing review of the viability of planned systems for the Batch 1 ship deliveries. This will include the identification and resourcing of technical activities to develop an integrated systems approach.
ASC Shipbuilding does not have access to an adequate land based test functionality to support the functional integration of the Combat System for Ship 1 IOC.	Design considerations are being developed for provision of a Land Based Testing System.
<b>Emergent Risks (risk not previously identified but has emerged during 2019–20)</b>	
<b>Description</b>	<b>Remedial Action</b>
Work needs to be undertaken to ensure the Build Scope Statement contains a minimum level of uncertainty acceptable to Defence and Government.	The SEA 5000 Phase1 project is working collaboratively with ASC Shipbuilding and central agencies to ensure the levels of cost and schedule uncertainty in the upcoming Gate 2 submission is fully understood.

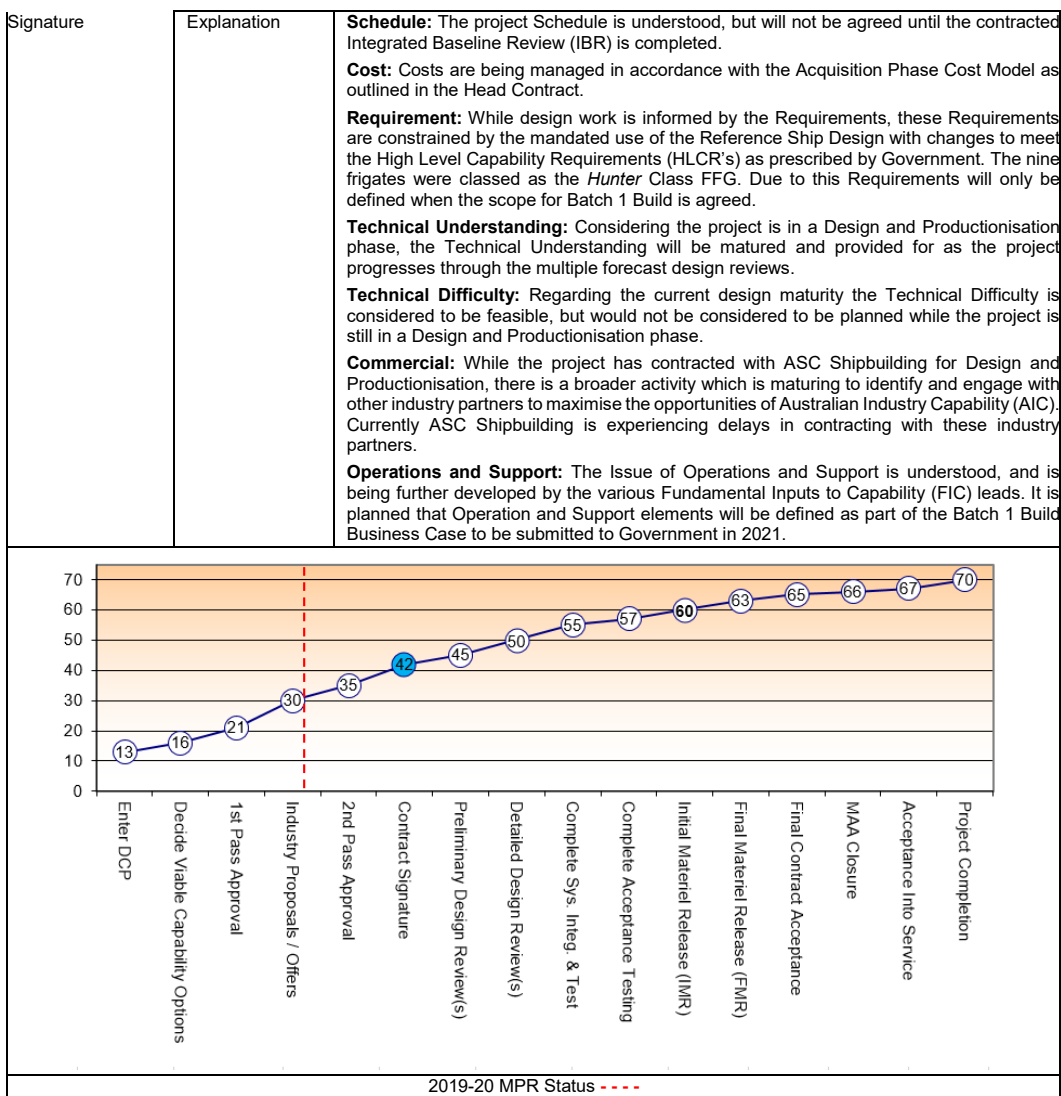
## 5.2 Major Project Issues

Description	Remedial Action
The UK, AUS, US and Canada cannot effectively share information to support the iterative design cycle for the Hunter Class Frigate Program.	Actively manage & implement actions arising from Global Combat Ship (GCS) User Group through weekly teleconferences. Hold discussions between the relevant US and UK security authorities to clarify bilateral agreements. Implement GCS User Group document handling template. Provide support and oversight of Data Management System (DMS) development.
<b>Note</b>	
Major risks and issues in Section 5 are excluded from the scope of the Auditor-General's Independent Assurance Report.	

## Section 6 – Project Maturity

### 6.1 Project Maturity Score and Benchmark

Maturity Score		Attributes							Total
		Schedule	Cost	Requirement	Technical Understanding	Technical Difficulty	Commercial	Operations and Support	
Project Stage	Benchmark	6	6	6	6	6	6	6	42
Contract	Project Status	4	5	5	5	4	5	3	31



## Section 7 – Lessons Learned

### 7.1 Key Lessons Learned

Description	Categories of Systemic Lessons
Government Furnished Material (GFM), data and information requirements need to be clearly defined, articulated and agreed between the platform designer, the various CoA Branches, Divisions and SPO's responsible for delivery, and materiel suppliers. This is required in terms of both the level of data maturity required, and schedule required by dates to enable the platform designer to meet key project milestones.	Schedule Management

## Section 8 – Project Line Management

### 8.1 Project Line Management as at 30 June 2020

Position	Name
Division Head	Ms Sheryl Lutz
Branch Head	Mr Derek Gill
Project Director	CAPT Peter Mingay

## Project Data Summary Sheets

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## Project Data Summary Sheet<sup>153</sup>

Project Number	SEA 1000 Phase 1B
Project Name	FUTURE SUBMARINES DESIGN ACQUISITION
First Year Reported in the MPR	2019 - 20
Capability Type	Replacement
Acquisition Type	Developmental
Capability Manager	Chief of Navy
Government 1st Pass Approval	NA
Government 2nd Pass Approval (or key Government pre-Second Pass Approval)	Feb 2019
Budget at 2 <sup>nd</sup> Pass Approval (or key Government pre-Second Pass Approval)	\$5,952.5m
Total Approved Budget (Current)	\$5,925.8m
2019-20 Budget	\$579.5m
Project Stage	Contract Signature
Complexity	ACAT 1



### Section 1 – Project Summary

#### 1.1 Project Description

SEA 1000 Phase 1B intends to deliver a fleet of 12 regionally superior conventionally powered submarines to be known as the Attack Class. The Attack Class fleet will be built in Australia by an Australian workforce, at a purpose built Submarine Construction Yard which will be owned by the Commonwealth through Australian Naval Infrastructure and operated by Naval Group. The Future Submarine Program will provide Australia with an enduring sovereign submarine capability, with the ability to build, operate, and sustain submarines in Australia into the future.

#### 1.2 Current Status

##### Cost Performance

The in-year underspend of \$26.4m is predominantly attributed to delays in NG procurement activities and submission of contract change proposals to Additional Work Scope 1, a late start in subcontractors engagement for the Lockheed Martin Australia Combat System Integrator Design, Build and Integration Contract, and contract end adjustment for the Initial Services Contract. There is also lower than anticipated expenditure for Life of Type Extension activities for Collins Class Submarines, lower than anticipated posting costs for the Resident Project Office Cherbourg and travel expenditure due to COVID-19 restrictions.

##### Project Financial Assurance Statement

As at 30 June 2020, project SEA1000 Phase 1B has reviewed the project's approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial contractual obligations of Defence for this project, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget remaining for the project to complete against the agreed scope.

##### Contingency Statement

The project has not applied contingency in the financial year or in prior years.

##### Schedule Performance

The Future Submarine Program is continuing to work towards delivery of the first Attack class submarine in the early 2030s, subject to future Government Approvals beyond the design work currently Approved for Phase 1B of the Program.

In September 2017, the Commonwealth, Naval Group, and Lockheed Martin Australia completed a pre-sizing activity to determine the initial sizing envelope of the Attack class submarine. The pre-sizing activity was followed by a successful Preliminary System Requirements Review, which was completed in October 2017 on schedule and marked the end of Functional Analysis and the first phase of design.

The successful completion of Functional Analysis allowed entry to the phase of design known as Feasibility Studies. System Requirements Review (Feasibility Studies) was completed on schedule on 20 March 2018.

The Concept design process for the Attack class submarine involved refinement of the design and associated artefacts to maintain alignment with requirements, as requirements transition in parallel from preliminary to final status. It was vital to ensure that the concept design was concluded on a sound basis before the Project committed more resources to the next level of design, avoiding

#### 153 Notice to reader

Forecast dates and Sections: 1.2 (Material Capability Delivery Performance), 1.3 (Major Risks and Issues), 4.1 (Measures of Material 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.

<p>any costly and lengthy re-work in the future that are likely to arise if the concept design is not robust.</p> <p>The Concept Studies Review was not completed as originally planned in September 2018 due to the need to further develop the transverse balances and the Definition Plan for the subsequent design phase. The rescheduled Concept Studies Review was conducted in November 2018, corrective actions were completed by January 2019 and the Concept Studies Review was satisfactorily completed in February 2019.</p> <p>Compared to pre-contract estimates for the progression of design, an extended schedule for the design work has been implemented under the Submarine Design Contract – the first program contract executed under the Strategic Partnering Agreement. This schedule addresses the need for high-levels of design maturity required by Defence as the design phase of the Program progresses. Design work has continued to progress to the required level of maturity under the Submarine Design Contract. The extended period for the design work has not impacted the scheduled delivery date of the first or follow on submarines.</p> <p>Under the Submarine Design Contract, the Functional Ship Systems Requirements Review was scheduled for 31Oct19 and experienced a delay of five weeks to conduct of the review. This delay was assessed as recoverable by the next major milestone review, Functional Ship - System Functional Review (FS-SFR), planned for January 2021. At that time, Naval Group and Lockheed Martin Australia confirmed the path towards a successful Functional Ship System Functional Review at a Tripartite planning conference held in Adelaide at the end of January 2020.</p> <p>Naval Group advice reported to the mid-year Contract Performance Review indicated the level of risk for on-time achievement of the Core Work Scope 1 objectives (including FS-SFR) required treatment. Any potential impact to the Contract and Program Critical Path, and mitigation actions to resolve these issues, are currently being assessed.</p>
<p><b>Material Capability Delivery Performance</b></p> <p>SEA1000 Phase 1B does not currently have any material capability delivery approved. The project is currently approved for:</p> <ol style="list-style-type: none"> <li>design including functional analysis, feasibility studies, design definition studies and basic design to enable design and construction of 12 regionally superior Future Submarines; and</li> <li>design and construction of the Submarine Construction Yard infrastructure and facilities to enable, build integration and testing of platform and combat system elements of the Future Submarine.</li> </ol> <p>Capability requirements continue to be refined and assessed against the approved scope, cost and schedule.</p>
<p><b>Note</b></p> <p>Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.</p>

### 1.3 Project Context

<p><b>Background</b></p> <p>The SEA1000 Phase 1B Program is a large and complex program tied into the National Naval Shipbuilding Plan. The Program is in the design stage, and has multiple Government decision-making points.</p> <p>Initial options for the Future Submarine included a Military Off The Shelf (MOTS) or modified MOTS design, evolved Collins design and a new design. MOTS and modified MOTS options were removed from consideration following Government consideration in April 2013, based on an inability of available designs to meet Australia's essential capability requirements. Following extensive investigation into an evolved Collins design, Government agreed in September 2014 to cease work on progressing this option based on the effort required being equivalent to a new design.</p> <p>On 26 April 2016, Government announced that Naval Group of France has been selected as the international partner to work with Australia on the design and delivery of the Future Submarines. The Design and Mobilisation Contract was signed with Naval Group on 30 September 2016 formally commencing design of the Future Submarine. The Strategic Partnering Agreement (SPA) was signed on 11 February 2019, an overarching agreement between the Commonwealth and Naval Group under which successive Program Contracts will be executed to deliver the Future Submarine Program. On 1 March 2019, the first contract under the SPA, the Submarine Design Contract was signed superseding the Design and Mobilisation Contract.</p> <p>Following a Restricted Tender Process, Lockheed Martin Australia was selected as the Future Submarine Combat System Integrator on 30 September 2016. An initial Design Services Contract was signed with Lockheed Martin on 17 November 2016. This contract was superseded by the Design Build and Integration Contract on 12 January 2018, which represents the long-term Combat System Integration contract and includes the execution of the initial work scope.</p> <p>As announced by Government in April 2016, the Future Submarines will be constructed at a purpose built Submarine Construction Yard (SCY) at the Osborne Precinct in Adelaide. The SCY will require new infrastructure and upgrades to existing infrastructure to support the work of Naval Group and LMA. Naval Group will establish SCY Infrastructure Functional Requirements (IFR) and undertake design assurance activities to ensure the SCY is capable of building, integrating, testing and accepting into service the planned Future Submarine fleet.</p> <p>Australian Naval Infrastructure (ANI) is the owner of the land and existing facilities at the Osborne Precinct. ANI's activities are fundamental to the successful achievement of Defence's Strategic Objective which includes a rolling acquisition of submarines for the Commonwealth's continuous naval shipbuilding program. The first Attack Class Submarine is scheduled to enter service from the early 2030s as it is delivered to the Royal Australian Navy to commence initial Operational Test and Evaluation.</p> <p>The Smart Buyer Process was introduced to Defence during 2016 and became a mandatory requirement for Defence projects during 2017. As this was after the Competitive Evaluation Process, it was not feasible to commence a Smart Buyer process for SEA1000 Phase 1B.</p>
<p><b>Uniqueness</b></p> <p>SEA1000 Phase 1B will deliver 12 Attack Class submarines to the Royal Australian Navy and is the largest and most complex ship building endeavour undertaken in Australia.</p> <p>As such, the project has unique tripartite governance arrangements to address the highly sensitive nature of the information and technologies procured from the United States of America, France and Australia, in the design of a regionally superior submarine.</p> <p>Another unique element of the Program is its engagement with key suppliers in the design phase. This is required to design a submarine capable of regionally superior performance, simultaneously maximising Australian Industry involvement, and qualifying equipment to function effectively and safely in the undersea environment. This practice ensures Australia will be able to exercise sovereign control over operations and sustainment of the Future Submarine.</p>

## Project Data Summary Sheets

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<b>Major Risks and Issues</b>
The project is currently managing risk at both a Tactical and Strategic level; generally reflected at the Contract and Program levels respectively. Strategic risks identified within Section 5 broadly fall under a number of key areas being: <ul style="list-style-type: none"> <li>Contractor performance risk;</li> <li>Resources, Skills and Workforce Management risk;</li> <li>Risk to the adaption and enhancement of methods, processes, systems and standards;</li> <li>Australian Industry Capability risk; and</li> <li>Risk to capability delivery to Navy, cost and schedule.</li> </ul>
<b>Other Current Related Projects/Phases</b>
N/A
<b>Note</b>
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
<b>Project Budget</b>			
Sep 16	Original Approved (Government Interim Approval)	989.4	1
Oct 17	Real Variation - Transfer	(4.3)	2
Nov 17	Government Interim Approval	1,279.3	3
Sep 18	Real Variation - Transfer	(19.7)	4
Nov 18	Real Variation - Transfer	(7.3)	5
Feb 19	Real Variation - Transfer	(20.0)	5
	Real Variation - Transfer	(7.3)	2
	Government Interim Approval	3,742.4	6
	<b>Total at Key Government pre-Second Pass Approval</b>	<b>5,952.5</b>	
Jun 20	Exchange Variation	(24.3)	
	Real Variation - Transfer	(2.4)	2
	<b>Total Budget</b>	<b>5,925.8</b>	
<b>Project Expenditure</b>			
Prior to Jul 19	Naval Group - Design and Mobilisation Contract	(365.1)	7
	Lockheed Martin Australia	(88.1)	7
	ASC Pty Ltd - Seconded Workforce	(23.2)	7
	Naval Group - Submarine Design Contract	(19.1)	7
	US Government - Submarine Combat Control System MOU	(0.0)	7
	Other Contract Payments / Internal Expenses	(227.0)	8
		(722.5)	
FY to Jun 20	Naval Group - Submarine Design Contract	(375.3)	7
	Lockheed Martin Australia	(93.3)	7
	ASC Pty Ltd - Seconded Workforce	(11.7)	7
	Naval Group - Design and Mobilisation Contract	(5.1)	7
	US Government - Submarine Combat Control System MOU	(4.0)	7
	Other Contract Payments / Internal Expenses	(63.7)	9
		(553.1)	
Jun 20	<b>Total Expenditure</b>	<b>(1,275.6)</b>	
Jun 20	<b>Remaining Budget</b>	<b>(4,650.2)</b>	
<b>Notes</b>			
1	Government approval for the design and mobilisation phase for Naval Group and Lockheed Martin Australia, and work to be undertaken by Defence including establishment of the overseas government presence, mobilisation of the program office and initial development of facilities needed for the Program.		
2	Transfer to the CIOG component of SEA1000 Phase 1B for the Defence Secret Environment - International.		
3	Government approval for design of the combat system by Lockheed Martin Australia, activity to develop the concept design for the Future Submarine Construction Yard and Infrastructure business case, and program office costs.		
4	Transfer to the CIOG component of SEA1000 Phase 1B for Information Communication Technology Infrastructure Project requirements and Defence Secret Environment - International.		
5	Funding provided to Australian Naval Infrastructure for the Submarine Construction Yard.		
6	Government approval for further design work by Naval Group and program office costs, and Portfolio Additional Estimates Statements 2018-19 budget measures.		
7	The scope of this contract is explained further in Section 2.3 – Details of Project Major Contracts.		
8	Other expenditure for the period to July 2019 comprises payments for Contractor/Consultant Support (\$103m), Lockheed Martin Australia Combat System Integrator Initial Services Contract (\$30.3m), Facilities and Security arrangements in Cherbourg (\$15.2m), Legal Services (\$12.1m), US Government (\$11.2m), Lockheed Martin Australia Combat System Integrator Design Services Contract (\$10.2m), Collins Class Life of Type Extension Activities (\$9.9m), Office Fitout (\$1.6m) and other expenditure not attributable to the listed contracts (\$33.5m).		
9	Other expenditure for the period July 2019 to June 2020 comprises payments for Contractor/Consultant Support (\$39.1m), Collins Class Life of Type Extension Activities (\$10.1m), US Government (\$3.8m), Facilities and Security arrangements in		



	Cherbourg (\$3.3m), Legal Services (\$3.1m), Lockheed Martin Australia Combat System Integrator Initial Services Contract (-\$0.8m), other expenditure not attributable to the listed contracts (\$5.1m).
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#### 2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
289.3	580.9	579.5	<p>PBS to PAES: Government approval of \$3.8 billion to enter into the Strategic Partnering Agreement and Submarine Design Contract with Naval Group was received in February 2019. This is reflected in the increased budget estimate for 2019-20. The variation is primarily due to this approval along with the alignment of the Submarine Design Contract with Naval Group (signed in March 2019) and the Design, Build and Integration Contract with Lockheed Martin Australia (signed in January 2018), which required reprogramming certain activities to 2020-21. The Attack Class Submarine Program remains on cost and schedule for delivery of the fleet from the early 2030s.</p> <p>PAES to Estimate Final Plan: The variation relates to an update of budget exchange rates from 2019-20 MYEFO to 2020-21 Pre-ERC.</p>
Variance \$m	291.6	(1.4)	Total Variance (\$m): 290.2
Variance %	100.8	(0.2)	Total Variance (%): 100.3

#### 2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(13.4)	Australian Industry	The underspend is predominantly attributed to delays in Naval Group procurement activities and submission of contract change proposals to Additional Work Scope 1, a late start in subcontractor engagement for the Lockheed Martin Australia Combat System Integrator Design, Build and Integration Contract, and contract end adjustment for the Initial Services Contract. There is also lower than anticipated expenditure for Life of Type Extension activities for Collins Class Submarines, lower than anticipated posting costs for the Resident Project Office Cherbourg and travel expenditure due to COVID-19 restrictions.
		18.5	Foreign Industry	
			Early Processes	
		(30.8)	Defence Processes	
		(0.7)	Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
579.5	553.1	(26.4)	<b>Total Variance</b>	
		(4.6)	<b>% Variance</b>	

### Project Data Summary Sheets

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## 2.3 Details of Project Major Contracts

3.5 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 20 \$m			
Naval Group – Design & Mobilisation Contract	07 Oct 16	60.9	416.3	Cost Ceiling (capped)	ASDEFCO (Strategic)	1,5
ASC Pty Ltd – Seconded Workforce	08 Mar 17	22.1	52.7	Cost Ceiling (capped)	Standing Offer	2,5
Lockheed Martin Australia – Combat System Design Build and Integration Contract	12 Jan 18	607.2	791.9	Cost Ceiling (capped)	ASDEFCO (Strategic)	3,5
Naval Group – Submarine Design Contract	01 Mar 19	589.7	988.0	Cost Ceiling (capped)	ASDEFCO (Strategic)	4,5
US Government	05 Jul 19	224.8	224.4	Reimbursement	MOU	5
Notes						
1	Increase in contract value reflects ongoing inclusion of staged concept-design work scopes.					
2	Increase in contract value reflects ongoing requirement for technical and engineering expertise.					
3	Increase in contract value includes the costs for subsystems withheld at signature due to pricing uncertainty.					
4	Increase in contract value reflects inclusion of staged work scopes plus procurement of long lead-time equipment.					
5	Contract value as at 30 June 2020 is based on actual expenditure to 30 June 2020 and remaining commitment at current exchange rates. This includes adjustments for indexation (where applicable).					
Contractor	Contracted Quantities as at		Scope	Notes		
	Signature	30 Jun 20				
Naval Group – Design & Mobilisation Contract	Nil	Nil	Progress the concept design for the future submarine in parallel to negotiation of the Strategic Partnering Agreement.			
ASC Pty Ltd	Nil	Nil	Specialist engineering and technical services.			
Lockheed Martin Australia – Combat System Design Build and Integration Contract	Nil	Nil	Design and risk reduction work, selection of all sub-system suppliers, and delivery of a detailed design for the Combat System			
Naval Group – Submarine Design Contract	Nil	Nil	Progress submarine concept design through definition phase to basic design.			
US Government	Nil	Nil	Cooperative development, production, and support of the submarine combat control system.			
Major equipment accepted and quantities to 30 Jun 20						
N/A						
Notes						

## 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	Preliminary System Requirements Review (PSRR)	Oct 17	N/A	Oct 17	0	
	System Requirements Review (Feasibility Studies)	Mar 18	N/A	Mar 18	0	
	Combat System System Requirements Review	Nov 18	N/A	Sep 18	(2)	
	Concept Studies Review (CSR)	Sep 18	N/A	Feb 19	5	1
	Functional Ship Systems Requirements Review - Definition Phase	Oct 19	N/A	Jul 20	8	2
	Functional Ship Systems Functional Review	Jan 21	N/A	Feb 21	1	3,4
Preliminary Design	Combat System Preliminary Design Review	Dec 19	Oct 21	Oct 21	22	5
Critical Design	Combat System Critical Design Review	Mar 22	Jun 23	Jun 23	15	5
<b>Notes</b>						
1	Additional work was required to further develop the transverse balances and the Definition Plan for the subsequent design phase before entering the Concept Studies Review, that was held in November 2018. The Commonwealth also required that a Tripartite Planning Conference be convened to successfully exit the Concept Studies Review and support orderly commencement of the Definition design work. The Conference was held in January 2019. The Commonwealth was satisfied with this outcome and the Concept Studies Review was effectively considered complete. Minor administrative actions followed and a letter advising the Contractor of formal exit was signed in February 2019.					
2	The Functional Ship Systems Requirements Review was held in December 2019. A series of actions were identified during the review to finalise the initial Functional Baseline, as well as traceability between the Technical Requirements Specifications and the Functional Performance Specification. These actions have progressed and formal exit from the review is expected in July 2020.					

3	The schedule to achieve Functional Ship System Functional Review was validated in January 2020 by Naval Group and Lockheed Martin Australia. Valuable work on Definition design has progressed since the conduct of the Functional Ship Systems Requirements Review in December 2019, however some impact is evident from the delay to formal exit of this review.
4	Compared to pre-contract estimates for the progression of design, an extended schedule for the design work has been implemented under the Submarine Design Contract – the first program contract executed under the Strategic Partnering Agreement. This schedule addresses the need for high-levels of design maturity required by Defence as the design phase of the Program progresses.
5	Adoption by Naval Group of the standard IEEE 15288.2 Technical Reviews and Audits on Defense Programs during 2018/2019 has improved alignment in design maturity points between Naval Group and Lockheed Martin Australia. Adoption of this standard resulted in amendments to nomenclature, content and timing for some design reviews. Notably, the Functional Ship Systems Functional Review was introduced and both the Preliminary and Critical Design Reviews were re-defined in terms of content and timing.

### 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	TBA	TBA	TBA	TBA	N/A	1
Acceptance	TBA	TBA	TBA	TBA	N/A	1
<b>Notes</b>						
1	SEA1000 Phase 1B has approval to conduct basic design of 12 regionally superior Future Submarines and design and construction of the Submarine Construction Yard infrastructure and facilities to enable, build integration and testing of platform and combat system elements of the Future Submarine. The above milestones are expected to be defined by Government in subsequent approvals.					

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

Progress Toward Materiel Release and Operational Capability Milestones				
Item	Original Planned	Achieved / Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	TBA	TBA	N/A	1
Initial Operational Capability (IOC)	TBA	TBA	N/A	1
Final Materiel Release (FMR)	TBA	TBA	N/A	1
Final Operational Capability (FOC)	TBA	TBA	N/A	1
Notes				
1	SEA1000 Phase 1B has approval to conduct basic design of 12 regionally superior Future Submarines and design and construction of the Submarine Construction Yard infrastructure and facilities to enable, build integration and testing of platform and combat system elements of the Future Submarine. The above milestones are expected to be defined by Government in subsequent approvals.			
Schedule Status at 30 June 2020				
Not Applicable				
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	
<p style="text-align: center; font-size: 24pt; font-weight: bold;">Not Applicable</p>	<p><b>Green:</b> SEA1000 Phase 1B does not currently have any materiel capability delivery approved. The project is currently approved for: design including functional analysis, feasibility studies, design definition studies and basic design to enable design and construction of 12 regionally superior Future Submarines; and design and construction of the Submarine Construction Yard infrastructure and facilities to enable, build integration and testing of platform and combat system elements of the Future Submarine. Capability requirements continue to be refined and assessed against the approved scope, cost and schedule. SEA1000 Phase 1B is expected to return to Government in 2020/2021 to seek progressive approval of scope and funding as the Program moves through the design and build phase.</p> <p>The first Attack Class Submarine (HMAS <i>Attack</i>) is scheduled to enter service from the early 2030s as it is delivered to the Royal Australian Navy to commence Operational Test and Evaluation. This is the point after which all contractor sea trials have been completed and the submarine has been formally accepted from Naval Group and Lockheed Martin Australia. During Operational Test and Evaluation, the Commonwealth personnel and persons providing services on behalf of the Commonwealth submarine will be progressively released for operations during the Operational Test and Evaluation, after which time the submarines will continue in service.</p>
	<p><b>Amber:</b> N/A</p>
	<p><b>Red:</b> N/A</p>
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)	Note 1	Not yet achieved
Initial Operational Capability (IOC)	Note 1	Not yet achieved
Final Materiel Release (FMR)	Note 1	Not yet achieved
Final Operational Capability (FOC)	Note 1	Not yet achieved
Note		
1	SEA1000 Phase 1B has approval to conduct basic design of 12 regionally superior Future Submarines and design and construction of the Submarine Construction Yard infrastructure and facilities to enable, build integration and testing of platform and combat system elements of the Future Submarine. The above milestones are expected to be defined by Government in subsequent approvals.	

## 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 our Program Partners will not adequately address issues and challenges (including technical risks) that arise during the course of the Program.	Contracted requirements exist on Program performance, behaviours and expectations and are supported by: ongoing engagement with CEO's; bilateral and tripartite governance arrangements; and ongoing independent critical peer review by the Naval Shipbuilding Advisory Board and Submarine Advisory Committee.
There is a risk that Program Participants are unable to staff the Program with the right number of suitably qualified and experienced personnel, build skills to prepare for construction and execute the Program effectively and with increasing productivity over time.	Program Partners have established Resourcing Profiles for current and future work; and must pass Mandated Systems Reviews before progressing to subsequent stages of design and delivery. Contracted requirements exist for delivery of a Capability Realisation Plan for Naval Group Australia and the Commonwealth-monitoring of ramp-up and training plans. Other actions include: Defence and Naval Group Australia working in close collaboration with the Naval Shipbuilding College and the Naval Shipbuilding Industry Reference Committee.  A Workforce Plan has been developed to ensure ongoing ramp up of skills in Defence's Future Submarine Program (FSP) Office to provide sufficient capacity to monitor and manage Partner performance. Other actions include: Mentoring and training programs to develop the skills and experience of junior Australian Public Service personnel; Succession Planning; ongoing recruitment of personnel to authorised levels and rebalancing of skills and experience to meet changing needs as the Program transitions from design through to construction and sustainment.
There is a risk to the implementation of best-practice industry methods, processes systems and standards (including those related to program planning and control) to promote effectiveness and efficiencies.	Contracted requirements exist for the adaption and enhancement of methods, processes, systems and standards to meet all FSP Objectives; to demonstrate how these meet the Commonwealth's needs; and are implemented in Australian (including through modern manufacturing in a newly established Submarine Construction Yard in Adelaide).  Requirements also exist for well-defined plans, an effective resource-based schedule, sound planning and Program management; and for the establishment of program management conforming to Australian standards.  Integrated Baseline Reviews (IBRs) are being undertaken which will set a performance measurement baselines which enables the Commonwealth to accurately measure cost and schedule performance. IBRs are planned to be conducted periodically through each Contract phase.
There is a risk that our Program Partners fail to maximise Australian Industry involvement through all phases of the Program without unduly compromising capability, cost or schedule.	Contracted requirements exist for Australian Industry Capability Plans for each Phase of the FSP, for Defence to approve engagement of key subcontractors; and for Naval Group to transfer procurement functions in France to Naval Group Australia. Contract requirements and processes have been developed to exercise better make-by decisions on best-for-program basis.
There is a risk to the FSP Strategic Objectives for the achievement of a regionally superior Attack Class submarine capability that provides the Commonwealth with enduring sovereign control over the operation and sustainment of Australia's Future Submarine capability; on cost and on schedule.	Sound requirements are being developed for the Attack class. Compliance is being monitored through the traceability of requirements to design artefacts and ongoing Design Reviews. Contracted requirements exist for the development and annual reporting of Program Cost Estimates, particularly within the design phase, to track and control costs as design decisions are made to balance capability and affordability. Other actions include cost transparency; routine assessment of pricing and expenditure; and cost and schedule management.  Requirements also exist for well-defined plans, an effective resource-based schedule, sound planning and Program management; and for the establishment of program management conforming to Australian standards. The Commonwealth are monitoring performance against the Contract Master Schedules and Integrated Master Schedule (IMS). IBRs are being undertaken which will set performance measurement baselines which enables the Commonwealth to accurately measure cost and schedule performance. IBRs are planned to be conducted periodically through each Contract phase.
Emergent Risks (risk not previously identified but has emerged during 2019–20)	
Description	Remedial Action
N/A	N/A

### 5.2 Major Project Issues

Description	Remedial Action
N/A	N/A
Note	
Major risks and issues in Section 5 are excluded from the scope of the Auditor-General's Independent Assurance Report.	

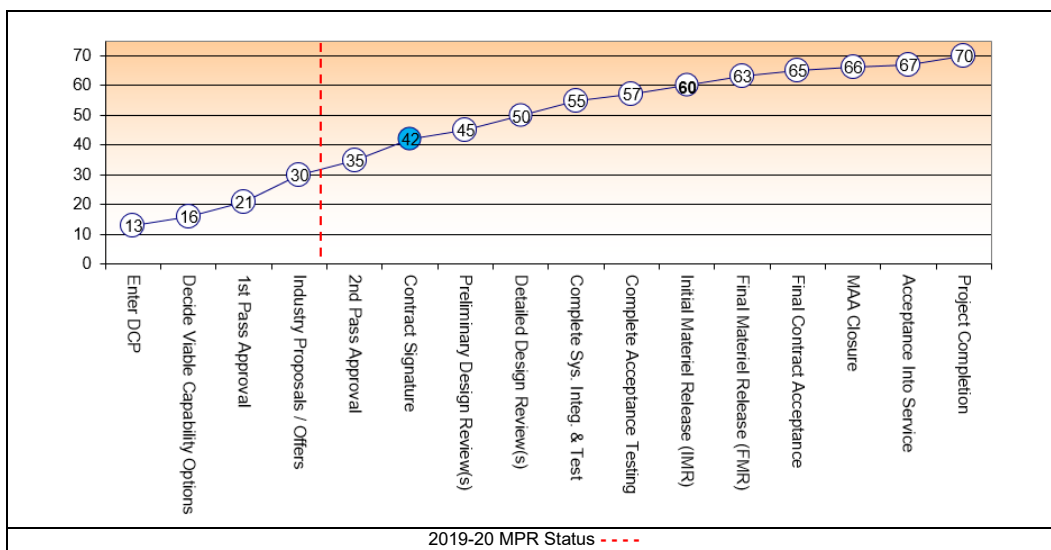
## Project Data Summary Sheets

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## Section 6 – Project Maturity

### 6.1 Project Maturity Score and Benchmark

Maturity Score		Attributes							Total
		Schedule	Cost	Requirement	Technical Understanding	Technical Difficulty	Commercial	Operations and Support	
Project Stage	Benchmark	6	6	6	6	6	6	6	42
Enter Contract	Project Status	4	7	6	4	4	3	4	32
	Explanation	SEA 1000 Phase 1B is currently approved for: design including functional analysis, feasibility studies, design definition studies and basic design to enable design and construction of 12 regionally superior Future Submarines; and design and construction of the Submarine Construction Yard infrastructure and facilities to enable, build integration and testing of platform and combat system elements of the Future Submarine. Capability requirements continue to be refined and assessed against the approved scope, cost and schedule. SEA1000 Phase 1B is expected to return to Government in 2020/2021 to seek progressive approval of scope and funding as the Program moves through the design and build phase. <b>Schedule:</b> The currently approved project schedule is understood and remains within schedule tolerance; notwithstanding there is significant schedule pressure on submarine design and SCY activities. The project is working to identify and mitigate any potential delays caused by COVID-19. <b>Cost:</b> Costs are being managed with some variation (underspend) in the approved budget. <b>Requirement:</b> While requirements are agreed by Navy and Contractors and captured on the appropriate contracts, key studies are underway to determine if requirements can be met. Key performance requirements will remain open until later in design, carrying forward risk. <b>Technical Understanding:</b> Considering the project is in a Design phase, the Technical Understanding will be matured and provided for as the project progresses through the multiple forecast design reviews. Studies are planned to better understand performance issues. <b>Technical Difficulty:</b> Modelling, early demonstration of Critical Equipment and balances indicate a feasible platform design. Risk mitigation studies are underway to confirm the achievement of requirements. <b>Commercial:</b> While the project has established Strategic-level Agreements and design contracts with Naval Group and LMA, as the design matures, more detailed requirements including the involvement of Australian Industry will be brought into project contracts. <b>Operations and Support:</b> The Issue of Operations and Support is understood at a high level, and is being further developed by the various Fundamental Inputs to Capability (FIC) leads. There is a broader activity to conduct; namely to define lower-level requirements including the involvement of Australian Industry, exercising sovereign control over operations and sustainment and qualifying equipment to function effectively and safely in the undersea environment.							



## Section 7 – Lessons Learned

### 7.1 Key Lessons Learned

Description	Categories of Systemic Lessons
Careful selection of Acquisition Contractors with relevant experience and knowledge, underpinned by strong commercial arrangements, is essential to protect the Commonwealth's interests	Contract Management
The Program must be an informed customer, closely monitoring Contractor progress with strong and pro-active management.	Contract Management
Research into program failures and lessons learned from submarine design by allied nations ensured SEA1000 Ph 1B was aware of the necessity of having a set of good requirements to achieve success in design and development.	Requirements Management

## Section 8 – Project Line Management

### 8.1 Project Line Management as at 30 June 2020

Position	Name
Division Head	Mr Gregory Sammut
Branch Head	CDRE Craig Bourke
Project Director	CDRE Craig Bourke

## Project Data Summary Sheets

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## Project Data Summary Sheet<sup>154</sup>

Project Number	LAND 400 Phase 2
Project Name	MOUNTED COMBAT RECONNAISSANCE CAPABILITY
First Year Reported in the MPR	2019-20
Capability Type	Replacement
Acquisition Type	MOTS Plus
Capability Manager	Chief of Army
Government 1st Pass Approval	December 2014
Government 2nd Pass Approval (or key Government pre-Second Pass Approval)	March 2018
Budget at 2 <sup>nd</sup> Pass Approval (or key Government pre-Second Pass Approval)	\$5,762.7m
Total Approved Budget (Current)	\$5,761.7m
2019-20 Budget	\$173.6m
Project Stage	Preliminary Design Review
Complexity	ACAT I



### Section 1 – Project Summary

#### 1.1 Project Description

LAND 400 Phase 2 (L400-2) will introduce the Mounted Combat Reconnaissance Capability (MCRC) through the acquisition of the Boxer 8x8 Combat Reconnaissance Vehicle (Boxer CRV). This capability seeks to meet Army's land combat reconnaissance requirements. The Project is approved to acquire 211 vehicles, additional modules, and training and support systems to replace the in-service capability provided by the Australian Light Armoured Vehicle (ASLAV).

#### 1.2 Current Status

##### Cost Performance

###### In-year

As at 30 June 2020, financial year 2019-20 expenditure was \$173.2m against a Year End (YE) budget of \$173.6m. The YE variance is primarily due to less than anticipated expenditure for Contractor Support and Remote Weapons Stations (Block II).

###### Project Financial Assurance Statement

As at 30 June 2020, project L400-2 has reviewed the project's approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial contractual obligations of Defence for this project, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget remaining for the project to complete against the agreed scope.

###### Contingency Statement

The project has not applied contingency in the financial year.

##### Schedule Performance

Initial Operating Capability remains on track for June 2022.

The Project is currently taking delivery of the first batch of 25 vehicles, whilst concurrently contributing towards the design of Block II vehicles. In the two years since contract signature, the project has undertaken a series of complex changes including the incorporation of a new electronic architecture. Verification and validation testing of the first Boxer 8x8 CRV has commenced at Monegetta Proving Ground and will continue until early 2021.

##### Material Capability Delivery Performance

As at 30 June 2020, Rheinmetall Defence Australia (RDA) has delivered 3 of 25 of Block I Boxer CRVs – the remaining vehicles are expected to be complete by mid-2021. Assembly of the Block II Boxer CRVs is scheduled to commence at the Military Vehicle Centre of Excellence (MILVEHCOE) in May 2022 and is expected to be complete by Oct 2026.

###### Note

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

#### 154 Notice to reader

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

### 1.3 Project Context

<p><b>Background</b></p> <p>The ASLAV supports the Australian Defence Force's current mounted combat reconnaissance capability and has seen extensive operational service, including in East Timor, Iraq and Afghanistan. Introduced in 1992, the ASLAV fleet will reach the end of its life around 2021.</p> <p>Government First Pass Approval for a replacement Mounted Combat Reconnaissance Capability (MCRC) was provided in December 2014. An assessment prior to First Pass Approval identified that current Military-Off-The-Shelf (MOTS) solutions would be unlikely to be capable of meeting all of Army's capability requirements. In response to the Request For Tender, tenderers were required to submit a MOTS solution, and were also provided the option of submitting a 'MOTS Plus' solution (defined as a MOTS baseline vehicle reconfigured with a single package of upgrades in order to deliver an increased level of compliance with the technical, functional and performance requirements). In March 2018, Government announced RDA as the preferred tenderer for the delivery of an Australianised Boxer 8x8 CRV to fulfil the MCRC for the ADF.</p> <p>RDA tendered the Boxer 8x8 Multi Role Armoured Vehicle integrated with the Rheinmetall Lance turret as the Boxer CRV to replace the ASLAV, this vehicle was subsequently selected by Government as the preferred solution, and an acquisition contract was signed with RDA in August 2018 for the provision and initial support of 211 Boxer CRVs.</p> <p>For the first 25 Boxer CRVs, referred to as Block I, manufacture and assembly will occur in Germany, with final integration and acceptance testing undertaken in Australia. After this initial phase, a gradual transition will occur for the assembly of the vehicles (Block II) from Germany to Australia. This will be via a coordinated ramp down in Germany and ramp up in Australia, thereby maximising the effect of technology transfer and reflecting the growing skill base in Australia.</p> <p>There will remain some vehicle subsystems for which the transfer of manufacture or assembly from Europe to Australia would not be cost effective and they will continue to be supplied from Germany (e.g. welded drive module hulls, 30mm cannons, power packs, etc.). Final assembly, integration, set to work and testing of those elements would, however, still occur in Australia. Selected low-volume variants will continue to be assembled in Germany.</p> <p>Delivery of the 211 vehicles will be via two deliberate Blocks (I and II). Of the 25 vehicles in Block I, the 13 Multi-Purpose Variant Boxer CRVs are a 'MOTS' solution, whilst the remaining 12 Block I Reconnaissance and 186 Block II Boxer CRV variants are classified as a 'MOTS Plus' solution. Block II consists of 121 Reconnaissance, 15 Command and Control, 29 Joint Fires and Surveillance, 10 Repair and 11 Recovery variants.</p> <p>The Boxer CRV will form part of Army's modernised Armoured Fighting Vehicle capability, until its life of type (approximately 2055).</p> <p>The Smart Buyer Process was introduced to Defence during 2016 and became a mandatory requirement for Defence projects during 2017. As the new process was introduced after L400-2 had approached the market, it was not feasible to implement it within the timeframe available.</p> <p>One Stop Payment has previously been invoked on RDA in response to the delayed achievement of a contract milestone (July to September 2019) – this Stop Payment has now been lifted.</p> <p><b>Uniqueness</b></p> <p>L400-2 is unique in that Australia is the first nation to acquire a Boxer vehicle with a manned turret, a variant that other countries have expressed an interest in buying. Additionally, L400-2 is acquiring a Reconfigurable Driver Training Simulator – an innovative Australian-developed simulator that uniquely, can be reconfigured for a variety of different vehicles. The simulator is attracting global interest for follow on sales and has been shortlisted for an Essington-Lewis Award for excellence in defence and industry collaboration.</p> <p><b>Major Risks and Issues</b></p> <p>The following risks and issues are being managed by the Project:</p> <ul style="list-style-type: none"> <li>• Failure of Boxer CRV to meet the contracted specifications;</li> <li>• Failure to meet scheduled delivery and operational milestones;</li> <li>• Failure to integrate LAND 200 (Battlefield Command Systems) onto the CRV;</li> <li>• RDA COVID-19 Impacts;</li> <li>• Delay in Production of Block I Boxer CRV;</li> <li>• C4I System Software and Equipment Availability; and</li> <li>• L400-2 Training System External Interfaces.</li> </ul> <p><b>Other Current Related Projects/Phases</b></p> <p>L200 is delivering two major subsystems which will be integrated into the CRV. These include a:</p> <ul style="list-style-type: none"> <li>• Battle Management System (BMS) — that enables commanders to monitor, direct and review operations with electronic displays of maps and combat data; and a</li> <li>• Tactical Communications Network — comprising secure, mobile infrastructure (such as radios) to support the distribution of the BMS and other combat systems used by Army.</li> </ul> <p><b>Note</b></p> <p>Major risks and issues are excluded from the scope of the Auditor-General's Independent Assurance Report.</p>
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### Project Data Summary Sheets

Auditor-General Report No.19 2020–21  
2019–20 Major Projects Report



## Section 2 – Financial Performance

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

Date	Description	\$m	Notes
	<b>Project Budget</b>		
Dec 14	Original Approved (Government First Pass Approval)	116.7	
	Government Second Pass Approval	5,646.0	
Mar 18	<b>Total at Second Pass Approval</b>	<b>5,762.7</b>	
Jun 20	Exchange Variation	(1.0)	
	<b>Total Budget</b>	<b>5,761.7</b>	
	<b>Project Expenditure</b>		
Prior to Jul 19	Contract Expenditure – RDA (Prime Contract)	(178.6)	1
	Contract Expenditure – NIOA (Explosive Ordnance)	(20.7)	
	Contract Expenditure – UMS	(7.2)	
	Other Contract Payments / Internal Expenses	(78.8)	
		(285.3)	
FY to Jun 20	Contract Expenditure – RDA (Prime Contract)	(107.9)	2
	Contract Expenditure – NIOA (Explosive Ordnance)	(24.1)	
	Contract Expenditure – UMS	(9.6)	
	Contract Expenditure – EOS	(1.7)	
	Other Contract Payments / Internal Expenses	(29.9)	
		(173.2)	
Jun 20	<b>Total Expenditure</b>	<b>(458.5)</b>	
Jun 20	<b>Remaining Budget</b>	<b>5,303.2</b>	
<b>Notes</b>			
1	Other Expenses (\$78.8m) are for Risk Mitigation Activity Contracts with Rheinmetall Landsysteme GmbH and BAE Systems (\$50.0m), Project Office Administration (\$23.5m), C4I (\$3.8m), Risk Mitigation Activity – Other (\$0.9m), and Remote Weapon Station – Block I (\$0.6m)		
2	Other Expenses (\$29.9m) are for C4I (\$12.3m), Project Office Administration (\$8.3m), Support Contract (\$3.4m), German Quality Assurance (\$2.9m), Test and Evaluation (\$2.7m), and other (\$0.3m).		

\*Note – Those projects approved in 'out- turned' dollars will not contain an entry for 'Price Indexation'. In these instances this line can be removed.

### 2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
200.3	173.7	173.6	The variation from PBS to PAES is primarily due to delays as a result of the inclusion of the Electronic Architecture scope of work and delay of the Active Protection System Feasibility Study.
			The variation from PAES to Final Plan is due to budget exchange rate updates.
Variance \$m	(26.6)	(0.1)	Total Variance (\$m): (26.7)
Variance %	(13.3)	(0.1)	Total Variance (%): (13.3)

### 2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(0.4)	Australian Industry	The Year End (YE) variance is primarily due to less than anticipated expenditure for Contractor Support and Remote Weapons Stations (Block II).
			Foreign Industry	
			Early Processes	
			Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
173.6	173.2	(0.4)	<b>Total Variance</b>	
		(0.2)	<b>% Variance</b>	

### 2.3 Details of Project Major Contracts

Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes		
		Signature \$m	30 Jun 20 \$m					
RDA	Aug 2018	3,890.2	3,741.5	Fixed	ASDEFCON	1,3		
UMS	Dec 2018	29.1	30.8	Fixed	ASDEFCON			
NIOA	Jul 2018	47.3	91.7	Fixed	ASDEFCON (Standing Offer)	4		
EOS	Dec 2019	50.2	48.9	Fixed	ASDEFCON	2,3		
Notes								
1	Contract value as at Signature is based on contract commitment at PBS 2018-19 Budgeted exchange rates. The commitment value included Price escalation estimates.							
2	Contract value as at Signature is based on contract commitment at MYEFO 2019-20 Budgeted exchange rates. The commitment value included Price escalation estimates.							
3	The price at 30 June 2020 is \$148.7 million lower than the price at signature due to exchange rate variation and lower than expected price escalation.							
4	Contract value as at signature reflects initial order quantity only.							
Contractor	Contracted Quantities as at		Scope			Notes		
	Signature	30 Jun 20						
RDA	223	223	Mounted Combat Reconnaissance Vehicles (Blocks I & II), Mission Modules, Support & Test Equipment and Training equipment					
UMS	6 1	6 1	Reconfigurable Driver Simulators Part Task Trainer					
NIOA	Classified	Classified	Explosive Ordnance					
EOS	82	82	Remote Weapon Stations (RWS) - Block II Vehicles			1		
Major equipment accepted and quantities to 30 Jun 20								
As at 30 June 2020:								
<ul style="list-style-type: none"><li>RDA has delivered 3 of 25 Block I CRV.</li><li>NIOA has delivered a quantity of explosive ordnance. The nature of these deliveries is Classified.</li></ul>								
Notes								
1	EOS has been contracted to deliver 2 Engineering Manufacture and Design RWS units, 2 Verification and Validation RWS units and 78 Full Rate Production RWS units.							

### Section 3 – Schedule Performance

#### 3.1 Design Review Progress

Review	Major System / Platform Variant	Original Planned	Current Contracted	Achieved / Forecast	Variance (Months)	Notes
System Requirements	Block I – Multi Purpose Vehicle	N/A	N/A	Nov 18	N/A	2
	Block I – Reconnaissance	Nov 18	N/A	Nov 18	-	
	Block II – Joint Fires and Surveillance	Jul 19	N/A	Jul 19	-	
	Block II – Command and Control	Jun 19	N/A	Jul 19	1	
	Block II – Reconnaissance	Jan 19	N/A	Feb 19	1	
	Block II – Repair	Aug 19	Oct 19	Sep 19	1	
Preliminary Design	Block II – Recovery	Feb 19	N/A	Feb 19	-	
	Block I – Multi Purpose Vehicle	N/A	N/A	Jan 19	N/A	2
	Block I – Reconnaissance	May 19	N/A	May 19	-	
	Block II – Joint Fires and Surveillance	Dec 20	Mar 21	Mar 21	3	3
	Block II – Command and Control	Jul 20	Jan 21	Jan 21	6	4
	Block II – Reconnaissance	Jul 19	N/A	Sep 19	2	5
Detailed Design	Block II – Repair	Dec 21	N/A	Dec 21	-	
	Block II – Recovery	Feb 20	Jul 20	Jul 20	5	6
	Block I – Multi Purpose Vehicle	Jan 19	N/A	Aug 19	7	7
	Block I – Reconnaissance	Oct 19	N/A	Nov 19	1	
	Block II – Joint Fires and Surveillance	Nov 21	Feb 22	Feb 22	3	3
	Block II – Command and Control	Apr 21	Oct 21	Oct 21	6	4
	Block II – Reconnaissance	May 20	Feb 21	Jan 21	8	8
	Block II – Repair	Sep 22	N/A	Sep 22	-	
	Block II – Recovery	Mar 21	Apr 21	Apr 21	1	
<b>Notes</b>						
1	All dates represent the Approval to exit the Design Review for each Mission System variant drive and mission modules.					
2	This was not a contractual requirement.					
3	Delay due to a combination of introduction of the Electronic Architecture Contract Change Proposal, COVID-19 (predominantly due to personnel resourcing constraints of the contractor), uncertainty with the load list and delays associated with Command and Control variant.					
4	Delay due to a combination of introduction of the Electronic Architecture Contract Change Proposal, COVID-19 (predominantly due to personnel resourcing constraints of the contractor), uncertainty with the load list and issues with interface documents.					
5	Delay associated with failure to satisfy all preliminary design review requirements which resulted in Defence invoking a Stop Payment in July 2019, which has now been lifted.					
6	Delay due to a Commonwealth request for a Recovery demonstration to be incorporated into the PDR.					

### Project Data Summary Sheets

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7	Delay due to late achievement of PDR and underestimation of design changes following the fitment exercise.
8	Delay due to a combination of the Stop Payment (in July 2019 – refer note 5), introduction of the Electronic Architecture Contract Change Proposal, COVID-19 (predominantly due to personnel resourcing constraints of the contractor), and personnel resourcing issues.

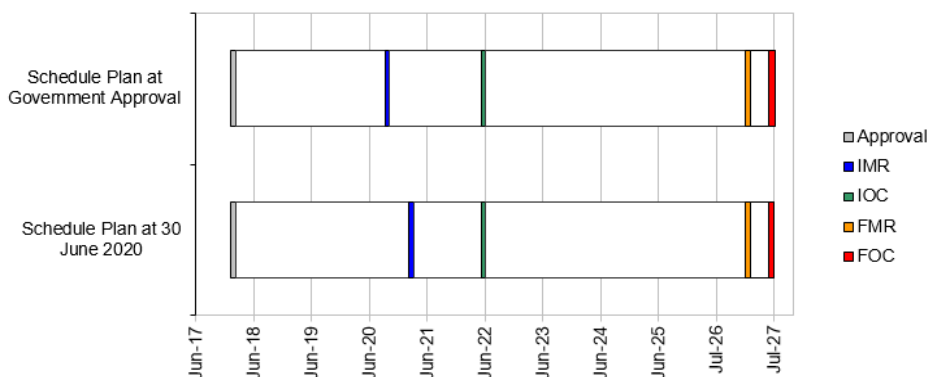
### 3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System / Platform Variant	Original Planned	Current Contracted	Achieved / Forecast	Variance (Months)	Notes
System Integration and Acceptance	Block I – Multi Purpose Vehicle	Oct 20	N/A	Oct 20		
	Block I – Reconnaissance	Oct 20	N/A	Feb 21	4	2
	Block II – Joint Fires and Surveillance	Oct 26	N/A	Sep 26	-1	
	Block II – Command and Control	Jun 26	N/A	Jun 26		
	Block II – Reconnaissance	Oct 26	N/A	Oct 26		
	Block II – Repair	Jun 26	N/A	Jun 26		
	Block II – Recovery	Mar 26	N/A	Mar 26		
<b>Notes</b>						
1	Dates specified are based on Acceptance of the final delivery for each variant.					
2	Block I – Reconnaissance delivery is delayed due to a combination of production and manufacturing delays in Europe and the impact of COVID-19 travel restrictions in both Europe and Australia.					

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

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Oct 2020	Mar 2021	5	1,3
Initial Operational Capability (IOC)	Jun 2022	Jun 2022	0	2,3
Final Materiel Release (FMR)	Jan 2027	Jan 2027	0	
Final Operational Capability (FOC)	Jun 2027	Jun 2027	0	
<b>Notes</b>				
1	The variance is due to a combination of production and manufacturing delays in Europe and the impact of COVID-19 travel restrictions in both Europe and Australia.			
2	IOC will be achieved through a combination of the delivery of Block I vehicles, and a period of operational test and evaluation.			
3	The dates listed do not align with Defence's Materiel Acquisition Agreement – Defence is in the process of updating the document to ensure alignment with Government documentation.			

Schedule Status at 30 June 2020

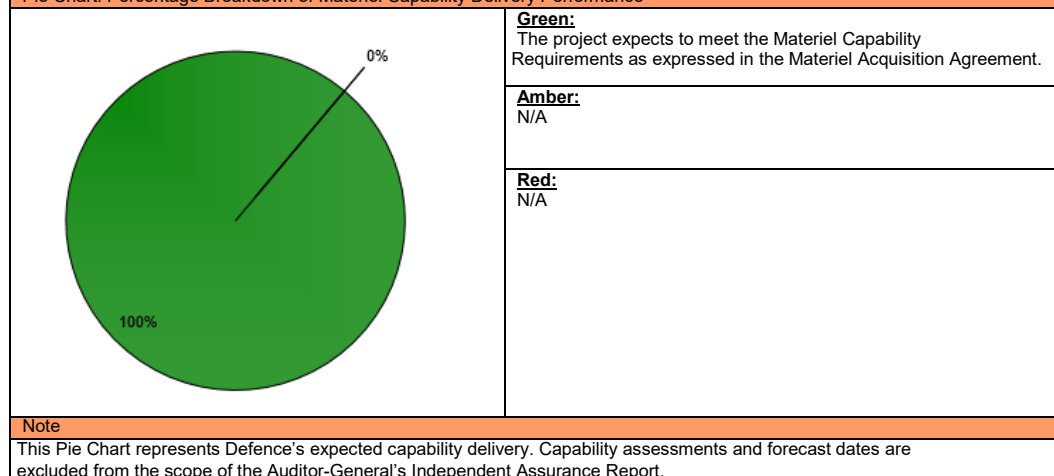


<b>Note</b>				
Forecast dates in Section 3 are excluded from the scope of the Auditor-General's Independent Assurance Report.				

## Section 4 – Materiel Capability Delivery Performance

### 4.1 Measures of Materiel Capability Delivery Performance

**Pie Chart: Percentage Breakdown of Materiel Capability Delivery Performance**



### 4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
IMR and IOC reflect the original Government approved milestones at Second Pass.		
Initial Materiel Release (IMR)	IMR is being met with Block I and will occur when: <ul style="list-style-type: none"> <li>21 Combat Reconnaissance Vehicle mission systems have been delivered to 7th Brigade, Brisbane; and initial contractor provided logistics support arrangements are in place including: user documentation, technical data, maintenance support, logistics instruction, engineering support, spares, and training systems.</li> </ul>	Not yet achieved
Initial Operational Capability (IOC)	IOC is being met with Block I and will occur when: <ul style="list-style-type: none"> <li>The initial scope of L400-2, including mission, support, and training systems, and facilities, if required, have been delivered to one Combat Brigade and support organisations and accepted into operational service.</li> </ul>	Not yet achieved
Final Materiel Release (FMR)	FMR will occur with final delivery of the Combat Reconnaissance Vehicle capability. It includes: <ul style="list-style-type: none"> <li>delivery of all vehicles, spares &amp; attrition and simulation training enablers for the Combat Reconnaissance Vehicles capability to all gaining units, and</li> <li>Logistics support arrangements, including: user documentation; technical data; maintenance support, logistics instruction, engineering support; spares; training systems; and facilities.</li> </ul>	Not yet achieved
Final Operational Capability (FOC)	FOC will occur when: <ul style="list-style-type: none"> <li>The full scope of L400-2, including mission, support and training systems, and facilities (if required), has been delivered to the three Combat Brigades and support organisations, and accepted into operational service.</li> <li>Support arrangements are finalised in accordance with the Integrated Logistics Support Plan.</li> <li>The three Armoured Cavalry Regiments are declared operationally ready by the Capability Manager (including training fleets, and Spares and Attrition stock vehicles).</li> </ul>	Not yet achieved

## Project Data Summary Sheets

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## Section 5 – Major Risks and Issues

### 5.1 Major Project Risks

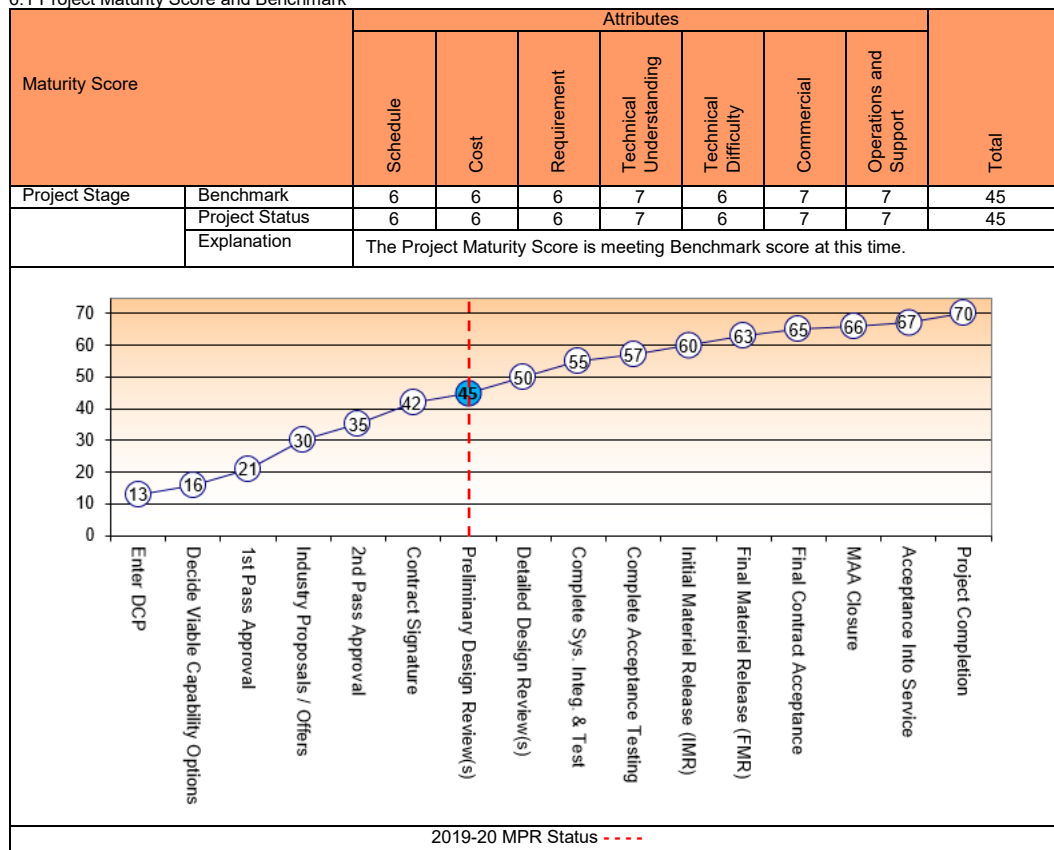
Identified Risks (risk identified by standard project risk management processes)	
Description	Remedial Action
<b>Failure of Boxer CRV to meet the contracted specifications</b> <p>There is a chance that the Boxer CRV may fail to meet the contracted minimum specifications leading to an impact on cost, schedule or capability shortfall. This risk area will be driven by Recovery and JFS Variant attributes; and verification and validation testing.</p>	<p>Block I Boxer CRV reliability and verification testing will provide early insight into the expected performance and capability of the Block II Boxer CRV.</p> <p>The Commonwealth is working closely with the contractor as part of the mandated system reviews and established working groups to ensure maturity of the vehicle design.</p> <p>The Commonwealth will monitor and provide input into the contractor's planned activities to minimise any impact to capability or performance.</p>
<b>Failure to meet scheduled delivery and operational milestones</b> <p>There is a chance that manufacture of Block II Boxer CRV is delayed, thereby impacting on FOC (Jun 2027). This will be affected by design or manufacturing delays leading to an impact on cost, schedule, performance and delivery. This risk area will be driven by Blast testing result; Gross Vehicle Mass development; and Anti-Tank Guided Missile integration.</p>	<p>The Commonwealth and the contractor are closely collaborating on design and capability specifications as part of the mandated system reviews and established working groups. The Commonwealth will monitor the contractor's planned activities to minimise any impact to schedule.</p>
<b>Failure to integrate LAND 200 systems onto the CRV</b> <p>There is a chance that the CRV capabilities will be affected by LAND 200 being unable to provide technical support or equipment within the required L400-2 timeframes leading to an impact on cost, schedule, performance and reputation.</p>	<p>The Commonwealth is establishing a Project Collaborative Agreement between L400-2 and L200 to ensure engagement between projects is optimised. The Project is also working closely with the contractor to ensure the impact of any delay in the provision of government-furnished equipment is minimised.</p>
Emergent Risks (risk not previously identified but has emerged during 2019–20)	
Description	Remedial Action
<b>RDA COVID-19 Impacts</b> <p>There is a risk that RDA will be unable to deliver against its contracted schedule due to the impacts of COVID-19.</p> <p>Potential impacts include reduced production capacity, supply chain delivery delays, lower levels of collaboration, possible staff absences or limitations, and potential disruption to program delivery. It may also lead to potential delays in the delivery of Block I vehicles and corresponding Milestones and potential delays to Block II Mandated System Reviews, delivery of vehicles and the corresponding Milestones.</p>	<p>Impact studies are currently being conducted by RDA with the Commonwealth awaiting initial results.</p>

### 5.2 Major Project Issues

Description	Remedial Action
<b>Delay in Production of Block I Boxer CRV</b> <p>Delays in manufacturing of Block I vehicles will impact on IMR (Oct 2020). Design and manufacturing delays will most likely impact Cost, Schedule, Performance and Delivery.</p>	<p>Strategies being implemented include: implementing quality assurance on the manufacturing line; confirming Government Furnished Equipment availability; the use of airfreight; more integration activities to be carried out in Australia; and a parallel testing and acceptance process.</p>
<b>C4I System Software and Equipment Availability</b> <p>CRV capabilities will be affected by Army and/or communications-related projects, System Project Offices (SPO) and original equipment manufacturers (OEM) being unable to provide equipment, software or technical support within L400-2 timeframes leading to an impact on Cost, Schedule, Performance and Reputation.</p>	<p>Ongoing stakeholder engagement with Army, C4I projects, SPOs and OEMs to closely manage the availability of equipment and technical information and support in accordance with L400-2 timeframes.</p>
<b>L400-2 Training System External Interfaces</b> <p>CRV Training System will be affected by undefined interfaces between the Training Management System (TMS), the Defence and Land Synthetic Environments and the Defence Learning Environment leading to impacts on Cost, Schedule, Performance, and Reputation.</p>	<p>Strategies being implemented include: identifying the appropriate owner of the TMS as a capability, including the support SPO; defining the TMS network architecture with the Chief Information Officer Group taking on design authority; and allocating contingency for a Battle Management System.</p> <p>The project is currently recruiting a network architect to develop the architecture, and raising the issue with Army Headquarters for direction and endorsement of the way forward.</p>
Note	
Major risks and issues in Section 5 are excluded from the scope of the Auditor-General's Independent Assurance Report.	

## Section 6 – Project Maturity

### 6.1 Project Maturity Score and Benchmark



## Section 7 – Lessons Learned

### 7.1 Key Lessons Learned

Description	Categories of Systemic Lessons
A formal After Action Review (AAR) was conducted by the project in order to develop lessons learned during the project that would be of use in particular to the L400-2 project, as well as other projects in CASG and Defence more widely. This AAR was completed by the Independent Advisor and made available to the Phase 2 and Phase 3 projects to assist them. A summary of the main lessons learned is presented below.	General
<b>Enhancing project team capability</b> – The project should be sufficiently resourced at each stage of the capability lifecycle. All members of the project team should be properly trained and prepared for their roles and have a good understanding of the project's scope, schedule and cost along with associated governance requirements.	Resourcing Governance
<b>Whole of capability focus</b> – The project should establish and maintain a 'whole of capability' focus in delivering the Boxer CRV, including management of all fundamental inputs to capability and commonality and alignment across the support and training systems to retain its effectiveness in rapidly changing threat and technology environments.	Requirements Management
<b>Whole of life approach</b> – When conducting market solicitation for the capability, the tender documentation should establish clear guidance on the level of maturity required initially as well as the level of innovation or developmental aspects the Commonwealth is prepared to accept. Requirements should be expressed in terms of mission or functional performance and should encourage tenderers to offer innovative solutions.	Requirements Management
<b>Project management discipline</b> – A Program Management Plan and Project Master Schedule are the means by which high performing projects are conducted. As such, they must be maintained as the basis for directing the L400-2 program, managing priorities and resources, and monitoring and reporting performance to the relevant stakeholders. A Risk Management Plan should inform a disciplined approach to identifying, recording, analysing and mitigating risks, issues as well as opportunities that may affect delivery of the capability.	Program Management Governance

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Description	Categories of Systemic Lessons
<b>Capability Manager and stakeholder engagement</b> are an essential part of the tender governance – arrangements should be established for regular participation of the 3-star Capability Manager and DEPEC CASG in senior governance arrangements. It is recommended that each major acquisition program invite participation from Contestability Division, Joint Force Design, Industry Division and Defence Science and Technology at all levels of the Tender Evaluation Organisation.	Governance
<b>Industry engagement</b> – Early engagement of 'Industry' (as one of the fundamental inputs to capability) is required to maximise Australian industry participation in delivering the capability. The requirements, guidance and parameters for industry involvement should be included in the tender documentation and facilitated industry engagement should be a standard part of any major acquisition project.	Requirements Management
<b>Tender requirements</b> – When conducting a tender, the RFT documentation should clearly identify which requirements are considered 'essential', 'important' and 'desirable' to the Commonwealth in order to guide the tenderers in developing proposed solutions. In addition, any Risk Mitigation Activity undertaken to differentiate between tendered solutions should look beyond the testing and evaluation requirements and consider other elements of the capability (including personnel training, repair and sustainment aspects).	Requirements Management
<b>Probity</b> – During tender evaluations, all staff involved in the project, including contracted workforce, must have a clear understanding of probity and all probity requirements in order to preserve the integrity of the tender process. Throughout the source selection and negotiation stages, any interaction between members of the project team and tenderers should be properly recorded to maintain transparency and ensure the Commonwealth is able to provide an appropriate response.	Resourcing

## Section 8 – Project Line Management

### 8.1 Project Line Management as at 30 June 2020

Position	Name
Division Head	MAJGEN David Coghlan
Branch Head	BRIG Greg McGlone
Project Director	COL Allan Hamley
Project Managers	Mr Duncan Moody Mr Nestor Zamora





## Project Data Summary Sheet<sup>155</sup>

Project Number	AIR 7000 Phase 2B
Project Name	MARITIME PATROL AND RESPONSE AIRCRAFT SYSTEM
First Year Reported in the MPR	2014-15
Capability Type	Replacement
Acquisition Type	MOTS
Capability Manager	Chief of Air Force
Government 1st Pass Approval	Jul 07
Government 2nd Pass Approval (or key Government pre-Second Pass Approval)	Feb 14
Budget at 2 <sup>nd</sup> Pass Approval (or key Government pre-Second Pass Approval)	\$3,577.7m
Total Approved Budget (Current)	\$5,362.4m
2019-20 Budget	\$299.8m
Project Stage	Initial Materiel Release
Complexity	ACAT II



P-8A Poseidon

Part 3. Project Data Summary Sheets

### Section 1 – Project Summary

#### 1.1 Project Description

AIR 7000 Phase 2B seeks to acquire the materiel elements of the Maritime Patrol and Response Aircraft (MPRA) weapon system, including a Through Life Support (TLS) system, as partial replacement of the AP-3C Orion aircraft.

Twelve P-8A Poseidon aircraft will be purchased for the Royal Australian Air Force (RAAF) through a Cooperative Program (CP) with the United States Navy (USN). The scope of the CP includes the Production, Sustainment and Follow-on Development (PSFD) of the United States Navy and RAAF P-8A Poseidon fleet.

#### 1.2 Current Status

##### Cost Performance

###### In-year

The project had an underspend of \$76.3m for this financial year, achieving a spend of \$223.5m at 30 June 2020 against a planned in-year budget of \$299.8m. The variation is due to delayed expenditure on some US Navy activities and the Mk54 torpedo Foreign Military Sales and lower than expected expenditure on facilities.

###### Project Financial Assurance Statement

As at 30 June 2020, AIR 7000 Phase 2B Project Office has reviewed the project's approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial contractual obligations of Defence for this project, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget remaining for the project to complete against the agreed scope.

###### Contingency Statement

The project has not applied contingency in the financial year.

##### Schedule Performance

In August 2014, an Advanced Acquisition Contract (AAC) was signed by the USN, on behalf of Australia, for the first four RAAF P-8A aircraft. The AAC for the second set of four P-8A aircraft was signed in June 2015. The AAC for the third set of four P-8A aircraft was signed in May 2016. The AAC allows the Prime Contractor, Boeing, to acquire long lead items in order to ensure that all required components are available on time for assembly of the P-8A aircraft. The USN placed the full aircraft production contract for the first four Australian P-8A aircraft with Boeing in August 2015. The contract for the second set of four aircraft, Lot 7, was placed in January 2016 and the third set of four aircraft, Lot 8, was placed in March 2017 (total of 12 aircraft).

The third set of four aircraft was approved by government in February 2016 with a budget of \$1,295.4m. The additional aircraft and budget has increased the AIR 7000 Phase 2B project scope. As a result of the increased scope, an update to the Materiel Acquisition Agreement (MAA) and Schedule has occurred.

The Royal Australian Air Force (RAAF) accepted the first aircraft in October 2016 ahead of schedule. Since this delivery, positive

#### 155 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 Assurance Report by the Auditor-General in Part 3 of this report.

schedule performance has continued, with **all twelve** aircraft accepted as at **December 2019**. Aircrew and maintenance training systems were delivered in time to support commencement of in-country training by 92 Wing at RAAF Base Edinburgh from July 2018. **Initial Operational Capability (IOC) was declared by Air Force in January 2018**. Final Materiel Release (FMR) and Final Operational Capability (FOC) dates **remain at June 2022**.

#### **Materiel Capability Delivery Performance**

The P-8A Poseidon is being developed under a spiral development program by the USN. The spiral development consists of an evolution of increments, each of which has a number of Engineering Change Proposals (ECP) that define the maturing configurations of the increment. The variant of the first P-8A acquired under the scope of Phase 2B is defined as Increment 2, ECP 2.

AIR 7000 Phase 2C proposes to be the first major upgrade of the aircraft purchased under AIR 7000 Phase 2B (predominantly a Mission System upgrade delivered in the later ECPs of Increment 3) subject to future government approval.

The USN declared Initial Operational Capability (IOC) for the Increment 2, ECP 1 aircraft in October 2014, and declared IOC for the Increment 2 ECP 2 aircraft in August 2016. Through the CP, Australia has had significant insight into, and influence on Search and Rescue Kit and Harpoon 1G integration, the work being undertaken on the Increment 2, ECP 2 configuration, and has high confidence that the aircraft (and supporting systems) will provide the capability required by the MAA.

**The Initial Materiel Release milestone was achieved in November 2017, enabling Air Force to declare IOC in January 2018.**

The Materiel Release 2 milestone was achieved in January 2019. This milestone relates predominantly to delivery of the necessary capability elements for 92WG to commence training of aircrew and maintenance personnel in Australia, along with provision of spares and explosive ordnance elements. Air Force subsequently declared achievement of the Operational Capability 2 milestone in February 2019.

**CASG achieved the Materiel Release 3 (MR3) milestone requirements in December 2019 as scheduled, with the exception of the Objective Search and Rescue (SAR) store capability (UNIPAC III) which is being managed as a caveat. The Capability Manager representative is expected to agree to the declaration of Materiel Release 3 in September 2020. This milestone relates to delivery of the final Mobile Tactical Operations Centre (MTOC) (totalling three), four additional P-8A aircraft (totalling eight), additional spares, support equipment and explosive ordnance, final publications and the Objective Search and Rescue (SAR) store capability.**

#### **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 AIR 7000 Phase 2B is an ACAT II project, seeking to acquire the P-8A Poseidon **Maritime Patrol and Response Aircraft (MPRA)** capability, as partial replacement for the AP-3C Orion capability, under a CP with the USN. IOC was announced in January 2018, supporting the **drawdown** of the AP-3C Orion **fleet in the maritime patrol role**.

In December 2011, Government approval was provided to participate in the CP for development of P-8A aircraft and, in March 2012, the Project entered into an initial 10-year Memorandum of Understanding (MoU) with the USN for P-8A PSFD. The MoU defines Australia's contribution towards the joint costs for PSFD, and the separate funding of Australian-unique deliverables and effort.

The Increment 3 Project Arrangement was signed in September 2012 to enable Australia to participate in the incremental upgrade to Phase 2B. This upgrade will be incorporated under AIR 7000 Phase 2C.

In February 2014, Government Second Pass Approval was for the Project to acquire eight P-8A Poseidon aircraft, along with associated support and training systems. The Government approved the acquisition of an additional four (4) aircraft in February 2016.

The Project Office issues Procurement Requests (PRs) to advise the CP of Australia's intent to acquire materiel through the CP. After an appropriate scope, schedule and cost have been advised by the CP, the Project Office issues a Letter of Authority (LOA) which provides Australia's financial commitment for the acquisition. The Project formally submitted its first PR through the CP in June 2014, which covered aircraft, aircrew training devices, aircraft spares, aircraft support and test equipment, transition training and other support elements.

On 4 September 2014, Defence signed a LOA authorising the USN to procure Australian P-8A initial aircraft spares.

In May 2015, the USN signed the contract for Australia's P-8A Aircrew Training Devices to be delivered in 2017-18.

Sustainment and in-service support will provide opportunities for Australian Industry involvement. Further opportunities exist for Australian Industry in facilities and infrastructure development.

In accordance with the approved acquisition strategy, opportunities for Australian Industry participation in the broader USN P-8A Global program will exist on a competitive contracting basis throughout the life-cycle of the P-8A. Opportunities include component manufacture, component repair, and research and design services.

AIR 7000 Phase 2B also seeks to generate Australian industry participation in the acquisition, sustainment and follow-on development phases of the program through the Australian Industry Capability and Boeing Global Supply Chain.

#### **Uniqueness**

The RAAF P-8A aircraft will be identical to the USN P-8A aircraft, except for minor configuration differences due to national requirements (such as different aircraft marking schemes). Other support elements, such as training devices and spares, will also be kept as common as technically possible.

AIR 7000 Phase 2B is acquiring, and sustaining, the P-8A capability through a Government to Government CP with the USN. This arrangement is distinctly different from the traditional Foreign Military Sales (FMS) or Direct Commercial Sales (DCS) arrangements.

The benefits of a CP include significantly enhanced insight and influence over the development of the weapon system, better awareness and control of project costs drivers and risks, better access to technical and sustainment data, and access to the USN wholesale spares warehouse.

There are 16 Commonwealth personnel embedded in the USN Program organisations to provide input, insight and influence across the P8 program. These embedded team members are referred to as Cooperative Program Personnel (CPP).

## **Project Data Summary Sheets**

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**Major Risks and Issues**

The Project Office has retired a previously reported High Risk associated with the Mk 54 Torpedo delivery following receipt in October 2019, whilst the High Risk associated with a delay to the delivery of the UNIPAC III Search and Rescue kit by the end of 2019 has realised. The Project Office has agreed a revised delivery date with Air Force and this is planned to be managed as a caveat to MR3.

MR2 was declared to Air Force with minor spares (Fly Away Kit) deficiencies and an outstanding qualification requirement for the Operational Flight Trainer (pilot simulator). Neither of these deficiencies represented an operational impact, resulting in Air Force declaring OC2 in February 2019. The Project Office has largely remediated the minor spares (Fly Away Kit) deficiencies, with delivery of remaining spares to be managed with the US Navy as they become available. The outstanding qualification requirement for the Operational Flight Trainer (pilot simulator) continues to be managed by the Project Office in conjunction with the US Navy as part of the jointly-managed simulator upgrade program.

MR3 was declared to Air Force with three deficiencies: permanent installation of one MTOC at RAAF Edinburgh, spares and support equipment to support the allocated Rate of Effort and delivery of the Objective Search and Rescue Store. Further details are provided in Section 5.2.

All other previously reported major risks and issues have been either retired, downgraded or transferred to sustainment to manage.

**Other Current Related Projects/Phases**

Project AIR 7000 Phase 1B received Second Pass approval in June 2018 to acquire a High Altitude Long Endurance, Remotely Piloted Aircraft System for patrol and surveillance purposes. The selected aircraft was the MQ-4C Triton platform, procured through a Cooperative Program with the United States Navy, similar to the P-8A acquisition. The Triton forms a critical aspect of the 'Family of Systems' approach, to replace the AP-3C Orion Capability. The Australian Government announced the investment decision through a joint media release statement on 26 June 18.

**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
	<b>Project Budget</b>		
Nov 07	Government First Pass Approval	144.1	1
Jul 10	Real Variation - Real Cost Decrease	(21.7)	2
Dec 11	Real Variation - Transfer	(38.0)	3
Apr 12	Government Intermediate Consideration	83.5	4
Feb 14	Government Second Pass Approval	3,409.8	5
	<b>Total at Second Pass Approval</b>	<b>3,577.7</b>	
Mar 16	Real Variation - Scope	1,295.4	6
Jun 18	Real Variation - Transfer	1.0	6
Jun 20	Real Variation - Real Cost Decrease	(20.3)	7
		<b>1,276.1</b>	
Jul 10	Price Indexation	20.5	8
Jun 20	Exchange Variation	488.1	
	<b>Total Budget</b>	<b>5,362.4</b>	
	<b>Project Expenditure</b>		
Prior to Jun 19	Contract Expenditure - Aircraft Acquisition Payments - Lot 6	(775.3)	
	Contract Expenditure - Aircraft Acquisition Payments - Lot 7	(784.2)	
	Contract Expenditure - Aircraft Acquisition Payments - Lot 8	(595.0)	
	Contract Expenditure - Aircrew Training System Contract	(358.4)	
	Contract Expenditure - Aircraft Government Furnished Equipment	(186.4)	
	Contract Expenditure - Aircraft Retail Spares	(122.2)	
	Contract Expenditure - PSFD MoU Contributions	(121.3)	
	Contract Expenditure - Increment 1 Contribution	(66.0)	
	Other Contract Payments / Internal Expenses	(894.0)	9
	Other adjustments to cash reporting	2.4	
		<b>(3,900.4)</b>	
FY to Jun 20	Contract Expenditure - Aircraft Acquisition Payments - Lot 8	(147.7)	
	Contract Expenditure - Aircrew Training Systems Contract	(4.5)	
	Contract Expenditure - PSFD MoU Contributions	(13.1)	
	Other Contract Payments / Internal Expenses	(58.2)	10
		<b>(223.5)</b>	
	<b>Total Expenditure</b>	<b>(4,123.9)</b>	
Jun 20	Remaining Budget	<b>1,238.5</b>	

Notes	
1	Government First Pass Approval to initiate the Project and progress the project to Intermediate Consideration. At First Pass, AIR 7000 entered the Spiral 1 MoU with the USN for development of the P-8A weapon system.
2	Hand back of contingency funding due to retirement of specific Increment 1 MoU risks.
3	Reallocation of funding to Defence Support and Reform Group to develop AIR 7000 Phase 2B facilities requirements.
4	Government Intermediate Consideration Funding Approval required to progress the project to 2nd Pass Government approval. Includes costs of project planning documentation development and contractor project support services.
5	Government Second Pass Approval to fund the acquisition of eight P-8A aircraft, and associated support systems and sustainment arrangements.
6	Government Second Pass Approval to fund the acquisition of an additional four P-8A aircraft and associated support systems. Whilst funding approval was provided under AIR7000 Phase 2D, funds have been merged with AIR7000 Phase 2B for administration and reporting purposes as it relates to the delivery of one capability. \$1m was transferred from DST Group due to surplus funds in FY2017-18.
7	<b>The Project was subject to a Real Cost Decrease by the Capability Manager as a result of identified savings. This reduction has not impacted delivered capability or scope of the project.</b>
8	Until July 2010, indexation was applied to project budgets on a periodic basis. The cumulative impact of this approach was \$17.4m. In addition to this amount, the impact on the project budget as a result of out-turning was a further \$3.1m having been applied to the remaining life of the project.
9	Other expenditure to <b>30 June 2019</b> was comprised of Maintenance Training Device scoping and acquisition costs of <b>\$113.7m</b> , Increment 3 contributions of \$84.1m, Wholesale Spares Pool of \$39.8m, Operational Load Management \$39m, Aircrew Maintenance and Training costs of \$36.6m, MK 54 acquisition costs of \$36.6m, Sonobuoys acquisition cost of <b>\$41.9m</b> , Commonwealth Project Personnel (CPP) expenses of \$22m, Mission Support System (MSS) of \$21.2m, DIRCM spares of \$20.3m, Tactical Operational Centre/Mobile Tactical Operational Centre (MTOC) scoping and acquisition costs of \$19.5m, Engine Spares \$16.8m, Support and Test Equipment (S&TE) acquisition costs of <b>\$31.7m</b> , Search and Rescue (SAR) Kit \$11.8m, CIOG Single Integration Environment of \$13.6m, ICT Co-operative Solution payment of \$4.9m, Field Service Representative (FSR) payments of \$4.6m, Training System Support Services/Spares of \$20.7m, Sustainment Transition \$29.2m, SNS Reliability Retrofit <b>\$28.9m</b> , Spare Engine \$23.4m, Strategic Support Partnership Contract (SSPC) <b>and Major Service Provider (MSP) \$27.5m</b> , Air to Air Refuelling <b>\$19.9m</b> , Transportation Training Systems \$9.9m, Training Systems Support \$4.6m, Ordnance <b>\$11.7m</b> , <b>Objective Search and Rescue (SAR) store Integration Services \$0.8m</b> , <b>Objective SAR Kit development and delivery \$1.9m</b> , PSFD MoU Inc 3 Payment <b>\$14.2m</b> , CIOG ICT integration <b>\$7.5m</b> , and other operating expenditure not attributable to the listed major contracts of <b>\$135.7m</b> .
10	Other expenditure to <b>30 June 2020</b> was comprised of <b>Support and Test Equipment (S&amp;TE) acquisition costs of \$23.2m</b> , <b>MK 54 acquisition costs of \$14.7m</b> , <b>Major Service Provider (MSP) expenses of \$5.2m</b> , CIOG ICT integration <b>\$3.7m</b> other operating expenditure not attributable to the listed major contracts of <b>\$11.3m</b> .

## 2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
360.3	301.6	299.8	PBS – PAES: <b>The variation reflects revised financial commitments to the cooperative program for aircraft and weapon payments. The variation is primarily due to the earlier programming of 2019-20 aircraft payment funding into 2018-19.</b> PAES: <b>Minor variation.</b>
Variance \$m	(58.7)	(1.8)	Total Variance (\$m): <b>(60.5)</b>
Variance %	(16.3)	(0.6)	Total Variance (%): <b>(16.8)</b>

## 2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(18.9)	Australian Industry	<b>The project underspend of \$76.3m was due to delayed expenditure on some US Navy activities and the Mk54 torpedo Foreign Military Sales and lower than expected expenditure on facilities.</b>
			Foreign Industry	
			Early Processes	
		(57.4)	Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
299.8	223.5	(76.3)	<b>Total Variance</b>	
		(25.5)	<b>% Variance</b>	

## Project Data Summary Sheets

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## 2.3 Details of Project Major Contracts

Contractor		Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
			Signature \$m	30 Jun 20 \$m			
PSFD MoU - Contributions (US Government)		Mar 12	130.4	145.2	Cost Ceiling (Capped)	MoU	1,8
Aircraft Government Furnished Equipment (GFE) (US Government)		Apr 14	142.9	233.4	Variable	MoU	2,7,8
AAC and Aircraft Production Lot 6 (US Government)		Aug 14	159.0	775.3	Variable	MoU	3,7,8
Retail Aircraft Spares (US Government)		Sep 14	122.1	122.2	Variable	MoU	4,7,8
Aircrew Training Systems (US Government)		Dec 14	275.4	358.4	Variable	MoU	5,7,8
AAC and Aircraft Production Lot 7 (US Government)		Jun 15	182.5	784.3	Variable	MoU	6,7,8
AAC and Aircraft Production Lot 8 (US Government)		May 16	139.0	742.7	Variable	MoU	8,9
Notes							
1	PSFD MoU shared contributions are limited to a cost ceiling, which can only be changed upon mutual written consent of the Participants. Australia is responsible for paying a proportion of the total costs based on the relative number of Australian aircraft in the overall fleet.						
2	Aircraft GFE to be procured via contract arrangements between the USN and various suppliers for Lot 6, Lot 7 and Lot 8 aircraft. Price represents the total value of contracts expected to be awarded and for which Section 23 Commitment Approval has been obtained. The USN are procuring the GFE on behalf of Australia as part of a consolidated US Government purchase.						
3	Lot 6 Aircraft AAC – signature allowed the prime contractor, Boeing, to procure long-lead aircraft components prior to entering into fully defined contract arrangement. Lot 6 production contract for acquisition of the first four aircraft was signed on 21 August 2015.						
4	Retail aircraft spares requirements to be procured via US Naval Supply Systems Command (NAVSUP) contracts, from USN inventory or via other US Government agency arrangements. The majority of retail spares are to be procured via NAVSUP.						
5	Aircrew Training Devices - signature allowed the prime contractor, Boeing, to acquire the required long-lead parts, commence engineering and program management activities in support of Australian P-8A training device production. A fully defined contract was signed May 2015.						
6	Lot 7 Aircraft AAC – signature allowed the prime contractor, Boeing, to procure long-lead aircraft components prior to entering into fully defined contract arrangement. Lot 7 production contract for acquisition of the second set of four aircraft was signed in January 2016.						
7	'Contract signature' dates in this table are based on the date each LoA was issued by AIR 7000 Phase 2 project office. LoAs are issued by the project formally authorising the commitment and/or obligation of funds for contract execution or efforts to satisfy Australian-unique requirements.						
8	Contract value as at 30 June 2020 is based on actual expenditure to 30 June 2020 and remaining commitment at current budget exchange rates.						
9	Lot 8 Aircraft AAC – signature allowed the prime contractor, Boeing, to procure long-lead aircraft components prior to entering into fully defined contract arrangement. Lot 8 production contract for acquisition of the third set of four aircraft was signed in March 2017.						
Contractor		Contracted Quantities as at		Scope		Notes	
		Signature	30 Jun 20				
PSFD MoU - Contributions (US Government)		N/A	N/A	Australia's contribution to shared costs from 2012-13 to 2021-22 based on the original purchase of eight aircraft. Includes contribution to production, sustainment and follow-on development for common efforts, and project overhead and administration costs.		1	
Aircraft Government Furnished Equipment (GFE) (US Government)		Various	Various	Items to be procured in support of production of Lot 6 (aircraft 1-4), Lot 7 (aircraft 5-8) and Lot 8 (aircraft 9-12).		2	
AAC Lot 6 (US Government)		Various	Various	Four Lot 6 aircraft and long-lead P-8A aircraft components.		3	
Retail Aircraft Spares (US Government)		Various	Various	Initial spares buy for the first eight aircraft.			
Aircrew Training Systems (US Government)		Various	Various	Training Systems Support Centre, Weapons Tactics Trainers, Part Task Trainer, Operational Flight Trainers, Mission Systems Desktop Trainers and Training Support.			
AAC Lot 7 (US Government)		Various	Various	Four Lot 7 aircraft and long-lead P-8A aircraft components.		4	
AAC Lot 8 (US Government)		Various	Various	Four Lot 8 aircraft and long-lead P-8A aircraft components.		5	

Major equipment accepted and quantities to 30 Jun 20						
To date, <b>all twelve</b> aircraft and <b>all three</b> Mobile Tactical Operations Centres (MTOCs) have been delivered.						
Notes						
1	No equipment delivered as part of this MoU.					
2	GFE delivery will be to prime contractor for aircraft production.					
3	The contract for acquisition of the first four aircraft was signed in August 2015, with all four aircraft being delivered.					
4	The contract for acquisition of the second <b>set of</b> four aircraft was signed in January 2016, with all four aircraft being delivered.					
5	The contract for the acquisition of the third set of four aircraft was signed in March 2017, <b>with all four aircraft delivered, and the final aircraft delivered in December 2019.</b>					

### Section 3 – Schedule Performance

#### 3.1 Design Review Progress

Review	Major System / Platform Variant	Original Planned	Current Contracted	Achieved / Forecast	Variance (Months)	Notes
Component Advance Development	Multi-Mission Maritime Aircraft (subsequently called the P-8A Poseidon)	N/A	N/A	2002	N/A	1
System Design Development (SDD) - Milestone B	P-8A SDD	May 04	May 04	May 04	0	2
Design Readiness Review	P-8A SDD	Jul 07	Aug 07	Aug 07	1	
Milestone C	P-8A SDD	May 10	Aug 10	Aug 10	3	3
FRP Decision	P-8A Increment 2	Apr 13	Dec 13	Jan 14	9	4,5
Notes						
1	Component Advance Development was a competitive award to multiple contractors to define alternative Multi Mission Aircraft concept system architectures and evaluate associated risks and proposed mitigations.					
2	SDD phase was used to design, develop and test the P-8A system.					
3	Milestone C represents Low Rate Initial Production (LRIP) Approval and entry into the Production and Deployment Phase.					
4	US Defense Acquisition Board approved the deferral of the Full Rate Production (FRP) decision from the original planned to allow for completion of the testing and subsequent reporting as well as adding an additional LRIP (Lot IV).					
5	AIR 7000 Phase 2B relies on the Design Review processes of the USN.					

#### 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	Fleet Release 30 (Increment 2 ECP 1)	Apr 14	Dec 14	Dec 14	8	1
	Fleet Release 40 (Increment 2 ECP 2)	Aug 15	Aug 16	Aug 16	12	1,2
	Fleet Release 46 (Increment 2 ECP 3)	Apr 17	Oct 17	Nov 17	7	1,3
Acceptance	Accept and deliver Lot 6 Aircraft (1-4)	Nov 16 - Sep 17	Nov 16 - Aug 17	Oct 16 - Jul 17	(2)	4,7
	Accept and deliver Lot 7 Aircraft (5-8)	Dec 17 - Sep 18	Dec 17 - Aug 18	Oct 17 - Jun 19	10	5,7
	Accept and deliver Lot 8 Aircraft (9-12)	Aug 19 - Feb 20	Aug 19 - Feb 20	Aug 19 - <b>Dec 19</b>	(2)	6,7
	MTOC and two Deployable MTOCs	Sep 16 - Aug 18	Nov 16 - Dec 19	Feb 17 - <b>Jul 19</b>	11	8
	Training System	Jan 18 - Mar 18	Mar 18 - Jun 18	Mar 18 - Jul 18	4	9
Notes						
1	Fleet Releases are the final configurations for the incremental builds of the P-8A Weapon System. Increment 2 is being delivered through a number of smaller Engineering Change Proposals. Variance from original planned dates are due to changes in the Boeing / USN schedule.					
2	Due to data disclosure issues FR 40 was updated to 40.1 and finalised in November 2016.					
3	Fleet Release 50 was re-titled Fleet Release 46 to align with the management of the Lot 8 production contract. The capabilities planned were unchanged as the change was solely based on nomenclature. The release of this variant was delayed by seven months due to developmental issues in the new capabilities to be incorporated.					
4	Australian Lot 6 aircraft were delivered in October 2016, February 2017, April 2017, and July 2017.					
5	Australian Lot 7 aircraft were delivered in October 2017, January 2018, May 2018, and June 2019.					
6	Australian Lot 8 aircraft <b>were delivered</b> in August 2019, September 2019, October 2019, and <b>December 2019.</b>					
7	Australia adopted a model of Recognition of Prior Acceptance for Aircraft certification.					
8	Variance is due to an additional Mobile Tactical Operations Centre (MTOC 32) being added to project scope <b>as part of the February 2016 Government Approval for the purchase of 4 additional aircraft. MTOC 32 was forecast for delivery in December 2019 however was accepted ahead of schedule in July 2019.</b>					
9	Variance from original planned date is due to the inability of the Original Equipment Manufacturer (OEM) to deliver the full Training System as per the contract. All training devices <b>were</b> delivered prior to the commencement of the first conversion training courses.					

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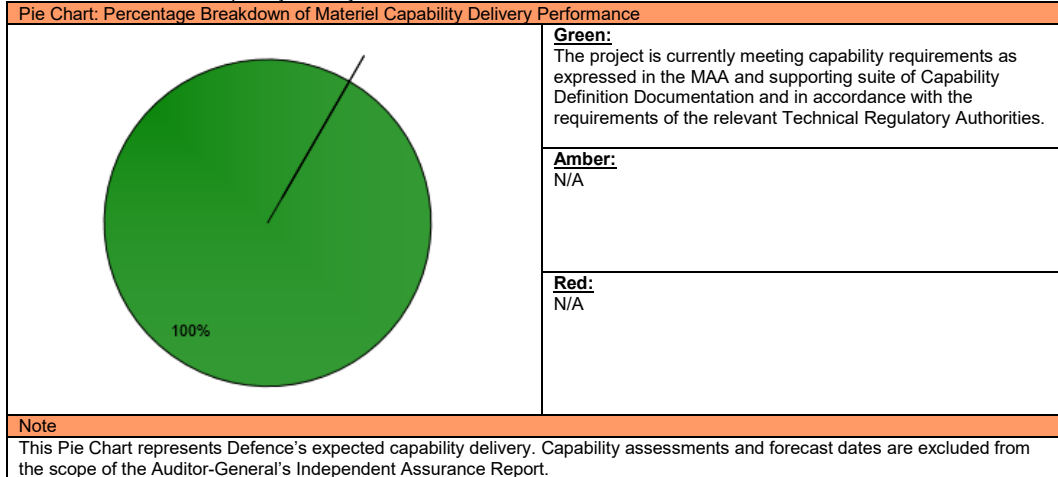


### 3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Materiel Release 1 (MR1)	Jan 17	May 17	4	1,2
In Service Date (ISD)	Nov 16	May 17	6	1
Initial Materiel Release (IMR)	Jan 18	Nov 17	(2)	3
Initial Operational Capability (IOC)	Feb 18	Jan 18	(1)	3
Materiel Release 2 (MR2)	Dec 18	Jan 19	1	4
Operational Capability 2 (OC2)	Jan 19	Feb 19	1	6
Materiel Release 3 (MR3)	Dec 19	Dec 19	0	7,8
Final Materiel Release (FMR)	Oct 19	Jun 22	32	5
Final Operational Capability (FOC)	Jan 20	Jun 22	29	5
Notes				
1	Variance due to the delay in accepting the first MTOC actually occurring in February 2017.			
2	When declaring MR1, CASG acknowledged the Threshold Search and Rescue Store capability would not be delivered until IMR. This was achieved, at the completion of Operational Test & Evaluation (OT&E) activities late in November 2017.			
3	Due to positive schedule performance across all areas of the project all requirements for IMR were delivered prior to forecast date, enabling Air Force to claim IOC on schedule.			
4	Variance of one month is due to time taken for CASG and Air Force to perform analysis of minor MR2 deficiencies. This was necessary to confirm that P-8 capability would not be affected by these minor deficiencies.			
5	FMR & FOC dates <b>were revised following February 2016 Government Approval</b> of the purchase of four additional aircraft.			
6	Air Force declared OC2 despite two minor MR2 deficiencies relating to spares (Fly Away Kit) and Operational Flight Trainer (pilot simulator) qualification. <b>The Project Office has largely remediated the minor spares (Fly Away Kit) deficiencies, with delivery of remaining spares to be managed with the US Navy as they become available. The outstanding qualification requirement for the Operational Flight Trainer (pilot simulator) continues to be managed by the Project Office in conjunction with the US Navy as part of the jointly-managed simulator upgrade program. The issue has been retired and will no longer be reported. A new medium Risk has been raised to reflect the current assessment and managed resolution of the MR2 deficiency relating to OFT qualification.</b>			
7	<b>The Capability Manager representative is expected to agree to the declaration of Materiel Release 3 in September 2020.</b>			
8	<b>UNIPAC III could not be delivered by Dec 2019 due to a transportation accident in the US. The MR3 declaration contains a caveat against UNIPAC III delivery as a result. Details are provided in section 5.2 of the PDSS.</b>			
9	<b>The 2018-19 MPR included reference to the OC3 milestone in this section. The OC3 milestone was generated following the increase in project scope of four aircraft to a total of 12 aircraft. While CASG retained the equivalent MR3 milestone, Air Force has since rolled the scope of OC3 into the FOC milestone. The OC3 milestone will no longer be disclosed in the PDSS.</b>			
<b>Schedule Status at 30 June 2020</b>				
<p>The chart displays two horizontal bars representing project schedules. The top bar, 'Schedule Plan at Government Approval', shows milestones completed by mid-2017. The bottom bar, 'Schedule Plan at 30 June 2020', shows a significant delay, with most milestones not completed until mid-2022. The legend indicates: Approval (grey), IMR (blue), IOC (green), FMR (orange), and FOC (red).</p>				
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



### 4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	<ul style="list-style-type: none"> <li>4 x P-8A aircraft delivered to RAAF Edinburgh (EDN).</li> <li>2 x MTOCs (previously delivered) in the following configurations: <ul style="list-style-type: none"> <li>1 x MTOC installed within Main Operating Base (MOB) temporary facility (not readily deployable).</li> <li>1 x MTOC temporarily installed at Forward Operating Base (FOB) either within interim fixed facility or deployable shelters.</li> </ul> </li> <li>7 x trained aircrews.</li> <li>3 x trained Mission Support System teams.</li> <li>7 x trained maintenance teams.</li> <li>Delivery of spares, Ground Support Equipment (GSE) and Support and Test Equipment (S&amp;TE) to support MOB and FOB operations.</li> <li>Publications to support supply, maintenance and operations for IOC.</li> <li>Network Connectivity between all delivered P-8A aircraft and Australian Single Information Environment.</li> <li>Delivery of Threshold Search and Rescue (SAR) store capability.</li> </ul> <p>IMR was achieved in November 2017.</p>	Achieved
Initial Operational Capability (IOC)	<ul style="list-style-type: none"> <li>Delivery of 4 P-8A aircraft able to deliver up to 1,000hrs Flying Rate of Effort;</li> <li>Minimum of 4 mission capable crews in MISR missions</li> <li>Trained and authorised maintenance and support staff to conduct MOB and FOB (Darwin) operations</li> <li>Delivery of spares, GSE and S&amp;TE to support MOB and FOB (Darwin) operations</li> <li>Delivery of 2 MTOCs: MOB and FOB (Darwin) with Single Information Environment (SIE) interface</li> <li>Established training arrangements in place to conduct ongoing transition, conversion and sustainment training</li> <li>Completion of Initial Operational Test &amp; Evaluation (IOT&amp;E)</li> <li>Award of Australian Military Type Certificate (AMTC) and Service Release</li> </ul> <p>IOC achieved in January 2018.</p>	Achieved

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Final Materiel Release (FMR)	<ul style="list-style-type: none"> <li>12 x P-8A aircraft delivered to EDN.</li> <li>All spares, GSE and S&amp;TE to support the additional Rate of Effort (6,600 hours) at both MOB and FOB.</li> <li>One MTOC to be semi-permanently installed and operational in Darwin, totalling 3 MTOCs delivered and installed.</li> <li>Three Media Fly Away Kits delivered and interfaced with SIE sufficiently to allow organic deployment to non-MTOC supported bases.</li> </ul> <p>FMR is expected to be achieved in June 2022.</p>	Not yet achieved
Final Operational Capability (FOC)	<ul style="list-style-type: none"> <li>12 x P-8A aircraft</li> <li>3 x Fly Away Kit MTOC with SIE interface</li> <li>Support systems in place to enable the delivery of the full 6,600hrs of annual Flying Rate of Effort</li> <li>Additional spares to support 6,600hrs annual Flying Rate of Effort</li> </ul> <p>FOC is expected to be achieved in June 2022.</p>	Not yet achieved
Note		

## Section 5 – Major Risks and Issues

### 5.1 Major Project Risks

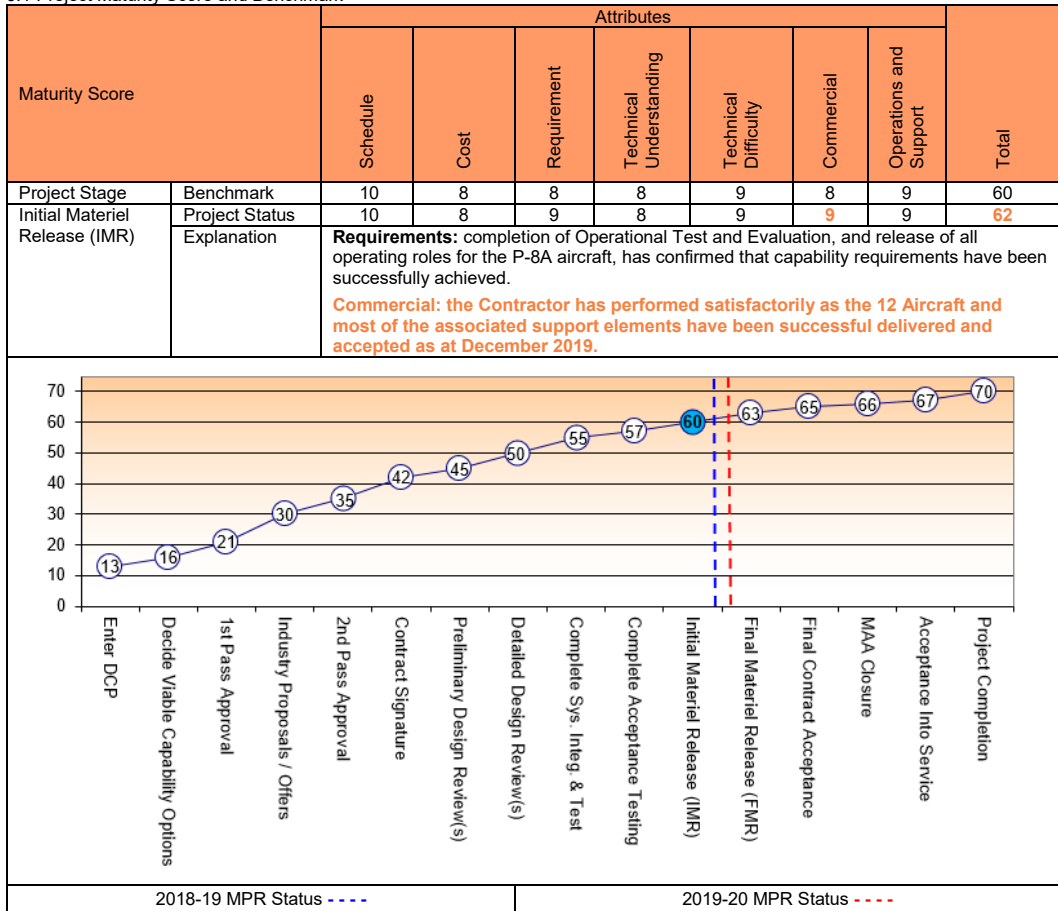
Identified Risks (risk identified by standard project risk management processes)	
Description	Remedial Action
The Project identified schedule risks associated with the Mk 54 torpedo.	<ul style="list-style-type: none"> <li>The balance of Mk54 torpedos arrived in Australia on 31 Oct 2019. The risk has been retired and will no longer be reported.</li> </ul>
The Project identified schedule risks associated with the UNIPAC III (objective) Search and Rescue Kit.	<ul style="list-style-type: none"> <li>This risk realised following a UNIPAC III transportation accident in the US. As a result, sufficient items could not be delivered in time to meet the MR3 milestone in Dec 2019.</li> <li>Sufficient legacy kits (UNIPAC II) remain available to provide the required Search and Rescue capability to Air Force until delivery of the UNIPAC III kits in Q1 2021.</li> <li>Air Force has acknowledged the delay of UNIPAC III delivery to Q1 2021.</li> <li>The risk has been retired and will no longer be reported; however, a new medium risk has been raised to manage the revised expected delivery of UNIPAC III.</li> </ul>
Emergent Risks (risk not previously identified but has emerged during 2019-20)	
Description	Remedial Action
N/A	N/A

### 5.2 Major Project Issues

Description	Remedial Action
<p>The following MR3 deficiencies were declared by the Project:</p> <ul style="list-style-type: none"> <li>Permanent installation of one MTOC at RAAF Edinburgh due to delays with E&amp;IG delivery of facilities. This resulted in a minor, but manageable, capability impact.</li> <li>Delivery of all spares and support equipment to support the allocated Rate of Effort. This was partially achieved (80% of spares delivered), but with some risk to aircraft availability from the shortfall.</li> <li>Delivery of Objective Search and Rescue store capability due to a transportation accident in the US.</li> </ul>	<ul style="list-style-type: none"> <li>The deficiency regarding the MTOC is anticipated to be resolved in August 2020, following acceptance of the required facility and successful installation of the MTOC.</li> <li>While a number of spares shortages are shared with the US Navy, the Project is working to review the spares requirements and supply chain improvements, with resolution expected by FOC.</li> <li>Delivery of this capability is now forecast for Q1 2021. Sufficient UNIPAC II kits remain available to provide the required capability to Air Force.</li> </ul>
<p>MR2 Fly Away Kit deficiency: The global supply chain for P-8A sustainment is still being refined, resulting in a global shortage of a number of spare parts and GSE.</p>	<ul style="list-style-type: none"> <li>Minor deficiencies against the MR2 spares requirement are being actioned by the P-8 Joint Program Office in the US. These minor deficiencies do not represent an operational concern and are expected to be resolved by FOC.</li> </ul>
Note	
Major risks and issues in Section 5 are excluded from the scope of the Auditor-General's Independent Assurance Report.	

## Section 6 – Project Maturity

### 6.1 Project Maturity Score and Benchmark



## Section 7 – Lessons Learned

### 7.1 Key Lessons Learned

Project Lesson	Categories of Systemic Lessons
The signed PSFD MoU does not provide explicit detail on those activities which will be undertaken in the interests of both nations by the CP (paid for by shared funding) and those which are Australian unique (paid for in addition to the shared financial contribution). Clearer definition of this division in the MoU would have avoided the post-signature negotiation required to resolve this ambiguity.	Contract Management
The CP model has allowed Australia to work closely with the USN in the future requirements definition and planning for the P-8A. This has been to the significant mutual benefit of both the USN and Australia.	Requirements Management
Precision of description about what is included under the PSFD MoU.	Contract Management
Greater focus in regards to Australian Industry involvement within MoU.	Requirements Management
Scope of the MoU, does not contemplate other USN organisations (NAVSUP, SPAWAR). Consider how support from other US agencies can be assured.	Contract Management
Use of a US Cooperative Program contract support model should be used with caution, if the activity will be subcontracted primarily back to Australian Industry to support. Consider direct contract arrangements within Australia, with reachback to US CONUS OEM as required if IP, export and data support can be assured.	Contract Management
Airworthiness Certification of USN product may not meet Australian WHS requirements. Consider what SFARP approach needs to be taken when introducing into service.	Requirements Management
Export controls need to be closely monitored to ensure the articles receive appropriate Congressional approval in time for shipment, particularly for classified items.	Contract Management

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When interfacing with US ICT organisations, it is very difficult to arrange access with the correct subject matter experts. Consider strong relationships under a cooperative program to ensure the right people are making decisions.	Requirements Management
Procurements through different parts of the USN organisation have different schedules and may take significantly longer than others. Ensure the contracting processes and timelines for the organisation conducting the contract management are well understood, before beginning the Procurement Process.	Contract Management
SATCOM connectivity and who pays for each segment is rarely clear. Ensure ownership of each data segment is well understood.	Requirements Management
SPAWAR manages a large number of components in the TOC across the USN, of which only a small number are needed for an aircraft platform. As a consequence, large numbers of "common" TOC components may be changed as part of a suite of TOC upgrades across the USN fleet, and rolled into what was a relatively minor air vehicle change. This may well hold up delivery of a new mission system software drop while awaiting the software regression testing to be complete on the overall configuration build change for the TOC.	Requirements Management
Consider co-location or moving of Acquisition Project staff to the Sustainment organisation as part of standing up the Sustainment Management Unit (SMU). This will ensure a better flow of knowledge transfer and ownership of the history of a particular requirement. Co-location of the Project Office with the SMU in January 2019 has already yielded benefits in terms of information transfer and cooperation in capability delivery.	Resourcing
Ensure the transition plan is approved well in advance of the first aircraft delivery (12 months or more).	Requirements Management

## Section 8 – Project Line Management

### 8.1 Project Line Management as at 30 June 2020

Position	Name
Division Head	AVM <b>Greg Hoffmann</b>
Branch Head	AIRCDRE David Scheul
Program Director	Mr Nigel Linnett
Project Manager	WGCDR Andrew Marriott



## Project Data Summary Sheet<sup>156</sup>

Project Number	AIR 9000 Phase 2, 4 and 6
Project Name	MULTI-ROLE HELICOPTER
First Year Reported in the MPR	2008-09
Capability Type	Replacement
Acquisition Type	Australianised MOTS
Capability Manager	Chief of Navy and Chief of Army
Government 1st Pass Approval	Apr 06 (Phases 4 and 6)
Government 2nd Pass Approval (or key Government pre-Second Pass Approval)	Aug 04 (Phase 2), Apr 06 (Phases 4 and 6)
Budget at 2nd Pass Approval (or key Government pre-Second Pass Approval)	\$3,522.8m
Total Approved Budget (Current)	<b>\$3,773.9m</b>
2019-20 Budget	<b>\$119.9m</b>
Project Stage	Initial Materiel Release
Complexity	ACAT I



### Section 1 – Project Summary

#### 1.1 Project Description

The Multi-Role Helicopter (MRH) Program is a key component of the Australian Defence Force (ADF) Helicopter Strategic Master Plan that seeks to rationalise the number of helicopter types in ADF service. The MRH Program consists of three phases of AIR 9000. Phase 2 (12 helicopters) is the acquisition of an additional Squadron of troop lift aircraft for the Australian Army, Phase 4 (28 helicopters) will replace Army's Black Hawk helicopters in the Air Mobile and Special Operations roles, and Phase 6 (6 helicopters) will replace Royal Australian Navy (RAN) Sea King helicopters in the Maritime Support Helicopter role. All three phases are grouped under the AIR 9000 MRH Program.

#### 1.2 Current Status

On 28 November 2011, the Minister for Defence announced this project as a Project of Concern.

##### Cost Performance

##### In-year

The project has spent **\$106.0m** against a budget of **\$119.9m to the end of June 2020**. The **\$13.9m cash underspend to the end of June 2020** is primarily due to **the timing of invoice payments at year end**.

##### Project Financial Assurance Statement

As at **30 June 2020**, project AIR 9000 Phase 2, 4 & 6 has reviewed the approved scope and budget for those elements required to be delivered by **Defence**. Having reviewed the current financial and contractual obligations of **Defence**, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget, including contingency remaining for the project to complete against the agreed scope.

##### Contingency Statement

The project has **committed** contingency in the financial year primarily for the treatment of various supportability and performance risks such as a replacement Mission Management System (**including Development Services and Software Development Support**), Mini Gun system **Support and Test Equipment**, Helicopter Aircrew Respiratory System (HARS) **sparing**, ISU Containers, C17 **Phase 2 Tactical Loading and additional equipment for Optimised Loading**, **Helmet Mounted Sight Display (HMSD) Improved Image Intensifier Tubes**, feasibility study into required changes to the **Aero Medical Evacuation – Mature (AME-M)** and Taipan Gun Mount **batteries and Captive Carriage requirements**. The **commitment** of Contingency is directly in support of the transition of the MRH90 into 6 Avn Regt.

#### 156 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 Assurance Report* by the Auditor-General in **Part 3** of this report.

### Schedule Performance

As a result of the Deed 2 negotiations with the contractor, the final delivery of aircraft was rescheduled to July 2017; this, and ongoing technical deficiencies, have resulted in delays to the Final Materiel Release (FMR) and Final Operational Capability (FOC) milestones. However, a number of capability milestones have been declared, including Army Initial Operational Capability (IOC) in December 2014, Navy IOC in February 2015, first Operational Capability Land (OCL1) in September 2015, second and third Operational Capability Amphibious (OCA2/3) in December 2015, the second Operational Capability Land (OCL2) in March 2016 and the third Operational Capability Land (OCL3) in February 2018. The FMR and FOC dates have been updated to June 2021 and December 2021 to support a revised Materiel Acquisition Agreement.

Forty-seven aircraft have been accepted into service with the final aircraft accepted in July 2017. The first thirteen aircraft required an in-service retrofit to bring them up to the full Phase 2, 4 & 6 capability baseline with the final retrofit completed in March 2016.

Both Full Flight Mission Simulators have been accepted (the first in August 2013 and the second in October 2014).

Remediation to rectify concerns regarding configuration management issues of production aircraft slowed the acceptance of production aircraft in 2015, this in turn slowed the rate of capability growth.

The Chief of Army delayed the introduction of MRH90 into 6 Avn Regt by 3 years, because of reliability and design shortfalls and subsequently extended the Black Hawk fleet to 2022 to mitigate the risk to capability. The delayed introduction to 6th Avn Regt resulted in the growth in total MRH90 flying hours temporarily stabilised below the planned mature rate.

In September 2017, Chief of Army's Senior Advisory Committee (CASAC) endorsed and CA agreed to continue the transition of MRH90 into 6 Avn Regt which commenced in January 2019 and will conclude with the withdrawal of the Black Hawk helicopters and 6 Avn Regt taking on full Special Operations capability by the end of 2021.

**The transition of MRH90 into 6 Avn Regt has commenced and has been supported by the project through the funding of facilities works, procurement of Support and Test Equipment and additional spares.**

**The Fast Roping, Rappelling and Extracting System has achieved Service Release and is entering service with the operating units.**

**The Taipan Gun Mount has completed its testing phase utilising all required weapons and is progressing through final design and qualification activities.**

**During the past year a number of capabilities have transitioned from the project office to the Sustainment Organisation including; all MRH Engineering Data, the Electronic Warfare Self-Protection System, the Aircraft Systems Trainer, CH47 Transport, the MRH90 Technical Publications, the heavy Stores Carrier and External Auxiliary Fuel Tank, C17 Transport and the Full Flight and Mission Simulator.**

### Materiel Capability Delivery Performance

Following achievement of In-Service Date (ISD) with agreed partial achievement of the contracted MRH capabilities, there has been significant work by both Industry and the Commonwealth to define and implement a series of capability block enhancements to bring the MRH90 to contracted standards. This included a retrofit program to progressively bring all aircraft up to the contracted standard. FMR has been reviewed and is now forecast to be achieved in June 2021 as the technical and supportability issues are resolved to meet the final operational capability. At this time it is expected that FMR will include the transfer of Project funding and contract management responsibilities concerning the completion of the remaining long lead time acquisition activities for Aero Medical Evacuation Equipment (AMEE), **C-17 Tactical Loading** and an Aircraft Maintenance Trainer (AMT) to the Army Aviation System Program Office (AASPO)

**MRH achieved 55.8% of its planned 2019/20 Financial Year Rate Of Effort. This represents hours actually flown, compared to planned flying hours. ROE is a Sustainment Contract Key System Health Indicator and this achievement indicates that some Key Performance Indicators are below the required performance bands.**

### Note

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

### 1.3 Project Context

#### Background

The Additional Troop Lift project was first foreshadowed in the Defence White Paper 2000.

The MRH Program consists of Phases 2, 4 & 6. Phase 2 was approved initially, providing 12 additional Troop Lift helicopters for Army. Phases 4 & 6 were approved subsequently with Phase 4 which provided 28 helicopters as the replacement of the Australian Army's fleet of 34 S-70A-9 Black Hawk helicopters, again for troop lift capability, and Phase 6 provided six helicopters as the replacement of the RAN's fleet of six Sea King helicopters, providing maritime support capability for Navy. The delivery of a 47th MRH90 was negotiated as part of Deed 2. This enables the use of one **aircraft** as a Ground Training Device without impacting the operational fleet.

In total, the AIR 9000 MRH Program will acquire 47 MRH90 aircraft and support systems. Support capabilities, such as Electronic Warfare Self Protection Support System, MRH Software Support Centre, MRH Instrumentation System and a Ground Mission Management System, will be acquired along with training systems and in-service support.

The Phase 2 Acquisition Contract was signed with Airbus Australia Pacific (Airbus AP) in June 2005 with the subsequent Sustainment and Program Agreement contracts signed in July 2005.

In November 2005 the Defence Capability and Investment Management Committee agreed that the way forward was to seek a combined first and second pass approval for both Phases 4 and 6 as part of a single approval process.

Cabinet endorsement was gained in April 2006 in a combined first and second pass process for Phase 4 and Phase 6. The agreed method of procurement, a two stage Contract Change Proposal (CCP), resulted in the execution of options contained in the Program Agreement for the procurement of additional aircraft approved under Phases 4 and 6. Initial CCPs for the Acquisition, Sustainment and Program Agreement Contracts were signed in June 2006.

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The three AIR 9000 Phase 2, 4 & 6 contracts (Program Agreement Contract, Acquisition Contract and Sustainment Contract) incorporate the above CCPs. On acceptance of two MRH90, appropriate training, maintenance and supply support, an In-Service Date of December 2007 was achieved with aircraft operating under a Special Flight Permit granted by the Chief of Air Force. This triggered the Sustainment Contract to come into effect and all three contracts are now currently active.

The Commonwealth suspended acceptance of aircraft from Airbus AP in November 2010; deliveries recommenced in November 2011 after negotiations of a remediation plan (Deed of Agreement and CCPs) to address a number of engineering and reliability issues. Concurrent with the recommencement of aircraft acceptance in November 2011, the Minister for Defence announced that the project would be listed as a Project of Concern citing schedule, aircraft technical deficiencies and Airbus AP's performance.

The Commonwealth has conducted negotiations with the prime contractor to review and settle commercial, technical and schedule issues resulting in a variation to the original contract signed on 9 May 2013, which has been termed 'Deed 2'. Deed 2, which came into effect on 1 July 2013 re-baselined the delivery schedule and addressed commercial and technical issues.

#### Uniqueness

The MRH90 aircraft is based upon the German Army variant of the NH90 Troop Transport Helicopter. The MRH90 design uses well established aerospace technologies, but will introduce new technologies into Army and Navy, primarily in the areas of composite structure, helmet mounted sight and display and fly-by-wire flight control systems.

The MRH Program is providing an MRH90 capability to two main users - Army and Navy. The capability delivery complexity this introduces has been mitigated through an agreement between Chief of Army and Chief of Navy. This provides the project with a single interface for introduction into service issues.

The MRH Program Office Design Acceptance Strategy is dependent upon the French Military Airworthiness Authority's (Direction Générale de l'Armement (DGA)) prior acceptance of the NH90 variants and certification recommendation for the MRH90. The DGA and other National Qualification Organisations' prior acceptance of European NH90s provide confidence for the ADF to leverage off common certification evidence for the MRH90.

#### Major Risks and Issues

The current open issues being managed by the project are:

- The current Cargo Hook Design is incompatible with Australian Defence Equipment which will delay maritime capability milestones OCM2 and OCM3 until the Enhanced Cargo Hook System is delivered.
- The achievement of the FMR has been delayed by the late delivery of role equipment including the Taipan Gun Mount, Enhanced Cargo Hook System, AME-Mature, and the Mission Troop Seat leading to an impact on cost, schedule and performance.
- The initial AME solution is not suitable for high care or multiple extractions which will delay full AME capability until the AME-Mature capability is delivered.
- Additional deployment spares are required to support transition into 6 Avn Regt.
- Spares will need to be procured to support the new role equipment and capabilities being developed for the MRH90
- Existing helicopter support facilities will require modification or upgrade to accommodate the MRH90.
- The current design of the self-protection weapons system is not meeting capability requirements.
- The existing Ground Mission Management System (GMMS) is not suitable for integration with the ADF mandated Joint Mission Planning System (JMPS) leading to an impact on MRH90 operational performance.
- The MRH90 capability transition into 6 Avn Regt has been affected by delays in delivery of key capability and role equipment leading to a delay of MRH90 transition and extension of Black Hawk for 6 Avn Regt operations
- The MRH Program may not be able to retain sufficient levels of experienced and skilled work force to achieve the required rate of Acquisition deliverables leading to an impact on schedule and capability.

#### Other Current Related Projects/Phases

AIR 9000 Phase 7 Helicopter Aircrew Training System (HATS): HATS will be an important link in the training continuum for inductees to the MRH 90 training system.

AIR 9000 Phase 8 Future Naval Aviation Combat System: The acquisition of 24 helicopters to enable the Navy to deploy at least eight Seahawks embarked at sea across the ANZAC class frigates and the new Hobart class Air Warfare Destroyers.

AIR 90 Identification Friend or Foe (IFF): AIR 90 will upgrade the MRH90 to the Mode 5 IFF waveform to maintain interoperability with US and NATO secure combat identification systems.

#### 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
	<b>Project Budget</b>		
Apr 04	Original Approved	3.3	1
Aug 04	<b>Government Second Pass Approval</b> (Phase 2)	953.9	
Jun 06	Real Variation - Scope (Second Pass Phase 4 and 6)	2,565.6	2
	<b>Total at Second Pass Approval</b>	<b>3,522.8</b>	
Oct 06	Real Variation - Transfer	(219.0)	3
Oct 08	Real Variation - Transfer	(20.0)	4
	Real Variation - Scope	31.5	5
Sep 17	Real Variation - Budgetary Adjustment	(87.4)	6
Nov 18	Real Variation - Transfer	(0.2)	10
		(295.1)	
Jul 10	Price Indexation	679.8	7
Jun 20	Exchange Variation	(133.6)	
	<b>Total Budget</b>	<b>3,773.9</b>	
	<b>Project Expenditure</b>		
Prior to Jul 19	Contract expenditure - Airbus AP	(2,744.6)	
	Contract expenditure - CAE Australia	(176.6)	
	Contract expenditure - Leonardo Helicopters	(10.3)	
	Other Contract Payments / Internal Expenses	(284.5)	8
		(3,216.0)	
FY to Jun 20	Contract expenditure - Airbus AP	(54.2)	
	Contract Expenditure - Leonardo Helicopters	(1.6)	
	Other Contract Payments / Internal Expenses	(50.2)	9
		(106.0)	
Jun 20	<b>Total Expenditure</b>	<b>(3,322.0)</b>	
Jun 20	<b>Remaining Budget</b>	<b>451.9</b>	
<b>Notes</b>			
1	This project's original budget amount is that prior to achieving Second Pass Government Approval.		
2	Incorporation of AIR 9000 Phase 4 (Black Hawk Upgrade/Replacement) and AIR 9000 Phase 6 (Maritime Support Helicopter).		
3	The funding related to facilities elements of the project was managed by Defence Estate and Infrastructure Group (DE&IG).		
4	Transfer to DE&IG for Facilities Infrastructure.		
5	Real Cost Increase funding for Full Flight Mission Simulator.		
6	Real Variation for Budget Adjustment (\$87.4m). This was offset and corrected by CFO by a subsequent Exchange Adjustment in the BORIS Bi-Annual update.		
7	Up until July 2010, indexation was applied to project budgets on a periodic basis. The cumulative impact of this approach was \$556.1m. In addition to this amount, the impact on the project budget as a result of out-turning was a further \$123.7m having been applied to the remaining life of the project.		
8	Other expenditure: <b>\$284.5m</b> for operating expenditure, contractors, consultants, and other capital expenditure not attributable to the aforementioned contracts.		
9	Other expenditure: <b>\$50.2m</b> which includes <b>\$41.6m</b> for capability re-design expenditure, <b>\$6.1m</b> for contractors and consultants, <b>\$1.8m</b> for other capital expenditure not attributable to the aforementioned contracts, and <b>\$0.7m</b> for operating expenditure.		
10	Budget transfer to DE&IG of \$0.2m for temporary amenities at 6 Aviation Regiment.		

### 2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
56.0	120.1	119.9	PBS to PAES: The variation is primarily due to accrued 2018-19 payments that were delayed to 2019-20, early partial achievement of Final Acceptance milestone criteria, and the allocation of contingency budget to realised risks associated with the stand up of 6 Aviation Regiment. PAES to Final Plan: The variance primarily reflects the reprogramming of capability funding.
Variance \$m	64.1	(0.2)	Total Variance (\$m): 63.9
Variance %	114.5	(0.2)	Total Variance (%): 114.1

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System Design	Full Flight and Mission Simulators	Oct 08	Mar 09	Jun 09	8	3
Preliminary Design	MRH aircraft - Phase 2	Jan 06	Jan 06	Apr 06	3	
	MRH aircraft - Phase 4/6	N/A	N/A	Jun 08	N/A	
	MRH Software Support Centre	N/A	Jun 07	Jun 07	0	
	Electronic Warfare Self Protection Support System	Mar 06	Mar 06	May 06	2	
	Ground based Mission planning and Management System	Jul 06	Apr 07	Jun 07	11	2
	MRH Instrumented System	N/A	Jun 07	Jul 07	1	
	Full Flight and Mission Simulators	Feb 09	Sep 09	Oct 09	8	3
Critical Design	MRH aircraft - Phase 2	May 06	May 06	Jun 06	1	
	MRH aircraft - Phase 4/6	Aug 08	N/A	Oct 08	2	
	MRH Software Support Centre	N/A	Oct 07	Sep 07	(1)	
	Electronic Warfare Self Protection Support System	Sep 06	Sep 06	Oct 06	1	
	Ground based Mission planning and Management System	Nov 06	Nov 07	Jul 08	20	2
	MRH Instrumented System	N/A	Jun 08	Jun 08	0	
	Full Flight and Mission Simulators	Aug 09	Feb 10	Apr 10	6	3
<b>Notes</b>						
1	Delays in the Systems Engineering process have resulted from the more developmental nature of the aircraft system, with the MRH90 variant being unique in some ways.					
2	Ground Mission Management System software delays are directly attributable to aircraft schedule delivery slip.					
3	Full Flight Mission Simulators design review delays stem primarily from slow Contractor derivation of requirements into a suitable System and Subsystem Specification. This was compounded by delays in the prime contractor establishing a vital subcontract with the aircraft manufacturer.					

### 3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System / Platform Variant	Original Contracted	Currently Contracted	Achieved /Forecast	Variance (Months)	Notes
System Integration	MRH aircraft - Phase 2	Jul 06	Nov 06	Dec 06	5	
	MRH aircraft - Phase 4/6	N/A	N/A	N/A	N/A	1
	MRH Software Support Centre	N/A	Oct 08	Nov 08	1	
	Electronic Warfare Self Protection Support System	N/A	N/A	Nov 07	N/A	
	Ground based Mission planning and Management System	N/A	N/A	N/A	N/A	2
	MRH Instrumented System	Nov 08	May 09	Dec 09	13	3
	Full Flight and Mission Simulators	Jun 11	Sept 11	Sep 11	4	4
Acceptance	Type Acceptance Review Special Flight Permit 1	Oct 07	N/A	Dec 07	2	5
	Australian Military Type Certificate	Dec 08	Dec 10	Apr 13	52	6
	Full Flight and Mission Simulator #1	Jul 12	Aug 13	Aug 13	13	7
	Full Flight and Mission Simulator #2	Jan 13	Oct 14	Oct 14	21	7
	Ground based Mission planning and Management System Lot 1	Feb 09	Sep 09	Dec 09	10	8
	Ground Mission planning and Management System Lot 2	Feb 09	Dec 09	Apr 10	14	8
	Ground Mission planning and Management System Lot 3	Sep10	Sep10	Mar 13	30	8
	MRH Software Support Centre	Feb 09	Feb 09	Dec 08	(2)	
	Electronic Warfare Self Protection Support System	Dec 07	Dec 07	Dec 07	0	
	MRH Instrumented System	Mar 10	Jun 10	Sep 11	18	9
Aircraft Acceptance	MRH aircraft #01 (First aircraft)	Dec 07	N/A	Dec 07	0	
	MRH aircraft #05 (First Australian built aircraft)	Dec 08	N/A	Dec 08	0	
	MRH aircraft #46	Jul 14	Jun 17	Jun 17	35	10
	MRH aircraft #47 (Final Aircraft)	Jul 17	Jul 17	Jul 17	0	

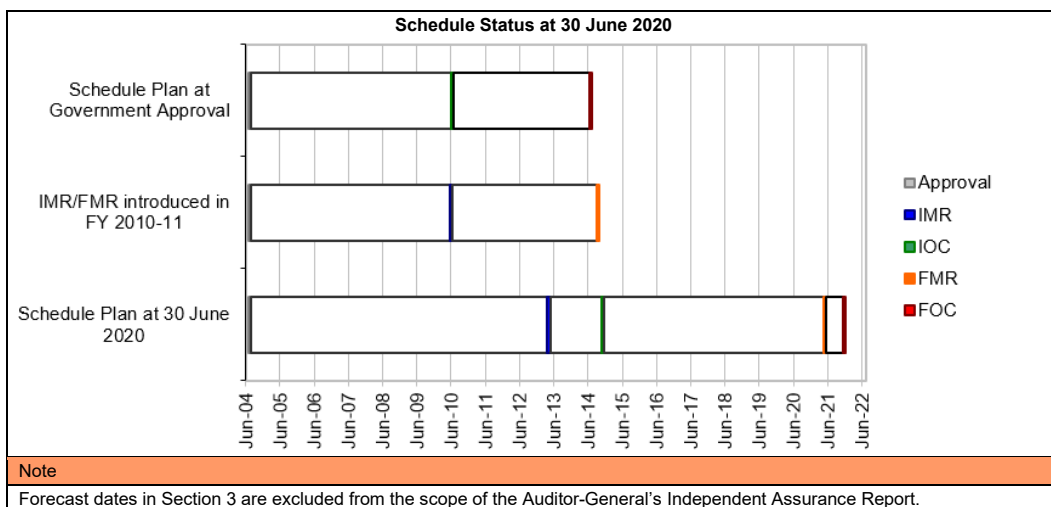
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Notes	
1	Phases 4/6 were rolled into the MRH Program from aircraft 13 onwards, which increased the number of aircraft from 12 to 46.
2	The acceptance and test-readiness of the Ground Mission Management System (GMMS) was broken into six lots post contract signature. The lots compose of GMMS deliverables that have been aligned to aircraft delivery – location and baseline. The acceptance of GMMS lots are listed in the acceptance area of this table.
3	The 13 month delay to closure of Test Readiness Review was due to electronic compatibility test design issues not resolved until November 2009. This delay was mitigated by the development of an interim MRH Instrumentation System capability used for a test activity in October 2009.
4	Achieved through completion of Test Readiness Review for Contractor In-Plant Test and Evaluation in September 2011.
5	The first Airworthiness Board (for a Special Flight Permit (SFP)) was conducted in November 2007 and a SFP was granted in December 2007. There have been a number of SFP extensions to allow flight trials of the aircraft as it further develops. The most recent SFP was granted in December 2012 and expired in April 2013.
6	Achievement of the Australian Military Type Certificate proved problematic due to technical and reliability issues, leading to insufficient levels of the Rate of Effort. Rate of Effort was required to validate that in-service support arrangements for the fleet are sufficient to cope with current numbers of aircraft and are growing in maturity to meet fleet requirements. Australian Military Type Certificate and Service Release was achieved 17 April 2013.
7	Refers to acceptance of Full Flight Mission Simulators in Oakey and Townsville. Delays have been incurred due to the late delivery of facilities and an underestimation of the time required to implement the design.
8	Lot 1, 2 and 3 have been altered to accommodate the variation in aircraft delivery date and configuration.
9	The MRH instrumented system incurred delays due to technical and supportability issues that resulted in contractual non-conformances. These non-conformances were rectified by September 2011.
10	The MRH90 program stopped accepting aircraft in November 2010 due to a number of technical and reliability issues. The Commonwealth recommenced accepting aircraft in November 2011 after negotiating a remediation plan to address a number of engineering and contractual issues; however acceptance of aircraft was again suspended in February 2012 pending resolution of another technical concern related to the aircraft's cargo hook. In May 2012 the Commonwealth agreed to accept a further four aircraft based on Airbus AP's agreement to the commercial terms associated with the rectification of the cargo hook issue. Scheduled aircraft acceptance recommenced in June 2012 with aircraft #46 accepted in June 2017 and the final aircraft (#47) accepted in July 2017.

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

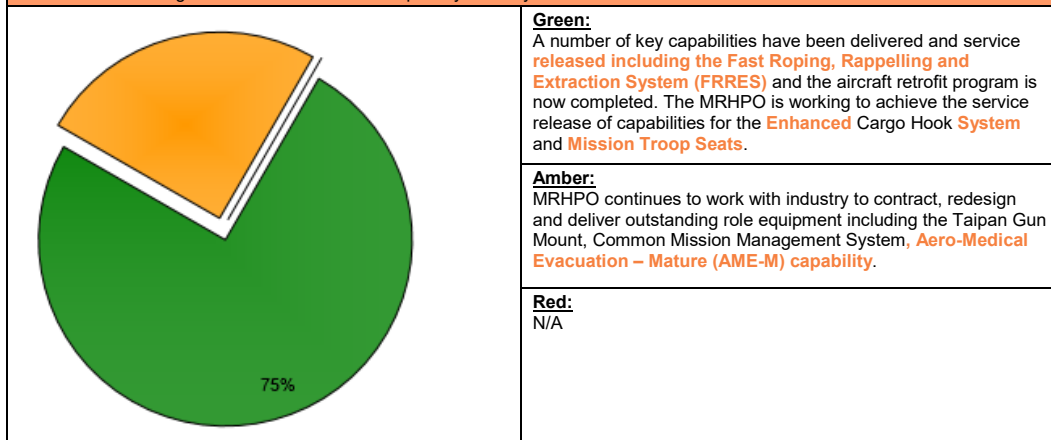
Item		Original Planned	Achieved /Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Army/Navy	Jun 10	May 13	35	1
Initial Operational Capability (IOC)	Navy	Jul 10	Feb 15	55	2
	Army	Apr 11	Dec 14	44	3
Final Materiel Release (FMR)	Army/Navy	Oct 14	Jun 21	80	4
Final Operational Capability (FOC)	Navy	Dec 12	-	-	5
	Army	Jul 14	Dec 21	89	4,5
Notes					
1	The MRH90 program stopped accepting aircraft in November 2010 due to a number of technical and reliability issues. This has impacted the achievement of capability milestones. The Commonwealth recommenced accepting aircraft in November 2011 after negotiating a remediation plan to address a number of engineering and reliability issues; however acceptance of aircraft was again suspended in February 2012 pending resolution of another technical concern related to the aircraft's cargo hook. In May 2012 the Commonwealth agreed to accept a further four aircraft based on Airbus AP's agreement to the commercial terms associated with the rectification of the cargo hook issue. Scheduled aircraft acceptance recommenced in June 2012 with the final aircraft (#47) accepted in July 17. IMR was declared on 13 May 2013, based on 6 Product Baseline 003 aircraft.				
2	Affected by delays to IMR. (Refer to Note 1 above)				
3	Affected by delays to IMR. (Refer to Note 1 above)				
4	Dates directly impacted by delay to IMR. (Refer to Note 1 above). The remediation of technical deficiencies and issues through replacement or re-design will draw upon significant engineering, logistic and commercial resources and will therefore form the critical path toward achieving FMR. The FMR and FOC dates have been reviewed to reflect this.				
5	FOC is now only forecast as a single date. The last capability subset is to be realised by Army as Operational Capability Special Operations 2 (OCS2) in November 2021, which is expected to trigger FOC.				



## Section 4 – Materiel Capability Delivery Performance

### 4.1 Measures of Materiel Capability Delivery Performance

#### Pie Chart: Percentage Breakdown of Materiel Capability Delivery Performance



#### 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)	<ol style="list-style-type: none"> <li>Six Product Baseline 003 aircraft with associated role equipment to support Initial Operational Capability milestones;</li> <li>Issue of Australian Military Type Certificate and Service Release;</li> <li>Completion of all MRH90 facilities at Townsville, Oakey and Nowra;</li> <li>Establishment of mature planned contractor support to maintenance and logistics; and</li> <li>Provision and certification of Mission Management systems necessary for Initial Operational Capability milestones.</li> </ol> <p>Initial Materiel Release was achieved in May 2013.</p>	Achieved
Initial Operational Capability (IOC)	<ol style="list-style-type: none"> <li>Achievement of Operational Capability Maritime Support 1 (OCM1) – embarkment of a single flight for limited daytime operations.</li> </ol>	Achieved

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	<p>2. Achievement of Operational Capability Amphibious 1 (OCA1) Milestones – deployment of a single troop (three aircraft) in a permissive environment.</p> <p>Initial Operational Capability was achieved in Army – December 2014 and Navy – February 2015.</p>	
Final Materiel Release (FMR)	<p>1. Forty-seven aircraft configured to the contractual baseline including configuration amendments specified in Deeds 1 and 2 (one aircraft to be used as a Maintenance Training Device);</p> <p>2. Role equipment delivered to support aircraft. Role equipment completion criteria is to include the transfer of Project funding and contract management responsibilities concerning the completion of the remaining long lead time acquisition activities for Aeromedical Evacuation Equipment (AMEE) to the Army Aviation System Program Office (AASPO);</p> <p>3. A mature sustainment organisation capable of discharging all in-service responsibilities; including logistic and training requirements;</p> <p>4. Mature training system with all training devices accepted, supported by an effective, functioning training organisation. Training completion criteria to include the transfer of Project funding and contract management responsibilities concerning the completion of the remaining long lead time acquisition activities for an additional Aircraft Maintenance Trainer (AMT) to AASPO; and</p> <p>5. All facilities and support equipment, required to support the capabilities accepted.</p> <p>FMR is forecast to be achieved in June 2021.</p>	Not yet achieved
Final Operational Capability (FOC)	<p>FOC is expected to be declared on achievement of all Operational Capability Milestones providing the following capabilities.</p> <p>1. Operational Capability Maritime (OCM3) - Three embarked flights</p> <p>2. Operational Capability Land (OCL3) - Two Airmobile Squadrons</p> <p>3. Operational Capability Amphibious (OCA4) - One Squadron capable of supporting amphibious operations</p> <p>4. Operational Capability Special Operations Support (OCS2) - One Special Operations Aviation Task Unit.</p> <p>Final Operational Capability is forecasted to be achieved in December 2021.</p>	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 chance that the MRH90 capability transition into 6 Avn Regt will be affected by delays in delivery of key capability and role equipment leading to a delay of MRH90 transition and extension of Black Hawk for 6 Avn Regt operations.	1. <b>This Risk has been realised and is now being managed by the project as an Issue and is reported in Section 5.2.</b>
There is a risk that the MRH Program may not be able to retain sufficient levels of experienced and skilled manpower to achieve the required rate of Acquisition deliverables leading to an impact on schedule and capability.	1. <b>This Risk has been realised and is now being managed by the project as an Issue and is reported in Section 5.2.</b>
There is a risk that Industry may not be able to retain sufficient workforce, prior to Acquisition Project closure, to sustain the timely delivery of the remaining capability elements.	<p>1. <b>This risk is the responsibility of and being managed by Industry without involvement or financial risks to Defence.</b></p> <p>2. <b>This risk is CLOSED.</b></p>
Emergent Risks (risk not previously identified but has emerged during 2019-20)	
Description	Remedial Action
There is a chance that additional spares are required to support Fast Roping and Rappelling Extraction System (FRRES).	1. <b>This Risk has been realised and is now being managed by the project as an Issue and is reported in Section 5.2.</b>

## 5.2 Major Project Issues

Description	Remedial Action
The current Cargo Hook Design is incompatible with Australian Defence Equipment which will delay the final solution delivery.	<ol style="list-style-type: none"> <li>1. Contract for the design and production of a new Cargo Hook</li> <li>2. Qualify and test the Cargo hook</li> <li>3. DASA Design Acceptance Following NQO Review - NLT - <b>27 Apr 2020.</b></li> <li>4. MRHPO and Industry to work together to achieve service release by <b>Q3 2020.</b></li> </ol>
The Fast Roping and Rappelling is not suitable which has affected the achievement of operational capability leading to an impact to schedule and performance.	<ol style="list-style-type: none"> <li>1. <b>The enduring solution the Fast Roping, Rappelling and Extracting System has achieved Service Release</b></li> <li>2. <b>This issue is CLOSED.</b></li> </ol>
The achievement of the FMR has been delayed by the late delivery of supplies according to the contracted schedule, leading to an impact on cost, schedule and performance	<ol style="list-style-type: none"> <li>1. Formation of Cabin Integration Working Group;</li> <li>2. Industry Prototyping;</li> <li>3. Accept incremental improvements;</li> <li>4. Use of Liquidated Damages as offset</li> <li>5. Leverage NATO Helicopters 90 (NH90) community solutions</li> </ol> <p>A new MAA has formally approved a re-baselined FMR.</p>
The initial AME solution is not suitable for high care or multiple extractions which will delay the final solution delivery schedule.	<ol style="list-style-type: none"> <li>1. <b>An Aero-Medical Evacuation capability working group was initially formed and has now evolved into an IPT.</b></li> <li>2. <b>The functional requirements specification has been agreed with Commonwealth stakeholders and Industry.</b></li> <li>3. <b>Phase 1 of the AME solution is in contract.</b></li> <li>4. <b>Industry has been contracted to conduct an Advanced Change Study Notice to inform and de-risk the solution for the remaining AME capability to be delivered.</b></li> <li>5. <b>After agreement of the results of the ACSN the agreed solution will be contracted.</b></li> </ol>
Existing helicopter support facilities will require modification or upgrade to accommodate the MRH90.	<ol style="list-style-type: none"> <li>1. <b>Facilities works for 6 Avn Regt are complete.</b></li> <li>2. <b>Funding for additional facilities works at 5 Avn Regt has been approved and is expected to be used with E&amp;IG to complete support facilities improvements in 5 Avn Regt to support MRH90.</b></li> </ol>
The current design of the self-protection weapons system is not meeting capability requirements.	<ol style="list-style-type: none"> <li>1. Refurbishment of armouries</li> <li>1. Maintenance Training for Armourers on M134</li> <li>2. Deployable packaging (Pelican cases) from M134 OEM (Dillon)</li> <li>3. Additional Workforce funding for Item Manager</li> <li>4. Additional spares and S&amp;TE.</li> </ol>
The existing Ground Mission Management System (GMMS) is not suitable for integration with the ADF mandated Joint Mission Planning System (JMPS) leading to an impact on MRH90 operational performance.	<ol style="list-style-type: none"> <li>1. Formation of user working group.</li> <li>2. Develop and agree on options to meet capability requirements.</li> <li>3. Implement agreed solution - <b>CMMS.</b></li> <li>4. Contracts for enduring solution are in place.</li> </ol>
The Enhanced MRH Armament Sub-System (EMAS) is incompatible with an introduced weapon leading to an impact on operational performance and delivery schedule.	<ol style="list-style-type: none"> <li>1. <b>This issue is now CLOSED.</b></li> <li>2. <b>The Taipan Gun Mount has demonstrated its capability with all required weapons.</b></li> <li>3. <b>All Taipan Gun Mount requirements are fully contracted.</b></li> </ol>
Existing packaging for some equipment has been identified as unsuitable for deployment, due to rapid deterioration and excessive size and weight.	<ol style="list-style-type: none"> <li>1. <b>This issue is now CLOSED.</b></li> <li>2. <b>Deployable containers and packaging has been delivered.</b></li> <li>3. <b>Additional packaging for specific role equipment sought via CCP-176 is fully contracted.</b></li> <li>4. Personnel have been trained in manual handling procedures and provided with equipment to manage the weight of existing packaging.</li> </ol>
<b>Additional deployment spares are required to support transition into 6 Avn Regt.</b>	<ol style="list-style-type: none"> <li>1. <b>With the transition of MRH90 into 6 Avn Regt and ongoing development of the Logistics Support Concept additional spares are being procured to support the transition.</b></li> </ol>
<b>Spares will need to be procured to support the new role equipment and capabilities being developed for the MRH90</b>	<ol style="list-style-type: none"> <li>1. <b>As new Role Equipment is developed for MRH90 spares to support the new items are being procured.</b></li> <li>2. <b>Spares Assessments are planned to be conducted after in-service use of the role equipment to ensure that spares are procured on the basis of actual failure rates in use rather than forecast failure rates</b></li> </ol>
<b>The MRH90 capability transition into 6 Avn Regt has been affected by delays in delivery of key capability and role equipment leading to a delay of MRH90 transition and extension of Black Hawk for 6 Avn Regt operations.</b>	<ol style="list-style-type: none"> <li>1. <b>Form 6 Avn Regt Integrated Project Team.</b></li> <li>2. <b>Monitor delivery of key capabilities.</b></li> <li>3. <b>Mitigate delays including through Industry collaboration.</b></li> <li>4. <b>Implement solution for each deliverable.</b></li> </ol>

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The MRH Program may not be able to retain sufficient levels of experienced and skilled work force to achieve the required rate of Acquisition deliverables leading to an impact on schedule and capability.

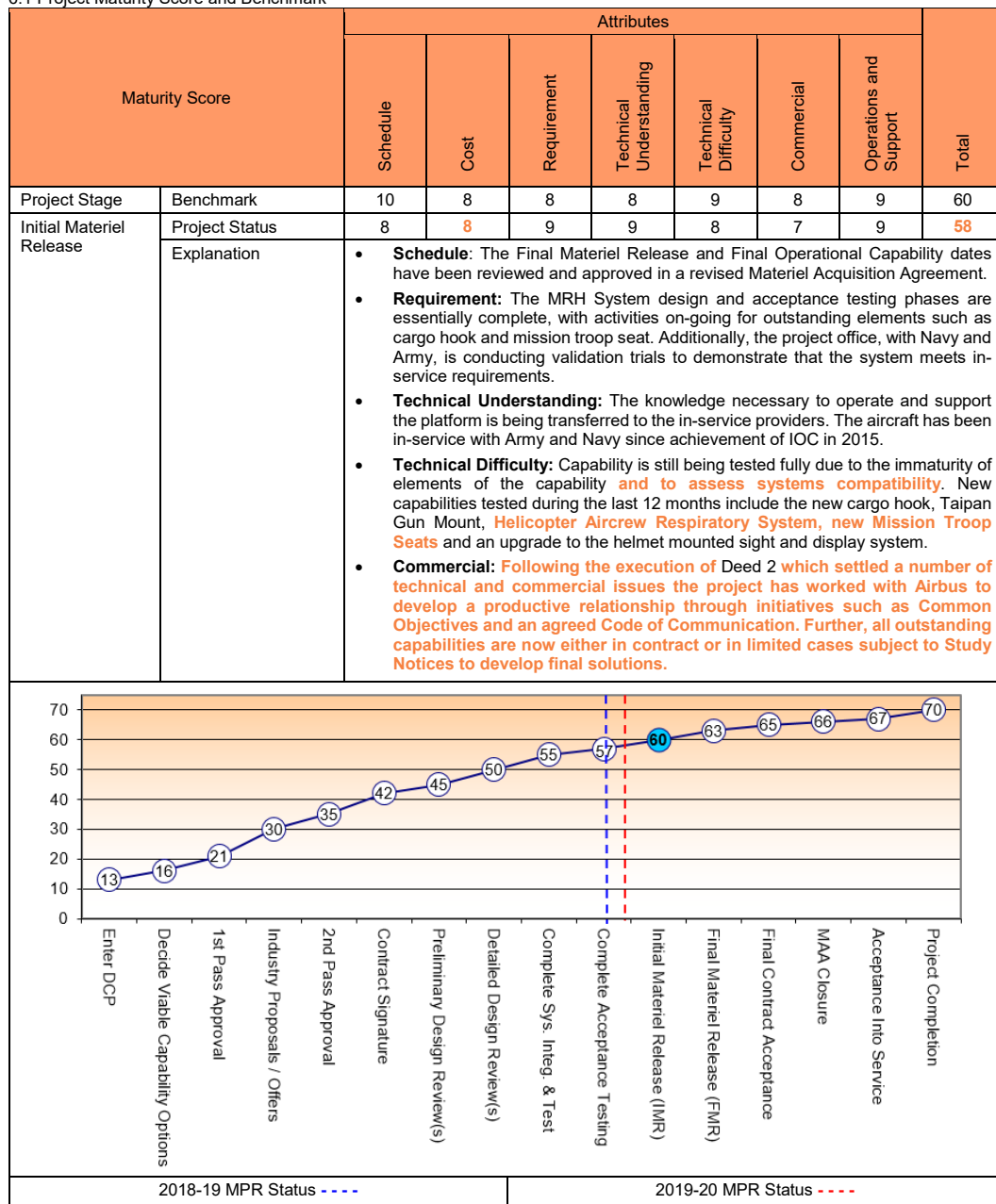
1. Early identification of staff transition and turnover.
2. Detailed succession planning.
3. Early engagement with Army and Royal Australian Air Force posting Directorates and CASG, to identify solutions.
4. Identify areas where contracted workforce can supplement where applicable.

#### Note

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

## Section 6 – Project Maturity

### 6.1 Project Maturity Score and Benchmark



Section 7 – Lessons Learned

7.1 Key Lessons Learned

Project Lesson	Categories of Systemic Lessons
Early establishment of the Sustainment organisations. Both Commonwealth and Industry teams need to be set up well in advance of the first of the deliveries. The provision of accepted aircraft to an Operational Squadron has led to a range of lessons in regard to command and control of assets and people, stakeholder management and the relationship with Industry.	Resourcing
The impact of attaining limited Intellectual Property rights has been critical to the ongoing development of the capability and achievement of value for money in further contract negotiations. It has also limited the provision of data for integration with other platforms (such as the Landing Helicopter Dock ships).	Contract Management
The MRH Program was incorrectly viewed as a Military off-the-Shelf (MOTS) acquisition. Lessons associated with intended MOTS procurements include: that it is essential that the maturity of any offered product be clearly assessed and understood; and that elements of a chosen off-the-shelf solution may not meet the user requirement.	Off-the-shelf Equipment
Better arrangements should be put in place to ensure appropriate considerations of contractor performance occur before the Commonwealth enters into similar contracts with the same contractor.	Contract Management

Section 8 – Project Line Management

8.1 Project Line Management as at 30 June 2020

Position	Name
Division Head	Mr Shane Fairweather
Branch Head	BRIG James Allen
Project Director	COL Andrew Thomas
Project Manager	Mr Kieran Gahan



## Project Data Summary Sheet<sup>157</sup>

Project Number	SEA 1180 Phase 1
Project Name	OFFSHORE PATROL VESSEL
First Year Reported in the MPR	2018-19
Capability Type	Replacement
Acquisition Type	Australianised MOTS
Capability Manager	Chief of Navy
Government 1st Pass Approval	Apr 16
Government 2nd Pass Approval (or key Government pre-Second Pass Approval)	Nov 17
Budget at 2 <sup>nd</sup> Pass Approval (or key Government pre-Second Pass Approval)	\$3,639.1m
Total Approved Budget (Current)	<b>\$3,701.4m</b>
2019-20 Budget	<b>\$248.9m</b>
Project Stage	<b>Detailed Design Review (s)</b>
Complexity	ACAT II



### Section 1 – Project Summary

#### 1.1 Project Description

Project SEA 1180 Phase 1 Offshore Patrol Vessel (OPV) will acquire 12 new vessels based on an existing design, to replace and improve upon the capability delivered by the 13 Armidale Class Patrol Boats (ACPB). The primary role of the SEA 1180 Phase 1 OPV will be maritime patrol and response operations in support of the National Civil Surveillance Program (NCSP) in order to contribute to protecting Australia's territory, territorial seas, and Economic Exclusion Zone (EEZ) (Constabulary Tasks). In addition to the 12 OPVs the Project will acquire, through a separate contract, the sea boats for the vessels. These consist of two Rigid Hull Inflatable Boats and one Rapid Intercept Craft for each OPV.

#### 1.2 Current Status

##### Cost Performance

###### In-year

The project achieved **\$227.2m** spend out of **\$248.9m** budget. The EOFY variance is a result of a partial slippage of Luerssen MS6-Production Readiness Review & CCP for Simulators until the next FY. In addition spend on GFE, PB Life Of Type Extension and Project office costs were lower than forecast.

###### Project Financial Assurance Statement

As at **30 June 2020**, project SEA 1180 Phase 1 has reviewed the approved scope and budget for those elements required to be delivered by the project. Having reviewed the current financial and contractual obligations of the project, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget remaining for the project to complete against the agreed scope.

###### Contingency Statement

The project has not applied contingency in the Financial Year.

##### Schedule Performance

The Project achieved Second Pass Government approval on 24 November 2017 and contract signature with Luerssen Australia on schedule on 31 January 2018. An intensive design review program has been conducted and the project commenced construction of the first Offshore Patrol Vessel in South Australia in November 2018 on schedule. A Whole of Ship Design Review was added to the program, and conducted in late **October 2019**. **The Support System Detailed Design Review remains outstanding, rescheduled for November 2020.**

**The construction of the first OPV commenced on schedule in November 2018 in South Australia at which time the ships were announced as the Arafura Class. The contracted keel laying milestone for OPV 1 (Arafura) was achieved in February 2019 and the ceremony for Nuship Arafura occurred on 10 May 2019. Production of the second OPV commenced in June 2019, two months ahead of schedule. The keel laying for OPV 2 (Eyre) was achieved on 9 April 2020. OPV 3 (Pilbara) commenced construction in Western Australia ahead of schedule on 27 March 2020.**

**Nuship Arafura is expected to be delivered by Luerssen in December 2021 after which Navy will commence its Naval Operational Test and Evaluation (NOTE). Initial Operational Capability (IOC) is expected by December 2022.** The Project is on track to achieve the Initial Materiel Release (IMR) and Final Materiel Release (FMR) milestones.

<sup>157</sup> 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 Assurance Report* by the Auditor-General in **Part 3** of this report.

<b>Materiel Capability Delivery Performance</b>	
The project is on schedule to deliver 12 Offshore Patrol Vessels.	
<b>Note</b>	
Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.	
1.3 Project Context	
<b>Background</b>	
<p>The SEA 1180 Phase 1 Offshore Patrol Vessel (OPV) Project will acquire 12 OPVs to replace the existing Armidale Class Patrol Boats (ACPB). The primary role of the Arafura OPV is constabulary operations and each ship will carry two crane launched 8.5m Rigid Hull Inflatable Boats (RHIB) and one 10.5m Rapid Intercept Craft (RIC) launched via the stern of the vessel.</p> <p>In August 2015, the Government announced that SEA 1180 Phase 1 would become part of the continuous naval shipbuilding program and brought forward the construction of the OPV by two years to enable the start of the naval shipbuilding program by 2018.</p> <p>In September 2015, the Government approved funding for the commencement of the Competitive Evaluation Process (CEP) for SEA1180 Phase 1. Interim Pass Project Approval was provided by Government in November 2015 and First Pass Approval was provided in April 2016.</p> <p>The CEP consisted of an Analysis of Alternatives, a Risk Reduction Design Study (RRDS), a Request for Tender and an Offer Definition Improvement Activity. The Government also announced at First Pass that OPV designs from Damen (Netherlands), Fassmer (Germany) and Luerssen (Germany) had been shortlisted for the RRDS. Furthermore, the Government stated the first two OPVs would be built in Adelaide (Osborne Naval Shipyard) from 2018 and then transfer to Western Australia (Henderson Maritime Precinct in 2020).</p> <p>The Request for Tender was released in November 2016. Upgrade of the Osborne Naval Shipyard was announced by the Government in December 2016. The CEP culminated with the Government announcing Luerssen as the preferred tenderer on 24 November 2017. The Government also announced that ASC Shipbuilding would be utilised for the first two OPVs and that the capabilities of Austal and Cvmec would be used to build ten OPVs subject to the conclusion of commercial negotiations between Luerssen and Austal.</p> <p>The contract for the construction of 12 OPVs was signed with Luerssen Australia on 31 January 2018. Luerssen nominated Cvmec to construct the remaining ten OPVs and contracted Cvmec initially to acquire and prepare the steel and pipe for all 12 OPVs from Australian sources (where available). Luerssen also established contracts with L3 Communications as a systems integrator and Saab Australia for a Situational Awareness System. The Commonwealth elected to purchase the RHIBs and RICs based on Luerssen's OPV design directly from Boomeranger.</p> <p>To reduce the risk associated with commencing construction, the OPV Platform System was divided into two platform design streams (Stream A and B) and design streams for major subsystems, the Situational Awareness System and the Communication and Navigation System. Stream A consisted of the six keel blocks of the ship's hull which represented the high maturity of design enabling production to commence. Stream A was subject to a design and production readiness review process enabling construction to commence on schedule. Stream B are the remaining blocks which comprise the remainder of the OPV Platform. The internal components of these blocks were subject to some design change to accommodate those aspects of the OPV design that were modified to comply with Australian Government legislation or to meet Navy's requirements for commonality or interoperability with other Australian Defence Force units.</p> <p>The OPV Situational Awareness System includes a version of the Saab 9LV Combat System. The sensors and weapons to be integrated include a 2D radar, 40mm Gun, an Electro Optical Surveillance System, Electro Optical Device and Electronic Support Measures.</p> <p>The OPV Communication and Navigation System (CNS) includes an integrated electronic navigation system, internal and external communications systems such as Satellite Communication (SATCOM), Maritime Tactical Wide Area Network (MTWAN) and High Data Rate Line of Sight (HDRLoS) capability. The ship will also have an Integrated Platform Monitoring System. The Support System is based on new analysis built from a combination of new and existing support data. For that reason, it lags the development of the Platform System. CCP 007 <b>adjusted</b> the Support System development and also <b>introduced</b> a Whole of Ship Design Review enabling completion of the design phase.</p> <p>The project did not undergo a Smart Buyer Risk Assessment due to it already having had a similar risk review as part of an Independent Assurance Review.</p>	
<b>Uniqueness</b>	
The Arafura OPV design is based on an existing design in service with the Royal Brunei Navy (Darussalam Class). Only minimal changes were necessary to meet Australian Legislative and Regulatory requirements and specific ADF communications and situational awareness needs, the inclusion of a bow thruster and an additional reverse osmosis plant.	
<b>Major Risks and Issues</b>	
<p>The project is monitoring the <b>probability and impact of a potential delay to the contracted delivery dates for OPV 1 (Arafura) in part due to the impact of COVID-19 and restrictions on the number of personnel working within the ship.</b></p> <p>The project is managing the risk of possible delays in obtaining <b>Explosive Ordinance and Armament Certification, including implications for program schedule and cost for the OPV Program.</b></p> <p><b>Previously reported major risks and issues have been either retired or downgraded.</b></p>	
<b>Other Current Related Projects/Phases</b>	
Related Projects include:	
SEA 5000 – Hunter Class future Frigate: Nine Hunter Class (FFGs) frigates will be based on BAE Systems' Type 26 Global Combat Ship design, modified to meet Australian requirements, and will be built in Osborne, South Australia as part of the Continuous Naval Shipbuilding (CNS) Program.	
N2263 – Infrastructure Project for Arafura Class. The project will provide berthing, training, maintenance, logistics, and support facilities at HMAS <i>Stirling</i> , HMAS <i>Coonawarra</i> , and HMAS <i>Cairns</i> to support the introduction into service of 12 new Offshore Patrol Vessels (OPV) being delivered by Luerssen.	
<b>Note</b>	
Major risks and issues are excluded from the scope of the Auditor-General's Independent Assurance Report.	

## Project Data Summary Sheets

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## Section 2 – Financial Performance

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

Date	Description	\$m	Notes
	<b>Project Budget</b>		
Sep 15	Original Approval	10.0	1
Nov 15	Interim Pass Approval	1.5	2
Apr 16	Government First Pass Approval	45.9	3
Nov 17	Government Second Pass Approval	3,581.7	4
	<b>Total at Second Pass</b> (or key Government pre-Second Pass Approval)	3,639.1	
Jun 20	Exchange Variation	62.3	
Jun 20	<b>Total Budget</b>	3,701.4	
	<b>Project Expenditure</b>		
Prior to Jul 19	Contract Expenditure - Luerssen Australia	(291.3)	5
	Other Contract Payments/Internal Expenses	(62.3)	6
		(353.6)	
FY to Jun 20	Contract Expenditure - Luerssen Australia	(189.4)	5
	<b>Contract Expenditure - Boomeranger Boats Oy</b>	(2.7)	
	Other Contract Payments/Internal Expenses	(35.1)	7
		(227.2)	
Jun 20	<b>Total Expenditure</b>	(580.8)	
Jun 20	<b>Remaining Budget</b>	3,120.6	
<b>Notes</b>			
1	Funding in support of bringing forward the SEA 1180 Phase 1 project forward by two years and establishing a continuous onshore build.		
2	Funding for the conduct of the initial phase of the Competitive Evaluation Process (CEP).		
3	Continuation/Completion of CEP which included Project Support, a Risk Reduction Design Study and Schedule Protection Activities.		
4	This approval included \$103.7 million to support the transition from Armidale Class Patrol Boats to the new SEA1180 Arafura Class Offshore Patrol Vessels, including support for the life of type extension and lease extension of two Cape Class Patrol Boats (CCPB).		
5	Prime Contract with Luerssen Australia Pty Ltd. The scope of this contract is explained further in Section 2.3 – Details of Project Major Contracts.		
6	Other expenditure prior to Jul 19 comprises \$21.4m for the Risk Reduction Design Study and Schedule Protection Activity; <b>\$18.9m</b> to Nova for Project Office Support and <b>\$22.0m</b> for other contract payments/internal expenses.		
7	Other expenditure comprises <b>\$6.0m Luerssen Australia Pty Ltd. Licence &amp; facilities costs</b> , <b>\$7.8m Nova Project Office Support</b> , <b>\$3.5m EM Solutions</b> and <b>\$17.8m other operating</b> expenditure, contractors, consultants, and other capital expenditure not attributable to the listed contracts.		

### 2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Defence's Explanation of Material Movements
349.2	249.2	248.9	PBS - PAES: The variance is due to the <b>reprogramming of activities, i.e. milestone on Spares and Pre-Preparedness Review.</b>
Variance \$m	(100)	(0.3)	Total Variance (\$m): (100.3)
Variance %	(28.6)	(0.1)	Total Variance (%): (28.7)

### 2.2B In-year Budget/Expenditure Variance

Estimate Jun Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(12.7)	Australian Industry	EOFY variance is primarily a result of a partial slippage of Luerssen MS6-Production Readiness Review & CCP for Simulators until next FY. Additionally, spend on GFE, PB LOTE and Project office costs were lower than forecast.
			Foreign Industry	
			Early Processes	
		(9.0)	Defence Processes	
			Foreign Government	
			Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
248.9	227.2	(21.7)	Total Variance	
		(8.7)	% Variance	

### 2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 20 \$m			
Luerssen Australia	31 Jan 18	1,988.0	2,457.2	Fixed with forecast Escalation	ASDEFCON (Complex)	1,2
Boomeranger Boats Oy	9 Oct 19	42.2	55.1	Fixed with forecast Escalation	Modified ASDEFCON	1,2
Notes						
1	Contract value as at 30 June 2020 is based on actual expenditure to 30 June 2020 and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable). Amounts expensed convert using the spot rate of the day therefore due to calculation method 30 June 2020 value will reflect a variance to prior reporting period.					
2	The price is the value in out turned dollars (as at June 20) using Commonwealth cumulative escalation indices. While price escalation models are built into the contract, the price at signature does not include an estimate across the forward commitment (expected expenditure). The price at 30 June 2020 includes this estimate, which is the reason for the large difference between the two figures.					
Contractor		Quantities as at		Scope		Notes
		Signature	30 Jun 20			
Luerssen Australia		12	12	12 Offshore Patrol Vessels		
Boomeranger Boats Oy		41	41	27 Rigid Hull Inflatable Boats and 14 Rapid Intercept Craft		
Major equipment accepted and quantities to 30 Jun 20						
Nil						
Notes						
	N/A					

### Section 3 – Schedule Performance

#### 3.1 Design Review Progress

Review	Major System / Platform Variant	Original Planned	Current Contracted	Achieved / Forecast	Variance (Months)	Notes
System Requirements	Platform System – Stream A	Jun 18	NA	Jun 18	0	
Preliminary Design		Aug 18	NA	Aug 18	0	
Detailed Design		Oct 18	Nov 18	Nov 18	1	1
System Requirements	Platform System – Stream B	Jun 18	NA	Jun 18	0	
Preliminary Design		Nov 18	Dec 18	Dec 18	1	1
Detailed Design		Feb 19	NA	May 19	3	1
System Requirements	Command and Control System (C2)	Jun 18	NA	Jun 18	0	
Preliminary Design		Dec 18	Nov 18	Nov 18	(1)	
Detailed Design		Mar 19	NA	Mar 19	0	
System Requirements	Communication and Navigation System (CNS)	Jun 18	NA	Jun 18	0	
Preliminary Design		Jan 19	NA	Nov 18	(2)	1
Detailed Design		Apr 19	NA	May 19	1	
Preliminary Design	Support System (SS)	Nov 18	NA	Jun 19	7	1,2
Detailed Design		Jun 19	Mar 20	Nov 20	17	1,2,3
Detailed Design Review	Whole of Ship (WoS)	Oct 19	NA	Oct 19	0	2
<b>Notes</b>						
1	Variance was agreed by the parties at Contract Change Proposal (CCP) 001 and incorporated under Contract Amendment 3.					
2	CCP 007, proposed to delay the Support System Detailed Design by 12 months and reduce the Support System Detailed Design milestone review value commensurate with the other detailed design milestone values in order to create new milestones for a whole of ship Detailed Design, Integrated Baseline Review (IBR) with ASC, and an IBR with Luerssen. The whole of ship Detailed Design will be a complete assessment of the detailed design including antenna arrays. The IBR milestones are proposed to finalise Luerssen's establishment of the Earned Value Management System (EVMS).					
3	The Support System Design Review has been delayed to allow a Logistic Support Analysis program to be established effectively and is expected to occur in November 2020. A Draft CCP to reflect the delay is under development.					

### Project Data Summary Sheets

Auditor-General Report No.19 2020–21  
2019–20 Major Projects Report

## 3.2 Contractor Test and Evaluation Progress

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

## 3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Dec 21	Dec 21	0	
Initial Operational Capability (IOC)	Dec 22	Dec 22	0	
Final Materiel Release (FMR)	Dec 29	Dec 29	0	
Final Operational Capability (FOC)	Jun 30	Jun 30	0	
<b>Notes</b>				
N/A				

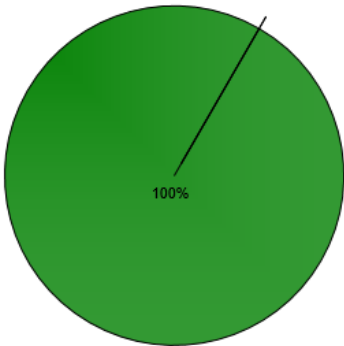
**Schedule Status at 30 June 2020**

**Notes**

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	
	<b>Green:</b> The Project is on track to deliver 12 Offshore Patrol Vessels. The majority of detailed design reviews have been completed providing confidence in the OPV design for production.
	<b>Amber:</b> N/A
	<b>Red:</b> N/A
<b>Note</b> This Pie Chart represents Defence's expected capability delivery. Capability assessments and forecast dates are excluded from the scope of the Auditor-General's Independent Assurance Report.	

4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	OPV1 delivered ready for Operational Test and Evaluation (OT&E). Those CASG Fundamental Inputs to Capability (FIC) elements including transition into sustainment as defined by the OPV Support System sufficient to support OT&E. IMR is expected to be achieved December 2021.	Not yet achieved
Initial Operational Capability (IOC)	IOC is achieved when Navy can be assured that the first OPV can demonstrate it can be operated and maintained to conduct effective and sustained operations. IOC is expected to be achieved December 2022.	Not yet achieved
Final Materiel Release (FMR)	OPVs 1-12 delivered in accordance with Government Approved scope. OPV12 delivered ready for OT&E. Those CASG FIC elements including transition into sustainment as defined by the OPV Support System sufficient to support OT&E for each OPV. FMR is expected to be achieved December 2029.	Not yet achieved
Final Operational Capability (FOC)	OPVs 1-12 complete in accordance with Functional Performance Specification and Operating and Support Intent. OPV12 delivered and OT&E completed. All Facilities accepted. All support organisations functioning. FOC is expected to be achieved June 2030.	Not yet achieved

Section 5 – Major Risks and Issues

5.1 Major Project Risks

Identified Risks (risk identified by standard project risk management processes)	
Description	Remedial Action
There is a chance that the OPV communications system will be affected by the late delivery of Government Furnished Data leading to an impact on schedule.	SEA 1180 project is constrained by third party retransfer permission. The project office works closely with Luerssen to understand design assumptions which are made due to the lack of GFM, in particular technical data.  This risk has been retired following identification and provision of the required communications system GFD, and receipt of GFM.

There is a chance that future Government Furnished Equipment changes will be imposed on the project leading to an impact on Cost.	SEA 1180 was funded to develop a single baseline for Government Furnished Equipment which has been established. Changes to that equipment driven by obsolescence or capability are managed outside of SEA 1180. The scope of any future changes will need to consider the Arafura Class as an In Service baseline.  <b>This risk has been retired with a baseline established and confirmed. The process for Engineering Change is established, and funding estimates through life will be included in the Sustainment budget.</b>
There is a chance that the Arafura Class OPV production will be affected by demands on the available workforce leading to an impact on quality and schedule.	The cause of this risk is the limited resources shared across the Continuous Naval Shipbuilding program. It is also caused by competition with competing Industries. The Naval Shipbuilding College is identifying the increased demands and skillsets required.  <b>The current workforce numbers are supporting the OPV build, however the risk continues to be monitored and is tracking at a Medium rating. The risk rating is reduced in part due to movement limitations created by COVID-19 and reduced employment security.</b>
<b>Emergent Risks (risk not previously identified but has emerged during 2019-20)</b>	
<b>Description</b>	<b>Remedial Action</b>
There is a chance that the OPV Program will be affected by delays in the provision of certification for Explosive Ordinance and Armament leading to an impact on schedule, cost and reputation.	Progress against the build schedule is closely monitored by the Project Office and Luerssen, particularly with regard to warning indicators and requirements to achieve the launch milestone and opportunities for regaining schedule lost due to COVID-19.
There is a chance that the OPV Project will be affected by delays in the provision of certification for Explosive Ordinance and Armament leading to an impact on schedule and performance.	The Project Office is working with the Certification Authority and the Explosive Ordnance suppliers to identify mitigations and work through options to improve the probability of a timely certification assessment.

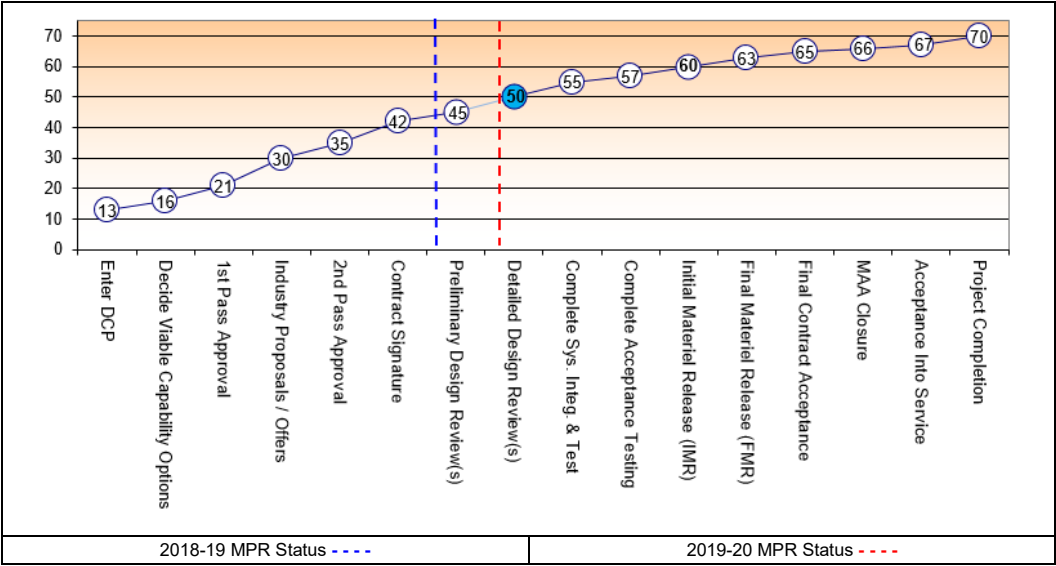
## 5.2 Major Project Issues

<b>Description</b>	<b>Remedial Action</b>
N/A	N/A
<b>Note</b>	
Major risks and issues in Section 5 are excluded from the scope of the Auditor-General's Independent Assurance Report.	

## Section 6 – Project Maturity

## 6.1 Project Maturity Score and Benchmark

Maturity Score		Attributes							Total
		Schedule	Cost	Requirement	Technical Understanding	Technical Difficulty	Commercial	Operations and Support	
Project Stage	Benchmark	7	7	7	8	7	7	7	50
Detailed Design Review	Project Status	7	7	8	7	8	7	5	49
	Explanation	<ul style="list-style-type: none"> <li>Requirement: The first 3 OPVs are progressing against the build schedule of the mature design.</li> <li>Technical Understanding has improved and will remain 7 until Support System Design is finalised.</li> <li>Technical Difficulty: OPV design is based on an existing Reference Ship Design.</li> <li>Operations and Support: Impact on the existing operating and support environment is known, planning has commenced on the transition from acquisition to sustainment.</li> </ul>							



Section 7 – Lessons Learned

7.1 Key Lessons Learned

Description	Categories of Systemic Lessons
Nil	

Section 8 – Project Line Management

8.1 Project Line Management as at 30 June 2020

Position	Name
Division Head	Ms Sheryl Lutz
Branch Head	Mr Peter Croser
Project Director/Manager	Mr Oliver Ciano



## Project Data Summary Sheet<sup>158</sup>

Project Number	AIR 5349 Phase 3
Project Name	EA-18G GROWLER AIRBORNE ELECTRONIC ATTACK CAPABILITY
First Year Reported in the MPR	2013-14
Capability Type	New
Acquisition Type	Australianised MOTS
Capability Manager	Chief of Air Force
Government 1st Pass Approval	Aug 12
Government 2nd Pass Approval (or key Government pre-Second Pass Approval)	Apr 13
Budget at 2 <sup>nd</sup> Pass Approval (or key Government pre-Second Pass Approval)	\$2,641.4m
Total Approved Budget (Current)	\$3,505.9m
2019-20 Budget	\$173.6m
Project Stage	Initial Materiel Release
Complexity	ACAT II



### Section 1 – Project Summary

#### 1.1 Project Description

The EA-18G Growler Airborne Electronic Attack Capability provides for the acquisition of 12 Boeing EA-18G Growler aircraft, ALQ-99 Tactical Jamming Systems (TJS), associated weapons, support and training systems to establish an Airborne Electronic Attack (AEA) capability for the Australian Defence Force (ADF). In December 2014 the scope of the project was expanded to include the Mobile Threat Training Emitter System (MTTES) Electronic Warfare (EW) in Queensland and in the Northern Territory, plus air-to-air and anti-radiation weapons for training activities. In April 2017 the scope was further expanded to include the acquisition and integration of CEA Technologies Pty Ltd (CEA) training systems into the MTTES, to further enhance electronic warfare training outcomes across the Australian Defence Force (ADF).

#### 1.2 Current Status

##### Cost Performance

###### In-year

At 30 June 2020, the project had spent \$160.9m against a Financial Year 2019-20 budget of \$173.6m. The variation is mainly due to delays associated with the advanced mobile threat training emitter systems production and invoicing.

###### Project Financial Assurance Statement

As at 30 June 2020, project AIR 5349 Phase 3 has reviewed the approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial contractual obligations of Defence for this project, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget remaining for the project to complete against the agreed scope.

###### Contingency Statement

The project has not applied contingency in the financial year.

##### Schedule Performance

Despite the significant change of scope approved in April 2013 to acquire new aircraft in lieu of modification of existing Lot 33 F/A-18F Super Hornets, the project achieved the initial In-Service Date (ISD) milestone in January 2017, as well as the subsequent Initial Materiel Release (IMR) milestone on schedule on 14 February 2017.

All 12 EA-18G Australian aircraft have been accepted and transferred to the RAAF, and have arrived in Australia. The Project met Australian airworthiness board timelines during 2016 to support Australian flight operations from the in-service date (ISD).

No 6 Squadron has undergone a role change and now is responsible for operational command of the Growler capability.

The existing Integrated Visual Environment Maintenance Trainers (IVEMTs) have been successfully upgraded to support F/A-18F and EA-18G maintenance training.

#### 158 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 Assurance Report* by the Auditor-General in Part 3 of this report.

Major Materiel Release (MR2) **was achieved in** September 2019. **This milestone was related to** the initial MTES training capability in Queensland. Aircrew training outcomes have been achieved through the US Navy. **The Capability Manager is expected to concur with achievement of MR2 in early July 2020.**

Major Materiel Release (MR3) was achieved in September 2018. This milestone principally related to enabling capabilities and training devices for the delivered Growler aircraft.

Major Materiel Release (MR4) has been delayed from March 2019 to **November 2021** due to ongoing design and integration effort for the MTES Northern Australia range. **Integration works involving US Navy personnel are currently on hold due to COVID-19 related international travel restrictions.** In the interim, MTES Queensland range equipment and other commercial arrangements will be utilised to enable a training effect on the MTES Northern Australia range.

The project is **scheduled** to achieve its next Major Materiel Release (MR 5) milestone in **November 2020**. This milestone principally relates to final integration and clearance of stores on the Growler aircraft and the initial delivery of advanced range training systems.

#### **Materiel Capability Delivery Performance**

The project remains on track to deliver a US Navy common Airborne Electronic Attack Capability based on the EA-18G aircraft and ALQ-99 TJS.

The EA-18G Growler contains the ALQ-218 Radio Frequency Receiver System as well as the ALQ-227 Communications Countermeasures Set to receive broad spectrum radio frequency signals and subsequently disrupt or jam those signals with the ALQ-99 TJS. As the EA-18G Growler airframe is based on the F/A-18F Super Hornet Block II configuration, it retains an Air-to-Air capability with the APG-79 Radar and AIM-120 Advanced Medium Range Air to Air Missiles (AMRAAM) weapons. Additional AMRAAM tactical missiles and Captive Air Training Missiles (CATMs) are being procured for the expanded air combat fleet. The AIM-9X Sidewinder Air-to-Air missile as integrated on the F/A-18F Super Hornet is also being integrated onto the EA-18G with additional CATMs and tactical missiles for Raise-Train-Sustain (RTS) approved for acquisition in December 2014.

The Australian EA-18G Growler will retain the capability for aircrew to train for the employment of AGM-88B High Speed Anti-Radiation Missiles (HARM) and AGM-88E Advanced Anti-Radiation Air to Ground Missiles (AARGM), with various HARM and AARGM CATMs being procured. Further, HARM and AARGM tactical missiles were approved for acquisition in December 2014 for RTS activities.

The AN/ASQ-228 Advanced Targeting Forward Looking Infra-Red (ATFLIR) pod will also be integrated onto the EA-18G and 15 ATFLIR pods have been procured. Air Combat Manoeuvring Instrumentation pods have also been procured for the Growler fleet to maximise training effectiveness.

In addition to modifying aircrew and maintenance training devices (flight simulators and IVENTs) that were procured by AIR 5349 Phase 1 for the F/A-18F Super Hornet to enable training on either the F/A-18F or EA-18G, the project has also acquired and delivered for installation, an additional two Tactical Operational Flight Trainers (TOFTs) (flight simulators) to address the increased training requirements of the additional EA-18G Growler aircrew.

The project plans to follow a similar approach taken to recent FMS acquisitions (including the F/A-18F Super Hornet) within the aviation domain to ensure compliance with Australian Defence Force airworthiness and workplace health and safety standards.

The December 2014 approval of MTES will provide the ability for in-country EA-18G aircrew training through establishment of EW training range capabilities in Queensland and the Northern Territory. Establishment of these ranges will ensure EA-18G aircrew can train effectively without needing frequent deployments to use United States electronic combat ranges for skills development. MTES will enhance ADF EW training range capabilities. The Growler aircraft is just one of the many Defence assets that will use this training range capability. The MTES began limited operations on the Queensland range during the 3<sup>rd</sup> quarter of 2018, supporting a number of exercises and a Growler training deployment to the United States. The MTES equipment for the Queensland range was accepted into operational service in May 2019. The MTES training capability will be expanded incrementally out to Growler Final Operating Capability.

The April 2017 approval for Advanced MTES includes a number of CEA training systems, associated control equipment, initial training and support planning, integration into the broader MTES Command and Control system, and development of training programs. Advanced MTES training capabilities will be incorporated into the incremental expansion of the MTES training capability out to FOC.

EA-18G Growler Initial Operating Capability with one caveat was declared by Air Force in February 2019.

#### **Note**

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

### 1.3 Project Context

#### **Background**

Defence first considered an Airborne Electronic Attack Capability based on the EA-18G Growler as part of the Force Structure Review 2008 (FSR08). While it was noted that an Electronic Attack capability would have broad application in a range of contingencies, the decision at the time was to consider the capability further as part of FSR13. Notwithstanding, in 2008, the Government approved a production modification for the last 12 F/A-18F Super Hornet aircraft procured under AIR 5349 Phase 1, to enable future upgrade to EA-18G Growler configuration, should strategic circumstances dictate.

In early 2011, the US Department of Defence advised the ADF that the US Navy (the sole operator of the EA-18G Growler) would place its final order for these aircraft in the second half of 2012 and the production line would close in 2015. Accordingly, the US Navy advised that if Australia wished to economically acquire an Airborne Electronic Attack capability, the only feasible option would be to add any Australian requirements to the final US Navy production contract.

In August 2012, the Government approved acquisition of an Airborne Electronic Attack Capability based on the EA-18G Growler. The approved scope from this combined pass approval consisted of modification of 12 existing RAAF Lot 33 F/A-18F Super Hornets.

Defence continued to assess the risk associated with the ADF's air combat transition from the F/A-18A/B Hornet and the F/A-18F Super Hornet, to the F-35A Joint Strike Fighter and developed options for Government consideration – the Air Combat Capability

### **Project Data Summary Sheets**

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<p>Transition Review. In April 2013, the Government approved the preferred option, which included the acquisition of 12 new build EA-18G Growler aircraft in lieu of modification of existing F/A-18F Super Hornets.</p> <p>The project classification is Australianised Military-Off-The-Shelf as there are a small number of Australian unique changes, such as ATFLIR and AIM-9X Stores Clearances.</p> <p>The Acquisition Strategy for AIR 5349 Phase 3 is to procure the principal materiel elements of the capability through the US Government FMS program. Accordingly, a number of FMS cases have been established with Navy International Programs Office and Naval Air Systems Command for acquisition of the materiel components of the capability as well as aircrew and maintainer training. Another FMS case will be utilised to acquire AIM-120 AMRAAM missiles from the US Air Force Security Assistance Command and the AMRAAM Joint Program Office. The procurement approach for the sustainment of the capability will mirror, and optimally leverage that already in place for the F/A-18F Super Hornet and will comprise a combination of Australian Industry based commercial support contracts, augmented where necessary with FMS case procured, US Government sourced products and services.</p> <p>The Materiel System for the capability will comprise 12 Boeing EA-18G Growler aircraft, ALQ-99 TJSs, AIM-120 AMRAAM missiles, and various AGM-88B/E HARM/AARGM training missiles, alternate mission equipment, mission planning systems, training devices, spares and support and test equipment, as well as training for aircrew and maintenance personnel. The Airborne Electronic Attack architecture will be enabled by a US Navy common EW database.</p> <p>Initially, both aircrew and maintenance personnel will be trained in the US utilising the US Navy's training system for the EA-18G Growler. Following the initial training of maintenance personnel, an EA-18G Growler maintenance training framework will be established at RAAF Base Amberley for ongoing training. For aircrew, training will remain in the US throughout the capability life cycle, supported by Defence managed FMS cases.</p> <p>In December 2014 the scope of AIR 5349 Phase 3 was expanded to include EW training ranges in Queensland and Northern Australia, plus air-to-air and anti-radiation weapons for RTS activities. Additionally, ongoing EA-18G and F/A-18F aircrew training in the US was approved.</p> <p>ACEASPO and AIR5349 Phase 3 have established a Support System for the capability, which leverages the significant configuration commonality between the F/A-18F Super Hornet and the EA-18G Growler. Existing support contracts have been modified to include sustainment products and services for the EA-18G Growler, in a similar way to that already in place for the F/A-18F Super Hornet. In addition, US Government FMS cases delivering sustainment products and services have been amended or replaced with arrangements including both F/A-18F and EA-18G systems. Notably, consistent with the Air Combat Capability Transition Review outcomes agreed by Government, the majority of F/A-18F and EA-18G aircrew training has moved to the US as No.6 Squadron has changed from being the F/A-18F training squadron to the EA-18G operational squadron. No. 1 Squadron will retain some Super Hornet aircrew training responsibilities.</p> <p>Further Government approval in April 2017 provides for acquisition and integration of CEA threat training systems into the MTES.</p> <p>In January 2018 an incident involving an in-service EA-18G aircraft occurred in the US at Nellis Air Force Base (near Las Vegas). Investigations into the incident have been completed and the aircraft has since been classified unrepairable and disposal actions have commenced. The project is working closely with Air Force regarding the development of possible replacement options.</p>
<p><b>Uniqueness</b></p> <p>Noting that AIR5349 Phase 3 shares many common aspects with AIR5349 Phase 1 and the acquisition of the F/A-18F Super Hornet, the primary area of uniqueness resides in the introduction of an offensive radio frequency Electronic Attack capability, and the underpinning materiel enablers for this new warfare domain for the ADF.</p>
<p><b>Major Risks and Issues</b></p> <p>Several risks have been identified with supply of MTES hardware to meet schedule, as well as the timely establishment of MTES operation and maintenance support contracts.</p> <p><b>The emergent issue of the COVID-19 pandemic is likely to cause disruption to schedule and additional costs due to the travel and workplace restrictions imposed. It is too soon to quantify these impacts, however the project is proactively replanning to minimise the impacts on the remaining milestones.</b></p> <p><b>There is a risk that Growler utilisation may be restricted by a lack of process, people and ICT tools to manage joint electromagnetic spectrum operations. The project has provided funding to develop frameworks and doctrine in support of Joint activities.</b></p> <p>There is an <b>issue</b> that some stores variants will not be fully cleared for use on Growler in time for Materiel Release 5. This will be mitigated by early release of training variants <b>and time-limited interim clearances.</b></p> <p>Late delivery of MTES systems and some Advanced MTES systems is being mitigated through additional use of US training ranges. Late delivery of MTES systems was a caveat to the declaration of IOC.</p> <p>Current accreditation and assurance policy and processes are not structured to accommodate the unique elements of the MTES. <b>Mitigating procedures have been developed</b> to minimise <b>any</b> impact on aircrew training outcomes while suitable modifications to the accreditation framework are developed.</p>
<p><b>Other Current Related Projects/Phases:</b></p> <p><b>AIR 5349 Phase 1 – Bridging Air Combat Capability:</b> Provision of 24 F/A-18F Super Hornets and associated supplies and support. Some AIR 5349 Phase 1 delivered supplies will be shared with AIR 5349 Phase 3. AIR 5349 Phase 3 will augment AIR 5349 Phase 1 delivered support arrangements.</p> <p><b>AIR 5349 Phase 2 – Bridging Air Combat Capability Weapons:</b> Provision of Air-to-Air and Air-to Surface Weapons and expendables for the F/A-18F Super Hornet. AIR 5349 Phase 2, through a Memorandum of Agreement (MOA) with AIR 5349 Phase 3, is managing the acquisition and introduction into service of the EA-18G weapons (AIM-120 AMRAAM, AIM-9X Sidewinder, AGM-88B HARM and AGM-88E AARGM) and expendables.</p> <p><b>AIR 5349 Phase 6 – Advanced Growler:</b> Establishing a co-operative agreement with USN to develop replacement jamming capability, further Electronic Attack capability development activities and acquisition of anti-radiation weapons.</p>
<p><b>Note</b></p>
<p>Major risks and issues are excluded from the scope of the Auditor-General's Independent Assurance Report.</p>

## Section 2 – Financial Performance

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

Date	Description	\$m	Notes
	<b>Project Budget</b>		
Aug 12	Original Approved	1,155.3	1
Apr 13	Subsequent Second Pass Approval – New build aircraft	1,486.1	2
Apr 13	<b>Total at Second Pass Approval</b>	<b>2,641.4</b>	
Dec 14	Real Variation – Scope	200.6	3
Jan 16	Real Variation – Financial Reduction	(267.9)	4
Nov 16	Real Cost Decrease	(100.0)	5
May 17	Real Variation – Scope (ADV MTES)	102.7	6
Aug 17	Real Variation – Financial Reduction	(27.0)	10
		<b>(91.6)</b>	
Jun 20	Exchange Variation	<b>956.1</b>	
	<b>Total Budget</b>	<b>3,505.9</b>	
	<b>Project Expenditure</b>		
Prior to Jul 19	Contract Expenditure – US Government (AT-P-SCI)	<b>(1,304.1)</b>	7
	Contract Expenditure – US Government (AT-P-LEN)	<b>(640.3)</b>	7
	Contract Expenditure – US Government (AT-P-GUW)	<b>(97.5)</b>	7
	Contract Expenditure – US Government (AT-D-YLB)	(69.3)	7
	Contract Expenditure – US Government (AT-P-AZN)	(63.3)	7
	Contract Expenditure – US Government (AT-P-GTM)	<b>(61.4)</b>	7
	Contract Expenditure – CEA Technologies	<b>(56.6)</b>	7
	<b>Contract Expenditure – Raytheon Australia</b>	<b>(15.1)</b>	<b>7, 11</b>
	Other Contract Payments / Internal Expenses	<b>(120.3)</b>	8
		<b>(2,427.9)</b>	
FY to Jun 20	Contract Expenditure – US Government (AT-P-GUW)	<b>(36.2)</b>	7
	<b>Contract Expenditure – US Government (AT-P-SCI)</b>	<b>(28.1)</b>	7
	<b>Contract Expenditure – US Government (AT-P-LEN)</b>	<b>(22.7)</b>	7
	<b>Contract Expenditure – US Government (AT-P-GTM)</b>	<b>(7.3)</b>	7
	<b>Contract Expenditure – US Government (AT-D-YLB)</b>	<b>(3.3)</b>	7
	<b>Contract Expenditure – CEA Technologies</b>	<b>(9.1)</b>	7
	<b>Contract Expenditure – Raytheon Australia</b>	<b>(18.2)</b>	<b>7, 11</b>
	<b>Other Contract Payments / Internal Expenses</b>	<b>(36.0)</b>	9
		<b>(160.9)</b>	
Jul 20	<b>Total Expenditure</b>	<b>(2,588.8)</b>	
Jul 20	<b>Remaining Budget</b>	<b>917.1</b>	
<b>Notes</b>			
1	Government approval in August 2012 for modification of Super Hornet aircraft to EA-18G Growler configuration and acquisition of associated Electronic Attack equipment.		
2	Government approval in April 2013 to change acquisition strategy to acquisition of new-build aircraft rather than modification of existing aircraft.		
3	Government approval in December 2014 for inclusion of Growler Enabling capabilities – MTES and RTS Weapons.		
4	Real Cost reduction – MAA 3.1 amendment processed January 2016 – for transfer of project funds to offset Growler Facilities funding shortfall, and return of surplus funds to the Defence Capability Plan.		
5	Real Cost Decrease – MAA 3.2 amendment processed September 2016 – representing a reduction of Project Contingency due to the mitigation of aircraft production risk.		
6	Government approval in April 2017 for acquisition and integration of CEA systems into the MTES.		
7	The scope of this contract is explained further in Section 2.3 – Details of Project Major Contracts.		
8	Other expenditure comprises: Operating expenditure, contractors, consultants, other capital expenditure not attributable to the aforementioned contracts and minor contract expenditure.		
9	Other Expenditure comprises: DELAWR Facilities work <b>(\$19.2m)</b> , Commercially Contracted resource support <b>(\$11.5m)</b> Operational Test and Evaluation activities <b>(\$1.4m)</b> , and FMS Weapons procurement – Case AT-P-AYW <b>(\$1.9m)</b> . Remaining expenditure <b>(\$2.0m)</b> comprises: Operating expenditure, and other capital expenditure not attributable to the aforementioned contracts and minor contract expenditure.		
10	Project contribution to investment program rebalancing activity has been formally recognised as real cost reduction with V4.1 MAA submission and approval mid-2018.		
11	<b>Expenditure relating to this contract in prior years was disclosed in Other Contract Payments/Internal Expenses.</b>		

### Project Data Summary Sheets

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## 2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
128.6	174.3	173.6	PBS–PAES: The variation reflects the financial programming requirements for Foreign Military Sales payments from 2018-19 into 2019-20.  PAES–Final Plan: Latest Plan reflects BE20-21 submission. Overall variance to AE19-20 is minor. Some CEA ADV MTES payments will now be delayed until FY20-21, allowing for some MTES FMS payments to be brought forward in FY19-20.
Variance \$m	45.7	(0.7)	Total Variance (\$m): 45.0
Variance %	35.5	(0.4)	Total Variance (%): 35.0

## 2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(9.0)	Australian Industry	The variation is due to delays associated with the advanced mobile threat training emitter systems production and invoicing.
			Foreign Industry	
			Early Processes	
		(12.7)	Defence Processes	
		9.0	Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
173.6	160.9	(12.7)	Total Variance	
		(7.3)	% Variance	

## 2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 20 \$m			
US Government (AT-P-LEN)	Aug 12	944.2	721.7	Reimbursement	FMS	1,2,7
US Government (AT-P-AZN)	May 13	36.2	80.8	Reimbursement	FMS	1,2
US Government (AT-P-SCI)	Jul 13	1,313.1	1,421.2	Reimbursement	FMS	1,2,8
US Government (AT-P-GTM)	Sep 13	19.3	199.2	Reimbursement	FMS	1,2,3
US Government (AT-P-GUW)	Feb 15	88.6	158.4	Reimbursement	FMS	1,2,5
US Government (AT-D-YLB)	Feb 15	84.6	93.4	Reimbursement	FMS	1,2,4,9
CEA Technologies Pty Ltd	Jun 17	87.3	91.6	Firm	Official Order	1,2,6
Raytheon Australia	Aug 17	24.9	44.9	Variable (cost reimbursement)	Survey & Quote	1,2,10
Notes						
1	Contract value as at 30 June 2020 is based on actual expenditure to 30 June 2020 and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable).					
2	The scope of this contract is explained further below.					
3	The large increase in the value of this contract reflects an increase in the training already being procured.					
4	This contract is for the acquisition of AMRAAM missiles and is being managed by Guided Weapons Branch through an FMS case established as part of the AIR 5349 Phase 2 Bridging Air Combat Capability Project.					
5	The value of this contract has increased to reflect higher actual costs for equipment being procured to support the MTES capability.					
6	This contract is for the acquisition of the Advanced MTES CEA Technologies Pty Ltd systems. The contract value has increased due to a contract change to remove redundant capabilities from the contract scope, while incorporating emergent user requirements to address maturing training needs.					
7	The contract value for AT-P-LEN was decreased significantly in June 2018, with the realisation of savings across a range of supplies and support services.					
8	The contract value for AT-P-SCI was decreased significantly in June 2019, with the realisation of savings across a range of supplies and support services.					
9	The contract value for AT-D-YLB was decreased significantly in February 2020, with the realisation of savings across a range of supplies and support services.					

10	This contract is for the provision of acquisition support, integration, verification and validation services. The contract was extended in September 2019.			
Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 20		
US Government (AT-P-LEN)	Various	Various	Advanced Electronic Attack Kits, ALQ99 TJSs, Launchers, Launch computers, Joint Mission Planning System and Software.	
US Government (AT-P-AZN)	Various	Various	HARM and AARGM training missiles, tactical missiles, associated support equipment and training.	
US Government (AT-P-SCI)	12	12	EA-18G aircraft, associated spares and support equipment.	
US Government (AT-P-GTM)	N/A	N/A	Initial Aircrew and Maintenance Training.	
US Government (AT-P-GUW)	Various	Various	EW training ranges systems including threat emitter systems, range control and debrief systems, associated IT, spares, support equipment, integration and test services.	
US Government (AT-D-YLB)	Various	Various	Weapons – AIM-120 C7 AMRAAM air-to-air missiles and associated support equipment and infrastructure.	
CEA Technologies Pty Ltd	Various	Various	Advanced MTES – CEA Technologies Pty Ltd systems – various threat emulation systems, support equipment and services.	
Raytheon Australia	N/A	N/A	Acquisition support, integration, verification and validation services.	
Major equipment accepted and quantities to 30 Jun 20				
Transfer of ownership for aircraft procured under ATPSCI commenced in Jan 17 and transfer of all 12 aircraft is now complete. Upgrade of the two existing Tactical Operational Flight Trainers (TOFTs) to enable both F/A-18F and EA-18G training. New built TOFTs were installed and declared ready for training.				
Delivery of the H12(A) Software configuration set and associated flight clearance recommendation.				
Four Mobile Radar Threat Simulators (MRTS) were accepted into operational service for the MTES Queensland range.				

### 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	EA-18G Aircraft	N/A – Military Off the Shelf				
	Aircraft Software – SCS H10A	Jan 14	N/A	Jan 14	0	
	Mission Planning System	May 14	N/A	May 14	0	
	ALQ-99 TJS	N/A – Military Off the Shelf				
	Modified TOFTs	Nov 14	N/A	Jul 15	8	1,3
	New-build TOFTs	Nov 14	N/A	Apr 15	5	2
	Modified Integrated Visual Environment Maintenance Trainers (IVEMTs)	Nov 14	N/A	Jul 15	8	3
Preliminary Design	EA-18G Aircraft	N/A – Military Off the Shelf				
	Aircraft Software SCS H10A	Jun 14	N/A	Jun 14	0	4
	Mission Planning System	Aug 14	N/A	Sep 14	1	
	ALQ-99 TJS	N/A – Military Off the Shelf				
	Modified TOFTs	May 15	N/A	Aug 15	3	1,3
	New-build TOFTs	May 15	N/A	Mar 16	10	2
	Modified IVEMTs	May 15	N/A	Oct 15	5	3
Critical Design	EA-18G Aircraft	N/A – Military Off the Shelf				
	Aircraft Software SCS H10A	Jun 14	N/A	Jun 14	0	4
	Mission Planning System	Sep 14	N/A	Jan 15	4	
	ALQ-99 TJS	N/A – Military Off the Shelf				
	Modified TOFTs	May 15	N/A	Aug 15	3	1,3
	New-build TOFTs	May 15	N/A	Mar 16	10	2
	Modified IVEMTs	May 15	N/A	Oct 15	5	3
Notes						
1	Modified TOFT's contract awarded April 2015.					

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2	Revised date reflects post contract award schedule.
3	Revised date reflects delay in contract award and updated schedule.
4	SCS H10A Preliminary Design Review (PDR) and Critical Design Review (CDR) (held by US Navy) was a combined event, hence dates are the same.

### 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	EA-18G Aircraft	Jun 16	N/A	Jul 16	1	1
	Aircraft SCS H10A	Jul 16	N/A	Jul 16	0	1
	Mission Planning System	Jul 16	N/A	Jul 16	0	1
	ALQ-99 TJS	Jul 16	N/A	Jul 16	0	1
	Modified TOFTs	Sep 16	N/A	Jul 17	10	2
	New-build TOFTs	Sep 17	N/A	Aug 18	11	3
	Modified IVENTs	Oct 16	N/A	Sep 16	(1)	
	MTTES–Queensland Ranges	Oct 17	N/A	May 19	19	4
	MTTES – Northern Australian Ranges	Mar 19	N/A	Nov 21	32	5
Acceptance	EA-18G Aircraft	Jul 16	N/A	Jul 16	0	1
	Aircraft Software –SCS H10A	Jul 16	N/A	Jul 16	0	1
	Mission Planning System	Jul 16	N/A	Jul 16	0	1
	ALQ-99 TJS	Jul 16	N/A	Jul 16	0	1
	Modified TOFTs	Jan 17	N/A	Jul 17	6	2
	New-build TOFTs	Sep 17	N/A	Aug 18	11	3
	Modified IVENTs	Nov 16	N/A	Nov 16	0	
	MTTES–Queensland Ranges	Oct 17	N/A	May 19	19	4
	MTTES – Northern Australian Ranges	Mar 19	N/A	Nov 21	32	5
<b>Notes</b>						
1	US Navy conduct a combined development and acceptance test program encompassing aircraft, SCS H10A, mission planning system, stores integration testing including the ALQ-99 TJS. Accordingly, dates for system integration and acceptance testing reflect the same schedule window.					
2	Modification of the TOFTs was deliberately delayed as a risk mitigation activity which ensures that US based TOFT upgrades will be completed prior to execution of the Australian based TOFT upgrade. The TOFTs were accepted with known deficiencies requiring remediation.					
3	Delay to new build TOFTs was caused by limited contractor availability to conduct the installation at Amberley.					
4	MTTES – Queensland range schedule has been delayed to accommodate a revised integration and certification strategy that incrementally delivers training capability.					
5	MTTES – Northern Australian range schedule is delayed due to delivery of long-lead items being later than planned and the complexity of in-country integration. <b>COVID-19 related international travel restrictions have further delayed in-country integration by US suppliers.</b> Training capability will be delivered incrementally out to Final Operating Capability.					

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

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Feb 17	Feb 17	0	1
In-Service Date (ISD)	Jan 17	Jan 17	0	
Initial Operational Capability (IOC)	Jul 18	Feb 19	7	2
Materiel Release 2 (MR2) MTTES QLD	Oct 17	Sep 19	23	3
Materiel Release 3 (MR3) Various systems	Jul 18	Sep 18	2	
Materiel Release 4 (MR4) MTTES Northern Australia	Mar 19	Nov 21	32	4
Materiel Release 5 (MR5) ADV MTTES, Additional Stores and Stores clearances	Jul 19	Nov 20	16	6
Materiel Release 6 (MR6) MTTES Northern Australia	Mar 20	Mar 22	24	7
Materiel Release 7 (MR7) ADV MTTES	Jul 20	Aug 21	13	8
Materiel Release 8 (MR8) ADV MTTES	Jul 21	Sep 21	2	9
Final Materiel Release (FMR)	Jul 22	Aug 22	1	

Final Operational Capability (FOC)		Jul 22	Aug 22	1	5
Note					
1	IMR was declared with Caveats on 14 February 17. The caveats related to late delivery of the upgrade of the TOFTs and late delivery of the Aircrew computer based training, and were resolved in 2017-18.				
2	IOC was due in July 2018 and evidence to support the declaration was supplied by the Project by that date. IOC was declared with one caveat relating to in-country training (late delivery of MTES systems). See Section 5.2 for more details. Achievement and declaration of operational capability milestones is a decision made by the Chief of the Air Force (CAF) based upon the maturity of all relevant areas of the fundamental inputs to capability (FIC), inclusive of those elements for which the project is responsible. CAF considered the elements of FIC sufficiently mature to declare Initial Operating Capability in February 2019.				
3	MR2 was delayed to accommodate a revised integration and certification strategy for the MTES – Queensland schedule that incrementally delivers training capability. <b>The majority of the MTES QLD mission equipment was accepted into operational service in April 19, however a minor technical issue delayed achievement of MR2 until September 19. The Capability Manager is expected to concur with achievement of MR2 in July 2020</b>				
4	MR4 has been delayed as some materiel components for the MTES- Northern Australian Ranges <b>have not been delivered on time. Range Integration has been postponed due to COVID-19 related international travel restrictions. The United States Government (USG) and Commonwealth of Australia (CoA) have continued to make progress toward achieving delivery in November 2021, including activating MTES subsystems as they become available. This includes in-country CoA contractors performing hands-on installation efforts with USG virtual technical support.</b>				
5	In January 2018 an incident involving an in-service EA-18G aircraft occurred in the US at Nellis Air Force Base (near Las Vegas). The project is working closely with Air Force regarding the development of possible replacement options. Declaration of FOC may be affected.				
6	MR5 delivery of initial materiel and support system for ADV MTES in Queensland running behind schedule due to delays in production and documentation. <b>Range acceptance testing has been delayed due to COVID-19 related domestic travel restrictions.</b>				
7	MR6 is dependent on achievement of MR4 and integration of additional FMS materiel, which have also been delayed in production.				
8	ADV MTES materiel components of MR7 delayed due to uncertainties in design source data.				
9	<b>There has been a minor delay to the production of the ADV MTES system associated with MR8.</b>				
<b>Schedule Status at 30 June 2020</b>					
<div><div>Schedule Plan at Government Approval</div><div>Schedule Plan at 30 June 2020</div></div> <div><div>Approval</div><div>IMR</div><div>IOC</div><div>FMR</div><div>FOC</div></div>					
Note					
Forecast dates in Section 3 are excluded from the scope of the Auditor-General's Independent Assurance Report.					

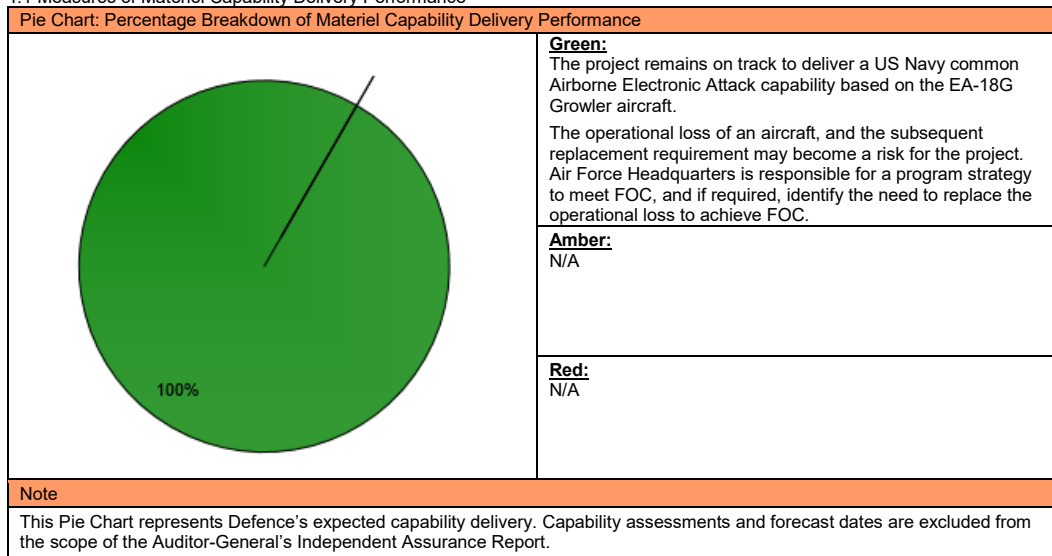
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## Section 4 – Materiel Capability Performance

### 4.1 Measures of Materiel Capability Delivery Performance



### 4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	<ul style="list-style-type: none"> <li>At least six new-build EA-18G aircraft in USA and associated equipment delivered to support Initial Operational Test and Evaluation (IOT&amp;E) programs.</li> <li>Sufficient aircrew and maintenance personnel to support Growler operations from ISD.</li> <li>Initial in-country aircrew training.</li> </ul> <p>IMR was declared on 14 February 2017 with caveats. The caveats associated with this declaration have since been satisfied.</p>	Achieved with caveats
Initial Operational Capability (IOC)	<ul style="list-style-type: none"> <li>Six Growler aircraft delivered and sufficient aircrews trained in Growler employment to meet contemporary limited preparedness requirements;</li> <li>Sufficient ALQ-99 assets delivered to support training and enable Growler operations in one area of operations (AO);</li> <li>In-country logistics and operational support, not including electronic warfare suite support;</li> <li>US-provided electronic warfare suite support;</li> <li>Ability to deploy within AS and near region to conduct Growler operations in a single AO;</li> <li>In-country aircrew currency training and maintenance training capability;</li> <li>Growler facilities completed, occupied and operational; and</li> <li>MTC and MAOC.</li> <li>Air Force declared achievement of IOC in February 2019 with one caveat.</li> </ul>	Achieved with caveat
Final Materiel Release (FMR)	<ul style="list-style-type: none"> <li>All 12 EA-18G aircraft delivered.</li> <li>All assets, equipment and spares delivered.</li> <li>All acquisition tasks completed and transitioned to sustainment organisation completed.</li> <li>MTES operating at the Queensland and Northern Australian ranges.</li> </ul> <p>FMR is a future dated milestone projected for <b>August 2022</b>.</p>	Not yet achieved
Final Operational Capability (FOC)	<ul style="list-style-type: none"> <li>Twelve Growler aircraft delivered and sufficient aircrew trained in Growler employment to meet contemporary preparedness requirements.</li> <li>All ALQ-99 assets delivered.</li> <li>Mature in-country logistics and operational support for training and deployment to two locations.</li> </ul>	Not yet achieved

	<ul style="list-style-type: none"> <li>The ability to deploy within AS and overseas to conduct Growler operations concurrently in one major and one minor AO.</li> </ul> <p>FOC is a future dated milestone currently projected for August 2022.</p>	
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## Section 5 – Major Risks and Issues

### 5.1 Major Project Risks

Identified Risks (risk identified by standard project risk management processes)	
Description	Remedial Action
There is a possibility that the level of Australian unique development required to meet the MTES requirements will need design, manufacture, integration and certification effort that cannot be completed within the MAA milestone dates (MR4 & MR6).	MTES has established an incremental delivery strategy due to delays for some long-lead items. MTES final increment deliveries will coincide with Growler FOC. During each increment of capability, the team will aim to identify areas of greatest technical risk and treat as appropriate.
There is a possibility that the Growler utilisation will be restricted by a lack of process, people and ICT tools to manage joint electromagnetic spectrum operations leading to reduced capability.	<b>The project has provided funding for the Growler Innovation Support Team to manage the development of doctrine and processes.</b>
Emergent Risks (risk not previously identified but has emerged during 2019-20)	
N/A	N/A

### 5.2 Major Project Issues

Description	Remedial Action
Late Delivery of MTES Systems and Advanced MTES Systems for Queensland and Northern Australia training ranges. <b>This issue constituted a caveat to the IOC milestone.</b>	Certification of MTES Prime Products for Queensland was <b>completed in September 19. Ongoing delays relating to Northern Australia training ranges</b> are being mitigated by use of alternative systems and an incremental approach to the delivery of training capability. Additional US based training has been <b>undertaken</b> to ensure aircrew training is accomplished. <b>The support contract with CEA Technologies is being negotiated.</b>
Current accreditation and assurance policy and processes are not structured to accommodate the unique elements of the MTES.	Relevant accreditation authorities have been identified and engaged. Procedural work-arounds are being used to minimise the impact on aircrew training outcomes while suitable modifications to the accreditation framework are developed.
<b>Disruption due to effects of COVID-19 Pandemic.</b>	<b>The project is experiencing significant disruption to schedule and additional costs due to the travel and workplace restrictions associated with the COVID-19 outbreak. The project is replanning to minimise the risk of delay to FMR, but delays to interim Materiel Releases are almost certain.</b>
<b>Some stores configurations will not be cleared for Growler use by MR5.</b>	<b>This was an emergent risk in 2018-19 that has now become a major project issue. Priority is being given to releasing training capabilities while working with DASA and Boeing to streamline the clearance process.</b>
Note	
Major risks and issues in Section 5 are excluded from the scope of the Auditor-General's Independent Assurance Report.	

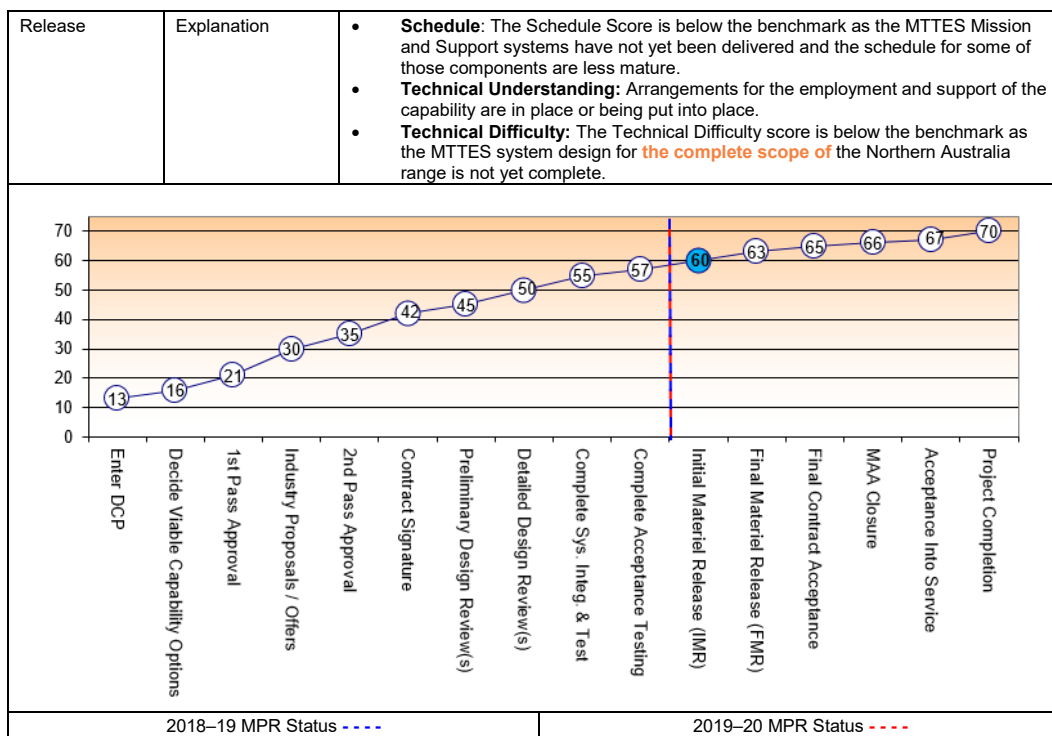
## Section 6 – Project Maturity

### 6.1 Project Maturity Score and Benchmark

Maturity Score		Attributes							Total
		Schedule	Cost	Requirement	Technical Understanding	Technical Difficulty	Commercial	Operations and Support	
Project Stage	Benchmark	10	8	8	8	9	8	9	60
Initial Materiel	Project Status	8	8	8	9	8	8	9	58

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## Section 7 – Lessons Learned

### 7.1 Key Lessons Learned

Description	Categories of Systemic Lessons
For appropriate management according to Defence best practice benchmarks, allocation of project management resources is required immediately on project approval, particularly for projects with primarily FMS acquisition strategies. These projects inherently experience significant lag between Second Pass approval and schedule and financial management maturity, due to the lag between FMS case establishment and initial prime acquisition contracts when compared to commercially based acquisitions. The delay in achieving maturity benchmarks are only exacerbated when resourcing is not applied early in the acquisition life cycle.	Resourcing
Workforce planning considerations need to capture project drawdown and closure resourcing requirements. If the project workforce is reduced too early, or if key roles are not maintained there is risk to project performance and good governance.	Resourcing

## Section 8 – Project Line Management

### 8.1 Project Line Management as at 30 June 2020

Position	Name
Division Head	AVM Gregory Hoffmann
Branch Head	AIRCDRE Gerry Van Leeuwen
Project Director	Ms Justine Baker
Project Manager	WGCDR Andrew McRae



## Project Data Summary Sheet<sup>159</sup>

Project Number	<b>LAND 121 Phase 3B</b>
Project Name	<b>OVERLANDER VEHICLES (MEDIUM AND HEAVY VEHICLES, MODULES AND TRAILERS)</b>
First Year Reported in the MPR	2013-14
Capability Type	Replacement
Acquisition Type	Australianised MOTS
Capability Manager	Chief of Army
Government 1st Pass Approval	Jun 04 – Phase 3 Dec 11 – Phase 3B
Government 2nd Pass Approval (or key Government pre-Second Pass Approval)	Aug 07 – Phase 3 Jul 13 – Phase 3B
Budget at 2 <sup>nd</sup> Pass Approval (or key Government pre-Second Pass Approval)	\$3,284.7m
Total Approved Budget (Current)	<b>\$3,398.6m</b>
2019-20 Budget	<b>\$259.9m</b>
Project Stage	Initial Materiel Release
Complexity	ACAT I



Overlander Med./Heavy

### Section 1 – Project Summary

#### 1.1 Project Description

LAND 121 Phase 3 was established to replace the current fleet of Australian Defence Force (ADF) Field Vehicles, Modules and Trailers (FVM&T) and will enhance the ground mobility of the ADF.

In December 2011, Government approved the splitting of LAND 121 Phase 3 into two projects:

- LAND 121 Phase 3A – Lightweight and Light Capability (LLC), incorporating the approved Phase 5A; and
- LAND 121 Phase 3B – Medium and Heavy Capability (MHC).

LAND 121 Phase 3B will upgrade and replace the existing medium and heavy vehicle and trailer fleet. Vehicles (protected and unprotected) consisting of nine variants, will be introduced by the project including cargo, tractor, recovery and tanker functions. Ten trailer variants for general cargo, equipment transport, and tanker capability will also be acquired. Fleet flexibility will be supplemented by flatracks and modules that will permit the rapid deployment of stores (including maintenance and combat engineering), fuel and water tankers and specialist bridging capabilities.

The following vehicles, trailers and modules will be acquired:

- 2,536 MHC vehicles and 3,054 modules supplied by Rheinmetall MAN Military Vehicles Australia (RMMVA);
- 1,582 trailers from Haulmark Trailers (Australia);
- 122 Geländewagen (G-Wagon) fitted with maintenance modules supplied by Mercedes-Benz Australia / Pacific Pty Ltd and associated trailers supplied by Haulmark Trailers (Australia) Pty Ltd (HTA), acquired by LAND 121 Phase 3A;
- 49 in-service Bushmaster Protected Mobility Vehicles upgraded to customised General Maintenance Vehicle variants and associated trailers;
- 18 Line Laying Modules acquired by LAND 121 Phase 3A; and
- A further **664** specialist modules are to be acquired.

#### 1.2 Current Status

##### Cost Performance

###### In-year

As at **30 June 2020**, financial year **2019-20** expenditure was **\$269.4m** against a budget of **\$259.9m**. The EOFY variation is primarily due **the achievement of several milestones ahead of schedule**.

##### Project Financial Assurance Statement

#### 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 Assurance Report* by the Auditor-General in **Part 3** of this report.

As at **30 June 2020**, project LAND 121 Phase 3B has reviewed the **projects** approved scope and budget for those elements required to be delivered by **Defence**. Having reviewed the current financial and contractual obligations of **Defence**, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget remaining for the project to complete against the agreed scope.

#### Contingency Statement

The project has not applied contingency funds in the financial year.

#### Schedule Performance

Phase 3B has progressed through the design phases for all contracted vehicles, modules and trailers, **with the exception of the specialist modules**.

While Stop Payments have **previously** been invoked on RMMVA, the RMMV Executive Board continues to monitor contract performance and progress in the achievement of targets.

Haulmark Trailers (Australia) Pty Ltd (trailers) continue to provide deliverables as required under the contract.

The Project achieved the Initial Materiel Release (IMR) milestone in November 2018, ahead of the scheduled date of December 2018 and **achieved** Initial Operational Capability (IOC) by the originally planned date of December 2019. **Schedule management remains a key focus, however Final Materiel Release and Final Operational Capability remain on track as scheduled for December 2022 and December 2023, respectively.**

#### Materiel Capability Delivery Performance

Affordability will impact the overall capability, with costs being managed by maximising off-the-shelf solutions.

As at **30 June 2020** RMMVA has delivered **2,536** of 2,536 vehicles and **2,849** of 3,054 modules.

Haulmark Trailers Australia (HTA) has delivered **1,408** of 1,582 matched trailers.

#### 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 LAND 121 is a multi-phased project to provide the ADF with the FVM&T and associated support systems to meet ADF mobility requirements including logistic distribution, command and liaison, casualty evacuation, troop lift, and the provision of mobility for specialist assets such as command shelters and communications terminals.

At the time Government approved LAND 121 Phase 3 the ADF's FVM&T fleet consisted of some 7,300 vehicles and 3,700 trailers acquired progressively from 1959. By 2008, 98 percent of the current assets had exceeded their life of type. The fleet was increasingly costly to maintain, repair and operate. Furthermore, the increased operational tempo from 1999 has compounded the challenges faced by the fleet to provide the mobility needs required by the ADF.

LAND 121 Phase 3 was approved in August 2007 to acquire 1,187 Mercedes-Benz G-Wagons, and 973 matching trailers from HTA. In August 2011, Government approved the acquisition of an additional 959 G-Wagons and 826 trailers under LAND 121 Phase 5A via the contracts negotiated for Phase 3.

Phase 3 was also intended to acquire medium and heavy FVM&T; however, the Commonwealth withdrew from negotiations with the preferred tenderer, and a tender resubmission process was initiated in December 2008. In December 2011, Defence announced negotiations would commence with the preferred tenderers, RMMVA for the MHC vehicle and module requirements and with HTA for the MHC trailer requirements.

Strictly, **Military Off The Shelf (MOTS)** items were not considered appropriate as modifications are required to achieve:

- Compliance with Australian Design Regulations;
- A requirement for vehicles to interface with in-service and new Australian designed trailers and modules; and
- Integrate with in-service communication equipment.

In a related decision at the same time, Government approved the splitting of LAND 121 Phase 3 into two projects: LAND 121 Phase 3A for the LLC approved under Phase 3 and amalgamating this with the additional scope approved under Phase 5A; and LAND 121 Phase 3B to progress the Phase 3 MHC scope elements. This decision effectively closed Phase 3 and amounted to a combined pass approval for the new Phase 3A and an 'interim pass' approval for the new Phase 3B. The December 2011 approval allowed the continuation of contracted activities toward the LLC acquisition and the ongoing negotiations for the MHC contracts for Phase 3B. Phase 3B was required to seek a supplementary second pass approval following contract negotiations.

The Phase 3A LLC Contract Amendments were executed in January 2012 and Phase 3B achieved second pass approval in July 2013 and contracts were executed shortly after.

#### Uniqueness

LAND 121 Phase 3B is to deliver the FVM&T capability to multiple locations throughout Australia and on operational service overseas. This presents a unique logistic challenge in having a robust Support System that will achieve stated availability requirements for the lowest life cycle cost.

#### Major Risks and Issues

The project is currently managing the following major risks:

- **Bridge Boat Interface (BBI) Vertical Launch and Recovery.**

The project is also managing the following project issues:

- **Finalisation of User Requirements for uncontracted specialist modules;**
- **Air Movements Training and Development Unit (AMTDU) certification;**
- **MHC Program Integration and Interface;**
- **Impact of COVID-19; and**
- **RMMVA's Achievement of Final Acceptance.**

#### Other Current Related Projects/Phases

LAND 121 is a multi-phased project providing the ADF with current-generation high-capability field vehicles, modules and trailers. Other LAND 121 projects are:

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**LAND 121 Phase 4** will acquire and deliver into service 1,100 Protected Mobility Vehicles – Light (PMV-L) and 1,058 associated trailers. The PMV-L will perform command, reconnaissance, liaison and utility roles.

**LAND 121 Phase 5B**, approved in June 2018, will acquire and deliver into service an additional (to Phase 3B) 1,044 vehicles with 872 modules and 812 trailers.

#### Note

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

## Section 2 – Financial Performance

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

Date	Description	\$m	Notes
<b>Project Budget</b>			
Dec 11	At Original Approval (Phase 3 Project Budget prior to split into 3A and 3B)	3,237.7	1
Jun 12	Exchange Variation	(66.5)	
	Budget as at 30 June 2012	3,171.2	
Jul 12	Real Variation - Scope (Funds retained by 3A)	(622.0)	2
	<b>At Original Approval (Phase 3B Project Budget after split from Phase 3)</b>	<b>2,549.2</b>	
Jul 12	Exchange Variation to opening budget	23.3	3
Jul 13	Real Variation - Scope	7.0	4
	Real Variation - Scope	21.0	5
	Real Variation - Project Supplementation	684.2	6
	<b>Total at Revised Second Pass Approval</b>	<b>3,284.7</b>	
Nov 18	Real Variation - Budgetary Adjustment	(30.0)	7
Jun 20	Exchange Variation	143.9	
	<b>Total Budget</b>	<b>3,398.6</b>	
<b>Project Expenditure</b>			
Prior to Jul 19	Contract Expenditure - Rheinmetall MAN Military Vehicles Australia (Acquisition)	(1,795.2)	
	Contract Expenditure - Haulmark Trailers (Aust) Pty Ltd (Acquisition)	(291.8)	
	Rheinmetall MAN Military Vehicles Australia (Support)	(11.6)	
	Other Contract Payments / Internal Expenses	(151.0)	8
		(2,249.6)	
FY to Jun 20	Contract Expenditure - Rheinmetall MAN Military Vehicles Australia (Acquisition)	(125.6)	
	Contract Expenditure - Haulmark Trailers (Aust) Pty Ltd (Acquisition)	(101.2)	
	Rheinmetall MAN Military Vehicles Australia (Support)	(3.8)	
	Other Contract Payments / Internal Expenses	(38.8)	9
		(269.4)	
Jun 20	<b>Total Expenditure</b>	<b>(2,519.0)</b>	
Jul 20	<b>Remaining Budget</b>	<b>879.6</b>	
<b>Notes</b>			
1	Phase 3 project budget prior to the split into Phase 3A and Phase 3B.		
2	Retention of Light Capability scope by LAND 121 Phase 3A.		
3	Update of exchange rates from approval to 2012–13 PBS rates.		
4	Transfer of funds from LAND 116 Phase 3 for acquisition of trailers.		
5	Transfer of funds from JP 2059 Phase 2 Bulk Liquid Distribution for acquisition of some vehicles and associated equipment to facilitate fuel and water transportation.		
6	Provision for general program supplementation associated with easing cost pressures identified during scoping for project approval, as per revised second pass approval.		
7	Budget Adjustment of \$30.0m was approved by Government in November 18. The \$30.0m adjustment from LAND 121 Phase 3B will be returned to the budget of LAND 121 Phase 5B in 2023-2024. LAND 121 Phase 5B relates to the acquisition and delivery into service of an additional 1,044 vehicles, 872 modules and 812 trailers. LAND 121 Phase 3B and LAND 121 Phase 5B are managed by the same project team at Defence.		
8	Other Expenses comprise of <b>(\$56.6m)</b> for the acquisition of G-Wagons by LAND 121 Phase 3A on behalf of LAND 121 Phase 3B, <b>(\$40.9m)</b> for salaries, <b>(\$17.9m)</b> for the Protected Mobility Vehicle, and <b>(\$35.6m)</b> for other project office costs not associated with the prime contracts.		
9	Other Expenses comprise of <b>(\$7.3m)</b> for the acquisition of G-Wagons by LAND 121 Phase 3A on behalf of LAND 121 Phase 3B, <b>(\$9.0m)</b> for salaries, <b>(\$3.3m)</b> for the Protected Mobility Vehicle, and <b>(\$19.2m)</b> for Other Project Office costs not associated with the prime contracts.		

### 2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
238.1	260.1	259.9	<b>PBS to PAES:</b> The variation is due primarily to <b>milestones carried over from FY 18/19</b> . <b>PAES to Final Plan:</b> Variance is due to <b>updates to exchange rates</b> .
Variance \$m	22.0	(0.2)	Total Variance (\$m): <b>21.8</b>
Variance %	9.2	(0.1)	Total Variance (%): <b>9.1</b>

### 2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(9.5)	Australian Industry	<b>'The EOFY variation is primarily due to the achievement of several milestones ahead of schedule.'</b>
			Foreign Industry	
			Early Processes	
			Defence Processes	
			Foreign Government	
			Negotiation/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
259.9	269.4	(9.5)	Total Variance	
		(3.7)	% Variance	

### 2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 20 \$m			
Rheinmetall MAN Military Vehicles Australia (Acquisition)	Jul 13	1,585.9	2,085.2	Variable	ASDEFCON	1, 2, 3
Haulmark Trailers (Australia) Pty Ltd (Acquisition)	Jul 13	397.7	505.7	Variable	ASDEFCON	1, 2
Rheinmetall MAN Military Vehicles Australia (Support)	Jul 13	32.3	46.7	Variable	ASDEFCON	1, 2
Notes						
1	Additional vehicles and trailers, worth \$28.3m and \$4.7m respectively, were funded and procured by LAND 121 Phase 3A, on behalf of the LAND 121 Phase 3B project.					
2	Contract value as at 30 June 2020 is based on actual expenditure to 30 June 2020 and remaining commitment at current exchange rates of EURO 0.6111 based on XR RBA on 30 June 2020, and includes adjustments for indexation (where applicable).					
3	Price at 30 June 2020 varies from Price at Signature due to contracted price escalation, and contract changes related to in-scope capability and support.					
Contractor	Quantities as at		Scope	Notes		
	Signature	30 Jun 20				
Rheinmetall MAN Military Vehicles Australia (Acquisition)	2,536	2,536	MHC vehicles with associated modules.	1		
Haulmark Trailers (Australia) Pty Ltd (Acquisition)	1,582	1,408	MHC Trailers.	1		
Rheinmetall MAN Military Vehicles Australia (Support)	N/A	N/A	MHC Support Contract for vehicles and modules.			
Major equipment accepted and quantities to 30 Jun 20						
As at 30 June 2020 Rheinmetall MAN Military Vehicles Australia has delivered 2,536 of 2,536 of the following vehicles:						
<ul style="list-style-type: none"><li>• Mediumweight Tray: all deliveries completed;</li><li>• Mediumweight Tray with Crane: all deliveries completed ;</li><li>• Mediumweight Tipper (dump): all deliveries completed;</li><li>• Heavy Integrated Load Handling: all deliveries completed;</li><li>• Heavy Tipper: all deliveries completed;</li><li>• Heavy Tractor: all deliveries completed;</li><li>• Medium Recovery : all deliveries completed;</li><li>• Heavy Recovery: all deliveries completed; and</li><li>• Heavy Tanker: all deliveries completed.</li></ul>						
and 2,849 of 3,054 of the following modules:						
<ul style="list-style-type: none"><li>• Flatracks: all deliveries completed;</li><li>• Bridge Boat Interface: all deliveries completed;</li><li>• Mediumweight Combat Engineer Section Stores: 89% Complete;</li><li>• Mediumweight Maintenance: 96% Complete;</li><li>• Mediumweight Stores: 67% Complete;</li><li>• Heavy Stores: 91% Complete;</li><li>• Heavy Bulk Fuel Pump and Storage: 81% Complete;</li></ul>						

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<ul style="list-style-type: none"> <li>Heavy Bulk Fuel Storage: <b>81% Complete</b>;</li> <li>Heavy Bulk Water Pump and Storage: <b>86% Complete</b>; and</li> <li>Heavy Bulk Water Storage: <b>90% Complete</b>;</li> <li><b>Command Post Module: delivery not yet commenced</b></li> </ul> <p>As at <b>30 June 2020</b> Haulmark Trailers (Australia) has delivered <b>1,408</b> of 1,582 of the following matched trailers:</p> <ul style="list-style-type: none"> <li>Medium weight Cargo trailers: <b>84% Complete</b>;</li> <li>Heavy ILH trailers: <b>all deliveries completed</b>;</li> <li>Heavy Equipment Trailers: <b>all deliveries completed</b>;</li> <li>Medium Equipment Transporters: <b>67% Complete</b>;</li> <li>Heavy Bulk Fuel Tankers: <b>all deliveries completed</b>;</li> <li>Heavy Equipment Transporters: <b>59% Complete</b>;</li> <li>Dolly Low Loaders: <b>all deliveries completed</b>;</li> <li>Heavy Cargo trailers: <b>all deliveries completed</b>;</li> <li>Heavy Bulk Water Tankers: <b>all deliveries completed</b>; and</li> <li>Dolly Road Trains: <b>45% Complete</b>.</li> </ul>
<b>Notes</b>
1 The quantity figures being communicated publicly excludes vehicle and trailer prototypes.

### Section 3 – Schedule Performance

#### 3.1 Design Review Progress

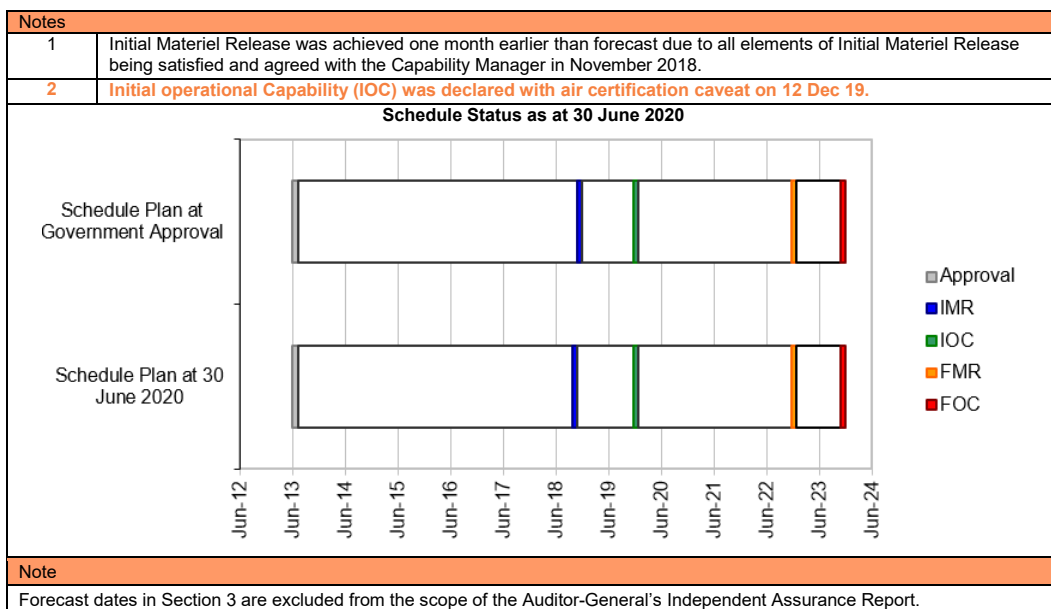
Review	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
Preliminary Design	Vehicles	Dec 14	Aug 15	Dec 15	12	1,2
	Modules	Aug 14	Feb 15	Mar 15	7	1,2
	Trailers	Jun 16	Jan 17	Jan 17	7	1,3
Detailed Design	Vehicles	May 15	Sep 16	Jun 17	25	1,2
	Modules	Nov 14	Jun 15	Mar 16	16	1,2
	Trailers	Jan 17	Jul 17	Jun 17	5	1,3
Critical Design	Vehicles	Aug 15	Jan 17	Dec 17	28	1,2
	Modules	Mar 15	Nov 15	Sep 16	18	1,2
<b>Notes</b>						
1	All dates represent the Approval of the exit for the Reviews of the last vehicle, module and trailer variants. All vehicles, contracted modules and trailers have now completed preliminary, detailed and critical design review processes.					
2	Vehicle and Module Variance is due to two replans. The first was due to major delays in finalisation of contracts between the prime contractor and its subcontractors. The second was an adjustment to the schedule by the contractor in order to reduce production risks by concentrating on the most mature vehicle variants and slower ramping up of Protected Vehicles.					
3	Trailer Variance is due to a change in scope by the CoA to Group C Trailers.					

#### 3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
System Integration, Acceptance Test and Evaluation (AT&E)	Vehicles	Jul 16	Aug 18	Sep 20	50	1,2,3,4,7
	Modules	Nov 15	Jun 17	Jul 20	56	1,2,3,4,5,7
	Trailers	Sep 17	May 18	Jun 18	9	1,6
<b>Notes</b>						
1	All dates represent the Approval of the Acceptance Verification Reports for the tests of the last vehicle, module and trailer variant.					
2	Delays by RMMVA to secure its subcontractor has impacted the completion of verification.					
3	Senior management attention (Defence and the RMMV Board) is expected to improve the schedule performance for completion of acceptance test and evaluation.					
4	Current Planned Date changes to Vehicles and Modules are IAW CCP064 signed 15 July 2016.					
5	A Contract Change Proposal IAW CCP 117 signed 13 July 2017 was executed to address an additional nine month variance associated with RMMVA sub-contractor, Holmwood Highgate delay in progressing the Liquid Module Program.					
6	Current Planned Date changes are IAW Group C Integrated Baseline Review (June 2016) outcomes and agreements.					
7	Revised Achieved/Forecast date relates to outcomes arising from remaining testing activities and associated AVRs for the Medium Recovery Vehicle. Final Acceptance Verification & Validation for this vehicle is scheduled to be finalised by September 2020. Revised Achieved/Forecast dates for the Bulk Liquid Modules relates to the resubmission of a number of Acceptance Verification Reports. These are expected to be finalised by July 2020.					

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

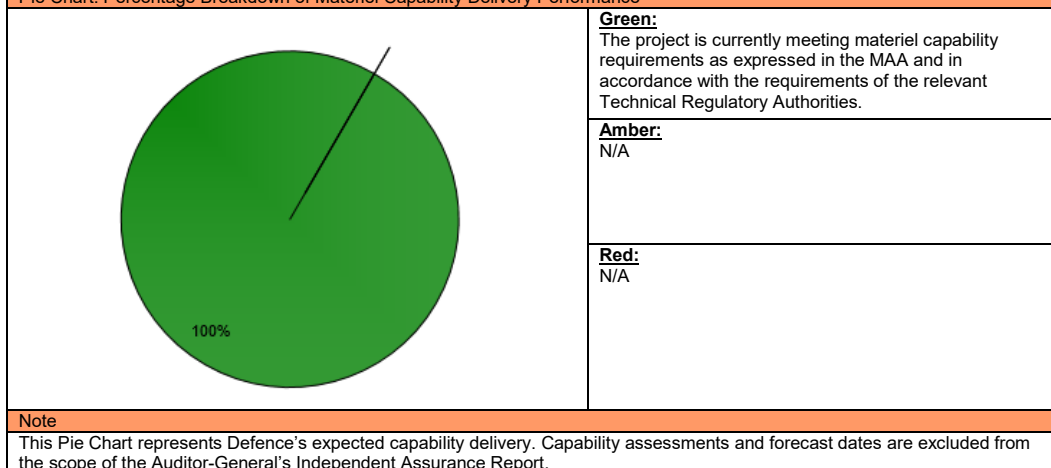
Item	Original Planned	Achieved/ Forecast	Variance (Months)	Note
Initial Materiel Release (IMR)	Dec 18	Nov 18	(1)	1
Initial Operational Capability (IOC)	Dec 19	Dec 19	0	2
Final Materiel Release (FMR)	Dec 22	Dec 22	0	
Final Operational Capability (FOC)	Dec 23	Dec 23	0	



## Section 4 – Materiel Capability Delivery Performance

### 4.1 Measures of Materiel Capability Delivery Performance

#### Pie Chart: Percentage Breakdown of Materiel Capability Delivery Performance



### 4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	IMR requires the following to be delivered: 659 medium and heavy vehicles, 436 modules, 57 trailers, sufficient training for operators and maintainers to support Army's introduction into service plan and adequate logistic support arrangements. Achieved November 2018.	Achieved
Initial Operational Capability (IOC)	IOC requires the following to be delivered: Based on a Protected Battle Group, which is approximately 100 vehicles, deployed on a Major Defence Training activity (Exercise TALISMAN SABRE or equivalent). <b>IOC was declared by Chief of Army in December 2019 with an air certification caveat.</b>	Achieved with an air certification caveat

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Final Materiel Release (FMR)	FMR requires the following to be delivered: 2,707 medium and heavy vehicles, 3,858 modules, 1,753 trailers, achieve the Directed Training Requirement across the entire medium and heavy capability for operators and maintainers and logistic support arrangements. Forecast achievement December 2022.	Not yet achieved
Final Operational Capability (FOC)	FOC requires the following to be delivered: Complete delivery of 2,707 vehicles, 1,753 trailers and 3,858 modules acceptance and Introduction Into Service to meet Chief of Army Preparedness Directive requirement to deploy and support a Multi Role Combat Brigade and concurrent Battle Group on operations. Forecast achievement December 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
<b>Changes to system specifications</b> There is a chance that the project will be affected by changes to system specifications leading to Contract Change Proposals which will impact on cost and schedule.	<b>Development of a decision log.</b> Changes will only be considered on formal advice from Army and will include costs and risks. The project team has worked with relevant stakeholders to assess proposed changes resulting from design reviews. While a number of Contract Change Proposals have been generated to reflect agreed outcomes of the design reviews, there has been no impact on schedule, and costs are being managed within the approved budget. This risk continues to diminish as the design review process is completed. However, some engineering changes are being considered as a result of verification and validation activities. This risk will remain active until the completion of verification and validation activities across multiple LAND 121 Phase 3B platforms.
<b>Integration of new generation communication equipment (C4I) – vehicles</b> There is a chance that the project will be affected by the complexities of delivering MHC vehicles with an integrated C4I solution impacting on performance, cost and schedule.	<b>Monitor and Review RMMVA performance.</b> This risk has been managed through the establishment of a working group involving RMMVA as the Prime System Integrator, and Thales as the Subject Matter Expert. The project has digitised a significant quantity of trucks with C4I fit in order to meet AHQ defined digitisation C4I package. 150 vehicles were digitised, with the C4I technical certification package received in August 2018. <b>C4I integration risks have been downgraded to medium as complexities associated with integration have become better understood. The Acceptance Verification and Validation (AV&amp;V) Program for all MHC vehicle platforms is nearing completion with only the 42M Medium Recovery outstanding. Remaining activities for the 42M are expected to be completed by the end of July 2020. This risk shall remain open until such time.</b>
<b>Access to Public Roads</b> There is a chance that the MHC will be affected by the States and Territories (S&Ts) delaying certification and/or not issuing the appropriate permits for operational use which may impact on schedule, cost, performance and reputation.	<b>Develop and agree to a strategy with States and Territories.</b> <b>Some of the vehicles have high axle masses that would be limited by restrictions imposed by Australian states and territories, resulting in some restrictions and controlled access to the public road network. Defence is managing this by working with the National Heavy Vehicle Regulator, state and territory authorities to obtain the necessary permits. Defence has an ongoing obligation to manage this requirement.</b> <b>This risk (T-9551) has been downgraded and is considered a business as usual activity which is being managed closely through established processes. The risk of permits not being provided has decreased significantly and the LAND 121 Phase 3B capability currently has active permits in each State and Territory.</b>

<b>Support and Maintenance not fully Developed</b> There is a chance that the MHC contracted Support and Maintenance Services (relating to the provision of spare parts, and after sales support for the protected variant and stores modules) will be affected by RMMVA not meeting their contractual obligations impacting on cost, schedule, performance and supportability.	<b>Monitor and Review RMMVA performance.</b> This risk is being mitigated by close monitoring and engagement with RMMVA through regular Combined Services Performance Reviews. The provision of spares is being resolved. <b>Risk has been downgraded to medium due to successful mitigation strategies and actions.</b>
<b>Emergent Risks (risk not previously identified but has emerged during 2019-20)</b>	
<b>Description</b>	<b>Remedial Action</b>
<b>Vertical Launch and Vertical Recovery</b> <b>Vertical Launch &amp; Vertical Recovery (VR&amp;VL) of the Bridge Erection &amp; Propulsion Boat (BEPB) and Improved Ribbon Bridge (IRB) modules into water and on dry land encompasses complex activities that may present risks to operators of the equipment.</b>	<b>Specialist services to be utilised.</b> <b>Progressive trials within a controlled environment are to be conducted to develop processes for the safe operation of the Bridge Boat Interface for VL&amp;VR. Risks may also be reduced through administrative controls and engineering design. The project is to procure engineering services from a company with specialised expertise in the design, manufacture and use of lifting and recovery equipment in order to assist with development and delivery of this capability.</b>

## 5.2 Major Project Issues

Description	Remedial Action
<b>Subcontractor engagement</b> The project has been affected by the delay to subcontractor engagement impacting on schedule, cost, performance and reputation.	<b>CoA to undertake financial, capacity and viability assessment of subcontractors.</b> All key subcontractors have now been engaged. The delay in engaging the subcontractors has impacted on the conduct of design reviews for some module elements. Performance issues initially identified with Varley have been resolved. RPC Technologies' performance issues have been addressed. The Holmwood Highgate contract schedule was amended to reflect changes to their delivery schedule however there are no impacts to the achievement of MAA milestones. This issue is being closely managed by the Project Manager after initial involvement by the Assistant Secretary. Weekly updates continue to be provided from RMMVA to assess progress. <b>This issue has been downgraded and is being closely monitored through engagement with RMMVA and its subcontractors. To be removed from next MPR review.</b>
<b>Project interface and integration issues.</b> The MHC has encountered technical engineering and project management integration and interface issues. Integration issues include issues between vehicles, modules and/or trailers, impacting on performance.	<b>Close collaboration with industry partners.</b> The Project integration issues are being actively managed with three key focus areas. The Hydraulic connectors between the Truck Tractor and Trailers has been identified as an issue and a Request for Proposal has been issued to RMMVA to install the correct hydraulic connectors. The second issue is the Park Brake Interlock capability between the ILH Truck, Trailers and Bulk Fuel Modules. RMMVA have proven a solution through testing and the quote has been accepted by the Commonwealth. Hydraulic interfaces have been reviewed during Group C trailer testing and have been found to be satisfactory with minor changes required. The Park Brake Interlock solution has been addressed. Electrical interfaces are still to be implemented on the vehicle and tested prior to conduct of pilot training in August 2018. The Bridge Boat Interface integration issue is being remediated via a Contract Change Proposal with RMMVA. <b>This overarching issue of MHC vehicles' and trailers' interface is being monitored closely by the Project Executive and Engineering, as evident by the Tractor integration and rework program. Integration is expected to be completed once all associated rework on assets are done. The Bridge Boat Interface underwent redesign, modifications and two trials in 2019 to resolve the integration issue and therefore this component of the issue has been resolved.</b>
<b>42M Medium Recovery Vehicle</b> The project has been affected by the delay in design and verification of the 42M recovery vehicle, and further delays to the delivery schedule impacting on cost, schedule and performance.	<b>Monitor and Review RMMVA performance.</b> <b>This risk has been retired as 42M vehicles have been delivered and the Operator trial course completed.</b>
<b>Implementation of Rework Programs</b> RMMVA have delivered vehicles and modules that have minor omissions or defects that will require remediation after Commonwealth Acceptance (via the raising of SG2s at the time of Acceptance) impacting on performance.	<b>Close collaboration with stakeholders.</b> Re-work plans were briefed to Commonwealth representatives in May 19 and agreement to commence re-work in Quarter 2 2019 was reached. The project Sustainment and Acquisition teams are working collaboratively to ensure rework programs will be implemented effectively.

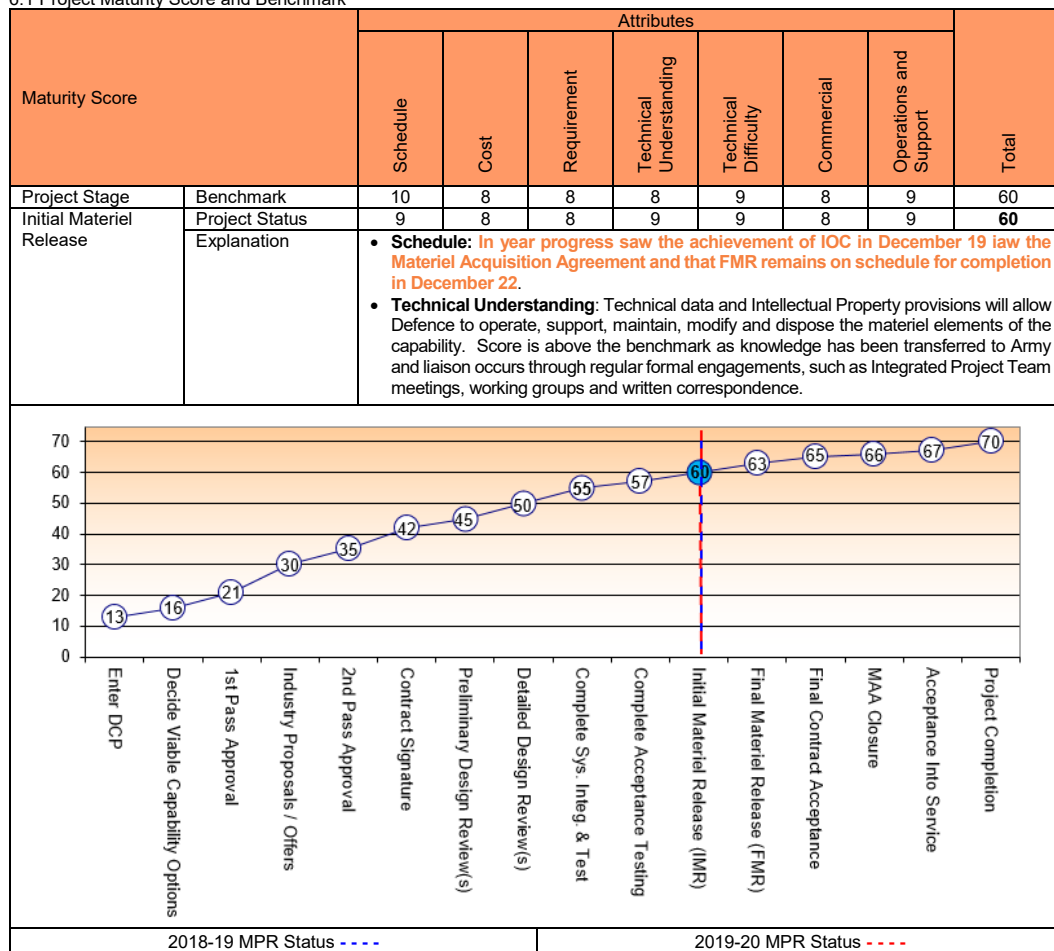
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	<p>Stakeholder communication provided at all levels in regards to rework required.</p> <p>Technical Certifications detail all use restrictions relating to rework required to ensure safety is addressed.</p> <p><b>This issue has been downgraded and is being monitored closely. The Rework program is underway for Vehicles and Modules.</b></p> <p><b>RMMVA provide weekly updates on the status of rework progress and parts availability This issue is expected to be removed at the next MPR.</b></p>
<p><b>ILS Acquisition Delays</b></p> <p>The capability has been affected by delays in codification and spares acquisition from RMMVA, impacting on reputation.</p>	<p><b>Monitor and Review RMMVA performance.</b></p> <p><b>This issue has been downgraded and continues to be tracked closely and has been elevated to management. There is continual engagement with RMMVA on progress.</b></p>
<p><b>Technical Certification delay</b></p> <p>The project is affected by the technical restrictions being in place at the time of vehicle's acceptance, impacting on schedule, performance and reputation.</p>	<p><b>Monitor and Review RMMVA performance.</b></p> <p><b>This issue has been downgraded as Technical Certification is now in place for all Mission Systems.</b></p>
<p><b>Finalisation of User Requirements for Uncontracted Modules</b></p> <p>Development of the Command Post (CP) Static module by RMMVA is on hold due to Operational Concept Document (OCD) and User Requirements being refined. This is expected to be completed by 30 July 20. Delay in issue and approval of the OCD for the Command Post will result in a risk to schedule for the delivery of the modules.</p>	<p><b>Close collaboration with stakeholders.</b></p> <p><b>The issue continues to be managed closely with key stakeholders via Integrated Project Team meetings and Project Management Stakeholder Group meetings. Options will be explored with RMMVA to optimise the delivery schedule.</b></p>
<p><b>Air Movements Training and Development Unit (AMTDU) certification</b></p> <p>There is a chance that Recovery vehicles' non-conformance to DEF(AUST) 9009A Air transportability will affect project schedule, performance and cost.</p> <p>IOC has been declared with lack of air certification caveat</p>	<p><b>Close collaboration with stakeholders.</b></p> <p><b>CASG has engaged RMMVA to conduct detailed Finite Elements Analysis on all Tie Down Points in order to satisfy air certification verification requirements. AMTDU continues to be heavily involved and consulted on aspects of design that impact air transportability. AMTDU assessments are being conducted using information available to inform the analysis and findings resulting in either a Risk Retention requirement or full clearance for Air Transportation to be advised once the design process is completed. Further verification activities may be required which could delay the certification of the vehicles.</b></p>
<p><b>Impact of COVID-19</b></p> <p>There is a chance that disruptions as a result of the COVID-19 pandemic will cause delays in the achievement of project milestones However, major milestones of Final Materiel Release (December 2022) and Final Operating Capability (December 2023) are expected to remain on track. The pandemic could impact: supply chains, delivery of Mission Systems to meet contractual and roll-out schedules, cancellation of events for media/industry, suspension of Training delivery, reduced organisational ability to maintain business tempo and business as usual activities; all of which could cause delay to the project.</p>	<p><b>Close collaboration with stakeholders.</b></p> <p><b>The mitigations and risks in relation to COVID-19 are being closely managed across all stakeholder groups. Close collaboration is also established with key Industry Partners. There is no impact expected to Final Materiel Release or Final Operating Capability milestones.</b></p>
<p><b>Achievement of Final Acceptance</b></p> <p>There remains a significant volume of Contract Data Requirements Lists (CDRLs), Action Items and rework to be completed by RMMVA across Trucks and Modules for them to meet the exit criteria for Final Acceptance Milestones A and B.</p>	<p><b>Monitor and Review RMMVA performance.</b></p> <p><b>Raised at the March 2019 Strategic Relationship Board and escalated to the highest levels of RMMVA senior management in Australia and Germany. RMMVA to present progress against remaining deliverables in fortnightly videoconferences for Commonwealth awareness/oversight.</b></p> <p><b>The risk continues to be monitored actively by Project Executive and RMMVA senior management. A tracking systems has been established by RMMVA and agreed with the Project and regular reporting is in place. RMMVA are expected to achieve Final Acceptance by Q4 2020.</b></p>
<b>Note</b>	
Major risks and issues in Section 5 are excluded from the scope of the Auditor-General's Independent Assurance Report.	

## Section 6 – Project Maturity

### 6.1 Project Maturity Score and Benchmark



## Section 7 – Lessons Learned

### 7.1 Key Lessons Learned

Description	Categories of Systemic Lessons
Government should refrain from announcing preferred tenderers until negotiations are complete. Public announcements undermine negotiation leverage and may provide detail which is subject to change during negotiations.	Contract Management
Projects must have a robust suite of up-to-date capability documents (Operational Concept Document and Functional Performance Specification) available during tender evaluation and negotiations to provide critical contextual information for the negotiation team. These documents also provide the framework for the acquisition authority and capability manager to conduct an informed acceptance process.	Requirements Management
It is key that requirements are fully agreed before negotiations commence to avoid any uncertainty and potential for delays.	Requirements Management
Where doubt exists in relation to compliance claims and/or significant risk is apportioned to a performance requirement, project teams should seek Objective Quality Evidence (OQE) during tender evaluation, so claims of fitness for purpose are supportable and evidence required during Design Acceptance, and AT&E is minimised.	Requirements Management
For projects of this size and complexity, team members require highly developed project management and contracting skills and experience. In preparing for LAND 121 Phase 3B contract negotiations, the need was identified for external expertise and advice to support the negotiation process. The presence of an experienced negotiator and technical adviser was key to being able to negotiate a successful contract.	Contract Management

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The effort involved with the vehicle/module/trailer interface (including all interfaces between elements of the prime equipment) should not be underestimated even for apparently simple equipment. The early formation of interface working groups is critical.	Contract Management
Early involvement of Army Logistic Training Centre (ALTC) staff in the development of the Training requirement is mandatory. This includes reviewing the ASDEFCON template DID ILS-910 and relevant clauses pertaining to training and participation in preliminary meetings to the Initial Training Conference. Propose a preliminary brief by ALTC to define expectations and 'fit' to contractual requirements.	Resourcing
Government Furnished Equipment (GFE) lists should be continuously developed and updated while the system specifications and statement of work are still subject to negotiations and potential variation, to ensure all items on the contracted GFE list are available and sourced.	Contract Management
Ensure contractual provisions require the contractor to have executed contracts with Approved Subcontractors within a specific time following contract execution, so as to avoid impact on contract deliverables and slippage to key engineering reviews.	Contract Management
'Mancats' is a vehicle diagnostic tool that can be used with the fleet of RMMVA vehicles being acquired. A lesson learned from LAND 121 Phase 3A (G-Wagons) was to lease, and not buy, the vehicle diagnostic tool. Leasing reduces the risk of hardware and firmware redundancy, and is a better value for money option for the Commonwealth. LAND 121 Phase 3B is negotiating an appropriate lease arrangement with RMMVA for 'Mancats'.	Contract Management
An AT&E program should consider risk and performance requirements to determine whether OQE can be provided by prime contractors and their parent companies to support claims of fitness for purpose in lieu of testing.  During negotiations all claims of compliance should be reflected in the qualification method to be used in the AT&E program.	Contract Management
Co-locating the Army School of Transport training team within the CASG Project Office has proven beneficial by allowing for close collaboration and enhanced communication between the two groups. In addition, it has allowed end user input into the vehicle development and supporting processes. The training team have also acted as ambassadors of the capability in their interactions with the wider user group.	Resourcing
<b>Projects of this size and scale will often have numerous dependent projects, many of which will rely on the bigger project running to schedule. The number of requests for information from numerous stakeholder groups sometimes requires prioritisation in order to remain focused on project priorities. This needs careful management to ensure wider Defence priorities and objectives are achieved/supported.</b>	<b>Governance</b>
<b>The importance of the Integrated Logistics Management (ILS) discipline cannot be underestimated. ILS involvement and input is recommended to be considered from the establishment of the project and contract establishment, and implementation. Emphasis on ILS together with engineering and project management involvement in Major Systems Reviews and the design process is critical in ensuring that ILS products can adequately support the delivery of the capability.</b>	<b>Resourcing</b>

## Section 8 – Project Line Management

### 8.1 Project Line Management as at 30 June 2020

Position	Name
Division Head	MAJGEN Andrew Bottrell
Branch Head	Ms Sarah Myers
Project Director	<b>Ms Alecia Millard</b>
Project Manager Vehicles and Modules	<b>Ms Ilana Katsap</b>
Project Manager Trailers	Mr Brenden Loton





## Project Data Summary Sheet<sup>160</sup>

Project Number	AIR 9000 Phase 8
Project Name	FUTURE NAVAL AVIATION COMBAT SYSTEM
First Year Reported in the MPR	2011-12
Capability Type	Replacement
Acquisition Type	MOTS
Capability Manager	Chief of Navy
Government 1st Pass Approval	Feb 10
Government 2nd Pass Approval (or key Government pre-Second Pass Approval)	Jun 11
Budget at 2nd Pass Approval (or key Government pre-Second Pass Approval)	\$3,029.6m
Total Approved Budget (Current)	<b>\$3.219.3m</b>
2019-20 Budget	<b>\$128.7m</b>
Project Stage	Initial Materiel Release
Complexity	ACAT II



### Section 1 – Project Summary

#### 1.1 Project Description

AIR 9000 Phase 8 has acquired 24 MH-60R Seahawk Romeo naval combat helicopters, associated weapons and support systems to replace the previous 16 S-70B-2 Seahawk Bravo helicopters and the cancelled SH-2G(A) Seasprite helicopters. The aircraft is equipped with a highly sophisticated avionics suite designed to employ Hellfire air-to-surface missiles and Mark (Mk) 54 anti-submarine torpedoes. The aircraft provide Navy with a contemporary helicopter with anti-submarine warfare (ASW) and anti-surface warfare capability.

The acquisition of 24 helicopters enable the Navy to deploy at least eight Seahawks embarked at sea across the ANZAC class frigates and the new *Hobart* class Air Warfare Destroyers (AWD).

#### 1.2 Current Status

##### Cost Performance

##### In-year

Year-end expenditure of \$75.3m is an underspend of \$53.4m (41.5%). The underspend is a result of lower than forecast Foreign Military Sales, MH-60R Helicopter Ship Integration and Contractor activities, and travel and training restrictions.

##### Project Financial Assurance Statement

As at **30 June 2020**, project AIR 9000 Phase 8 has reviewed the **project's** approved scope and budget for those elements required to be delivered by **Defence**. Having reviewed the current financial contractual obligations of **Defence** for this project, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget remaining for the project to complete against the agreed scope.

##### Contingency Statement

The project has not applied contingency in the financial year.

<sup>160</sup> 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 Assurance Report* by the Auditor-General in **Part 3** of this report.

Part 3. Project Data Summary Sheets	<p><b>Schedule Performance</b></p> <p>Materiel Release Three (MR3) was achieved 11 October 2018. This was defined as twenty four aircraft in United States Navy (USN) configuration accepted, with sufficient logistics support, including Ships Allowance Limit (SAL), Pack Up Kits (PUKs) and sufficient internal (crew served) machine guns to support eight flights at sea. The next major milestone will be Materiel Release Four (MR4), which is defined as:</p> <ul style="list-style-type: none"> <li>Weapons Acquisition Closure</li> <li>Explosive Materiel Branch (EMB) Authorised Maintenance Organisations ready to sustain MH-60R Explosive Ordnance (EO) at the mature rate of effort</li> <li>The transition of all AIR 9000 Phase 8 Weapons Air to Surface Missiles, Light Weight Torpedo's, non-guided EO and associated Support System Constituent Capabilities to the in-service support agencies.</li> <li><b>The MR4 milestone schedule has been delayed in the last MAA update (V3.3) to align with the planned acquisition and delivery of the final contracted number of weapons. MR4 is specified as the Project Weapons Acquisition Closure milestone.</b></li> <li><b>The ADF Mission System Options were split into two phases. Phase 2 centres on a Software update to most aircraft mission systems and the corresponding Tactical Flight Trainers (Pilot Simulators). The update is designated System Configuration 18 (SC18). Acceptance for SC18 will be conducted six months post receipt of a Flight Clearance Recommendation.</b></li> </ul>
	<p><b>Materiel Capability Delivery Performance</b></p> <p>The MH-60R Seahawk helicopter being procured is a Military Off the Shelf (MOTS) product from the USN. The MH-60R Seahawk has been in service with the USN since 2005 and was first deployed operationally by the USN in early 2010. The Australian Defence Force (ADF) has accepted delivery of 24 MH-60R aircraft, and there are currently no known impediments to the Project achieving the materiel capability performance requirements. The aircraft delivery schedule resulted in ADF MH-60Rs being delivered earlier than forecast at Second Pass.</p>
	<p><b>Note</b></p> <p>Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.</p>
	<p>1.3 Project Context</p>
MH-60R Seahawk	<p><b>Background</b></p> <p>The Defence White Paper 2009 stated that 'As a matter of urgency, the Government will acquire a fleet of at least 24 new naval combat helicopters to provide eight or more aircraft concurrently embarked on ships at sea. These new aircraft will possess advanced ASW capabilities, including sonar systems able to be lowered into the sea and air-launched torpedoes, as well as an ability to fire air-to-surface missiles.'</p> <p>First Pass Approval for the acquisition of the Future Naval Aviation Combat System to satisfy this requirement was provided by Government on 24 February 2010.</p> <p>The selection of the MH-60R followed a competitive solicitation process between a US Government FMS case offering the Sikorsky / Lockheed Martin MH-60R Seahawk and a direct commercial sale from Australian Aerospace (now Airbus Australia Pacific (AAP) offering the NATO Helicopter Industries NH90 NATO Frigate Helicopter. Second Pass Approval for acquisition of the MH-60R was provided by Government on 15 June 2011.</p> <p>Project SEA 5510 Stage 1 was approved by Government in June 2017, for the purpose of upgrading the MH-60R Seahawk's combat system, sensors, weapons and countermeasures throughout their operational life to maintain commonality and supportability with the United States Navy. AUD \$527.7m has been approved for Stage 1 from financial year 2018/19 to 2028/29.</p>
	<p><b>Uniqueness</b></p> <p>The Australian MH-60R helicopter has been acquired as a MOTS product, in the same baseline configuration as the USN aircraft. A limited number of Australian unique design modifications are being incorporated now that all aircraft have been delivered. The USN will develop the modifications for incorporation in Australian and USN MH-60R aircraft.</p> <p>The MH-60R is being acquired as a maritime combat capability. It will have limitations in utility roles such as passenger or cargo transfer.</p>
	<p><b>Major Risks and Issues</b></p> <p>The Project Office (PO) is currently managing <b>one</b> open risk <b>within the Project Performance Review Information Platform (PPRIP) system</b>. The highest level of pre-mitigation risk is medium, whilst also managing two open issues which are also rated as medium or below. However, there are currently no major risks or issues in achieving the MH-60R operational capability milestones on schedule.</p>
	<p><b>Other Current Related Projects/Phases</b></p> <p>Project AIR 9000 Phase 7 Helicopter Aircrew Training System (HATS). HATS <b>is</b> an important link in the training continuum for inductees to the MH-60R training system.</p> <p>Project AIR 9000 Phase 2/4/6 Multi-Role Helicopter. The acquisition of 47 helicopters to replace the current Army Black Hawk fleet and Navy Sea King fleet.</p> <p>Project SEA 5510-1 – MH-60R Capability Assurance Program (CAP) which was directed by Government to maintain a common baseline with the USN fleet of MH-60R aircraft.</p> <p>Project SEA 4000 Phase 3 Air Warfare Destroyer. AIR 9000 Phase 8 is to fund the modifications of the Hobart Class for interoperability with the MH-60R Seahawk 'Romeo' helicopter.</p>
	<p><b>Note</b></p> <p>Major risks and issues are excluded from the scope of the Auditor-General's Independent Assurance Report.</p>

## Project Data Summary Sheets

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## Section 2 – Financial Performance

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

Date	Description	\$m	Notes
<b>Project Budget</b>			
Aug 09	Original Approved ( <b>Government pre-first pass approval</b> )	0.3	1
Jun 10	Real Variation – Budgetary Adjustment	9.6	2
Jun 11	Government Second Pass Approval	3,019.7	
	<b>Total at Second Pass Approval</b>	<b>3,029.6</b>	
Jun 14	Real Variation – Budgetary Adjustment	(39.2)	3
Jul 10	Price Indexation	0.1	4
Jun 20	Exchange Variation	228.8	
	<b>Total Budget</b>	<b>3,219.3</b>	
<b>Project Expenditure</b>			
Prior to Jul 19	Contract Expenditure – US Government (AT-P-SCF)	(1,949.8)	5
	Contract Expenditure – US Government (AT-P-AHV)	(118.1)	5
	Contract Expenditure – US Government (AT-P-KOA)	(53.8)	5
	Contract Expenditure – US Government (AT-B-ZBZ)	(20.2)	5
	Contract Expenditure – Navy – Empire Test Pilots' School	(7.4)	
	Contract Expenditure – US Government (AT-P-ANY)	(1.5)	5
	Other Contract Payments / Internal Expenses	(187.4)	6
		<b>(2,338.2)</b>	
FY to Jun 20	Contract Expenditure – US Government (AT-P-SCF)	(18.2)	5
	Contract Expenditure – US Government (AT-P-AHV)	(13.8)	5
	<b>Contract Expenditure – US Government (AT-P-KOA)</b>	<b>(9.8)</b>	<b>5</b>
	<b>Contract Expenditure – US Government (AT-P-ANY)</b>	<b>(4.5)</b>	<b>5</b>
	<b>Contract Expenditure – Australian Warfare Destroyer Ship Integration</b>	<b>(19.9)</b>	<b>5</b>
	Other Contract Payments / Internal Expenses	(9.1)	7
		<b>(75.3)</b>	
<b>Jun 20</b>	<b>Total Expenditure</b>	<b>(2,413.5)</b>	
<b>Jun 20</b>	<b>Remaining Budget</b>	<b>805.8</b>	
<b>Notes</b>			
1	This amount represents the project Budget prior to achieving Second Pass Approval by Government.		
2	Project Development Funds.		
3	Facilities Budget Transfer to Defence Support and Reform Group.		
4	Up until July 2010, indexation was applied to project budgets on a periodic basis. The cumulative impact of this approach was \$0.1m, applied only to the portion of the budget approved at First Pass. From July 2010 all project budgets were approved by Government in out-turned dollars including AIR 9000 Phase 8.		
5	The scope of this contract is explained further in Section 2.3 – Details of Project Major Contracts.		
6	Other includes <b>training</b> , travel, contractor support, legal support, Non-FMS Procurements, ANZAC and AWD Ship Modifications, and general support activities.		
7	Other includes procurement of Contractors Support of <b>\$1.7m</b> , ANZAC Ship Integration of <b>\$3.5m</b> , Defence Science and Technology Group of <b>\$1.6m</b> , Spares and consumables and other minor expenditure of <b>\$2.3m</b> including Freight, general support activities, travel, Resident Project Team and Technical Services.		

## 2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
112.7	129.3	128.7	PBS to PAES: The variance was due to <b>the increased expenditure for the introduction of Foreign Military Sales (FMS) Case MH60R Helicopter Dynamic Components, earlier delivery of AWD Ship Integration activity offset by lower FMS forecasts and facilities activity.</b>
			PAES to Final Plan: <b>Exchange rate supplementation</b>
Variance \$m	16.6	(0.6)	Total Variance (\$m): <b>16.0</b>
Variance %	14.7	(0.5)	Total Variance (%): <b>14.2</b>

## 2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(17.5)	Australian Industry	<b>Year-end expenditure of \$75.3m is an underspend of \$53.4m (41.5%). The underspend is a result of lower than forecast Foreign Military Sales, MH-60R Helicopter Ship Integration and Contractor activities, and travel and training restrictions.</b>
		(35.7)	Foreign Industry	
			Early Processes	
		(0.2)	Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	

			Effort in Support of Operations	
			Additional Government Approvals	
128.7	75.3	(53.4)	<b>Total Variance</b>	
		(41.5)	<b>% Variance</b>	

### 2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 20 \$m			
US Government (AT-P-SCF)	Jun 11	2,090.3	2,421.4	Variable	FMS	1,3
US Government (AT-P-AHV)	Aug 11	168.1	206.2	Variable	FMS	1,3
US Government (AT-B-ZBZ)	Jan 12	12.3	20.2	Variable	FMS	1,2,3
US Government (AT-P-KOA)	May 17	53.8	63.6	Variable	FMS	1,3,4
US Government (AT-P-ANY)	Sep 17	9.3	12.6	Variable	FMS	1,3
Notes						
1	The scope of this contract is explained further below.					
2	Increased quantity of Tactical and Training Missiles in FMS Case.					
3	Contract value as at 30 June 2020 is based on actual expenditure to 30 June 2020 and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable).					
4	This contract was signed in financial year 2016/17 with payment made in financial year 2017/18.					
Contractor	Contracted Quantities as at		Scope	Notes		
	Signature	30 Jun 20				
US Government (AT-P-SCF)	24	24	MH-60R, synthetic training devices, and associated mission and support systems			
US Government (AT-P-AHV)	Classified	Classified	Mk 54 Torpedoes			
US Government (AT-B-ZBZ)	Classified	Classified	AGM-114N Hellfire Air to Surface Missiles			
US Government (AT-P-KOA)	N/A	N/A	MH-60R aviation spares			
US Government (AT-P-ANY)	Classified	Classified	Advanced Precision Kill Weapon System			
Major equipment accepted and quantities to 30 June 20						
<ul style="list-style-type: none"><li>A quantity of Mk 54 Torpedos delivered in August 2014</li><li>A quantity of Hellfire Missiles delivered in August 2014</li><li>'BRomeo' Seahawk Training Device delivered in October 2014</li><li>Tactical Operational Flight Trainer 1 delivered in February 2015</li><li>Aircraft 1 through 24 were delivered between December 2013 and August 2016</li><li>Rear Crew Trainer delivered in August 2016</li><li>Tactical Operational Flight Trainer 2 delivered in October 2016</li><li>Helicopter Support Facility (HMAS <i>Stirling</i>) was accepted in December 2016</li><li>Composite Maintenance Trainer delivered in December 2017</li><li>Initial quantity of Advanced Precision Kill Weapon System were delivered in December 2017 and the balance in October 2019.</li></ul>						

## 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	MH-60R Helicopter	N/A	N/A	N/A	N/A	1
	ADF Mission System Options – Phase 1	Jan 14	Jan 14	Apr 14	3	2
	ADF Mission System Options – Phase 2	Nov 14	Nov 14	Nov 14	0	2
	Air Warfare Destroyer	Dec 14	Dec 14	Jan 15	1	3
Preliminary Design	MH-60R Helicopter	N/A	N/A	N/A	N/A	1
	ADF Mission System Options – Phase 1	Mar 14	Mar 14	Jun 14	3	2
	ADF Mission System Options – Phase 2	Mar 15	Mar 15	Apr 15	1	2
	Air Warfare Destroyer	Dec 15	May 17	May 17	17	3

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Critical Design	MH-60R Helicopter	N/A	N/A	N/A	N/A	1
	ADF Mission System Options – Phase 1	Jun 14	Jun 14	Jun 14	0	2
	ADF Mission System Options – Phase 2	May 15	May 15	May 15	0	2
	Air Warfare Destroyer	Dec 16	Dec 17	Dec 17	12	3
<b>Notes</b>						
1	MH-60R helicopter system requirements and design reviews were not required as it a MOTS helicopter procured through FMS.					
2	The ADF Mission System Options were split into two phases. Phase 1 Statements of Work (SOWs) for ADF Unique Mission System Options were agreed by the PO, USN, Sikorsky and Lockheed Martin. Director General Technical Airworthiness has endorsed SOWs in accordance with Technical Airworthiness Regulations. Dates are reflective of Phase 1 design reviews. SOW for Phase 2 was released as part of USN request for tender 26 February 2014, with contract signature with Lockheed Martin achieved in October 2014.					
3	The AWD requires modification to enable the MH-60R aircraft to operate at full capability as the AWD certification baseline is based on a classic Seahawk aircraft. The modification works required to integrate the MH-60R aircraft will be conducted following the delivery of each AWD. With the reorganisation of the AWD Alliance the aviation upgrade effort has been delayed.					

## 3.2 Contractor Test and Evaluation Progress

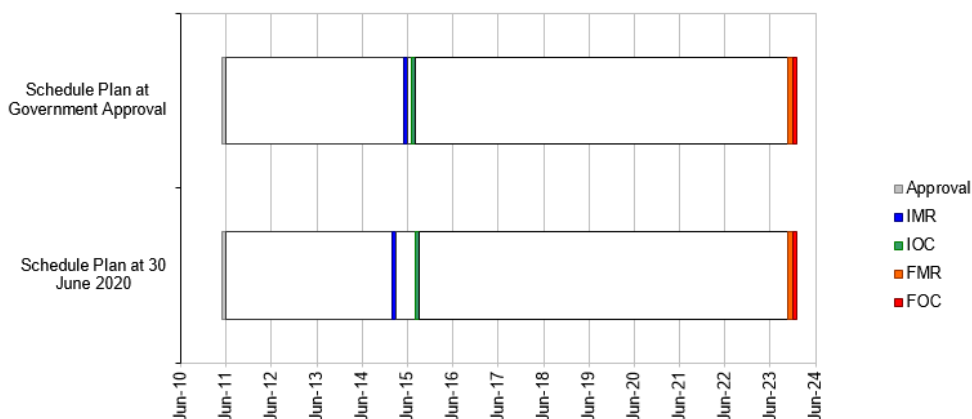
Test and Evaluation	Major System / Platform Variant	Original Planned	Current Contracted	Achieved /Forecast	Variance (Months)	Notes
System Integration	ADF Mission System Options – Phase 1	Aug 15	Aug 15	Aug 15	0	1
	ADF Mission System Options – Phase 2	Sep 18	Sep20	Sep 20	24	1,2
	Air Warfare Destroyer	Jun 20	Jun 20	Jun 20	0	3
Acceptance	ADF Mission System Options – Phase 1	Aug 16	Aug 16	Sep 16	1	1
	ADF Mission System Options – Phase 2	Sep 18	Mar 20	Sep 20	24	1,2
	Acceptance of first MH-60R	Jun 14	Dec 13	Dec 13	(6)	4
	Acceptance of final MH-60R	Sep 18	Aug 16	Aug 16	(25)	4
	Air Warfare Destroyer	Jun 20	Jun 20	Jun 20	0	3
<b>Notes</b>						
1	The ADF Mission System Options were split into two phases. Phase 1 SOW for ADF Unique Mission System Options was agreed by the PO, USN, Sikorsky and Lockheed Martin. SOW for Phase 2 was released as part of USN request for tender 26 February 2014, and contract signature with Lockheed Martin was achieved in October 2014. Phase 1 was accepted post commencement of System Integration due to it being a hardware installation, whereas Phase 2 will be accepted post receipt of a Flight Clearance Recommendation due to it being predominantly a software package that will be integrated into the fleet commencing approximately six months post acceptance.					
2	Schedule delays have been experienced with Phase 2, due in part to the Commonwealth having limited control over the development schedule with numerous schedule movements to the right being experienced.					
3	The dates disclosed in the table are the forecast dates for the Air Warfare Destroyer System Integration and Acceptance milestones for Ship 3 (the final ship to undergo modification).					
4	The project negotiated early delivery dates for all 24 MH-60R aircraft following acceptance of the Letter of Offer and Acceptance. This was, in part due to the US Government sequestration experienced in the early years of the program.					

## 3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved /Forecast	Variance (Months)	Notes
In-Service Date (ISD)	Jun 14	Jan 14	(5)	1
Initial Materiel Release (IMR)	Jun 15	Mar 15	(3)	2
Initial Operational Capability (IOC)	Aug 15	Sep 15	1	3
Materiel Release 2 (MR2)	Dec 16	Dec 16	0	4
Materiel Release 3 (MR3)	Jun 19	Oct 18	(8)	5
Materiel Release 4 (MR4)	Dec 20	Dec 23	36	6
Final Materiel Release (FMR)	Dec 23	Dec 23	0	
Final Operational Capability (FOC)	Dec 23	Dec 23	0	
<b>Notes</b>				
1	Revised aircraft delivery schedule.			

2	The project declared IMR in March 2015, three months ahead of schedule and the Capability Manager signed-off IMR in July 2015.
3	The Capability Manager declared IOC on 25 September 2015, 25 days later than originally scheduled. Navy linked MH-60R IOC to Anzac Class ship aviation upgrades, which resulted in extra technical assessments that resulted in the minor delay.
4	The project achieved MR2 in December 2016 on schedule.
5	The project achieved MR3 in October 2018 ahead of schedule due to the early delivery of aircraft, logistics support being established and sufficient trained personnel being available for deployment.
6	The MR4 milestone schedule has been delayed in the last MAA update (V3.3) to align with the <b>planned acquisition and delivery of the final contracted number of weapons. MR4 is specified as the Project Weapons Acquisition Closure milestone.</b>

**Schedule Status at 30 June 2020**



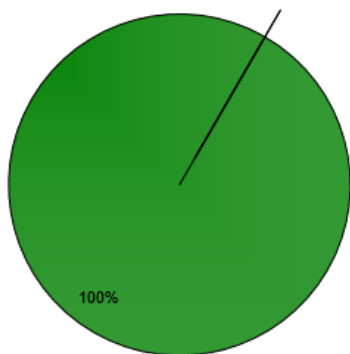
**Note**

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

#### 1. Pie Chart: Percentage Breakdown of Materiel Capability Delivery Performance



**Green:**

The project is currently meeting capability requirements as expressed in the Materiel Acquisition Agreement and supporting suite of Capability Definition Documentation and in accordance with the requirements of the relevant Technical Regulatory Authorities.

**Amber:**

N/A

**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)	1. Five aircraft in USN configuration, Tactical Operational Flight Trainer and supporting systems, 2. Establishment of key Sustainment organisations, 3. Initial stock of Mk 54 Torpedoes and Hellfire Missiles, and	Achieved

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	4. Modification of one ANZAC class ship for interoperability with MH-60R Seahawk helicopter.	
Initial Operational Capability (IOC)	One fully mission capable flight is available for operational deployment with associated support systems including training, facilities and supplies. IOC was achieved in September 2015.	Achieved
Final Materiel Release (FMR)	1. All 24 aircraft delivered and Australian Mission System Options implemented, 2. Full EO fit-out and all Mk 54 Torpedos and Hellfire Missiles delivered, 3. All ANZAC class ships and Air Warfare Destroyers modified for interoperability with MH-60R Seahawk helicopter, and 4. Final Training Management Package. Achievement is scheduled for December 2023.	Not yet achieved
Final Operational Capability (FOC)	The full range of operational capabilities, including all upgrades and modifications required to comply with the ADF environment and a support system including training and infrastructure. Achievement is scheduled for 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
N/A	N/A
Emergent Risks (risk not previously identified but has emerged during 2019-20)	
Description	Remedial Action
N/A	N/A

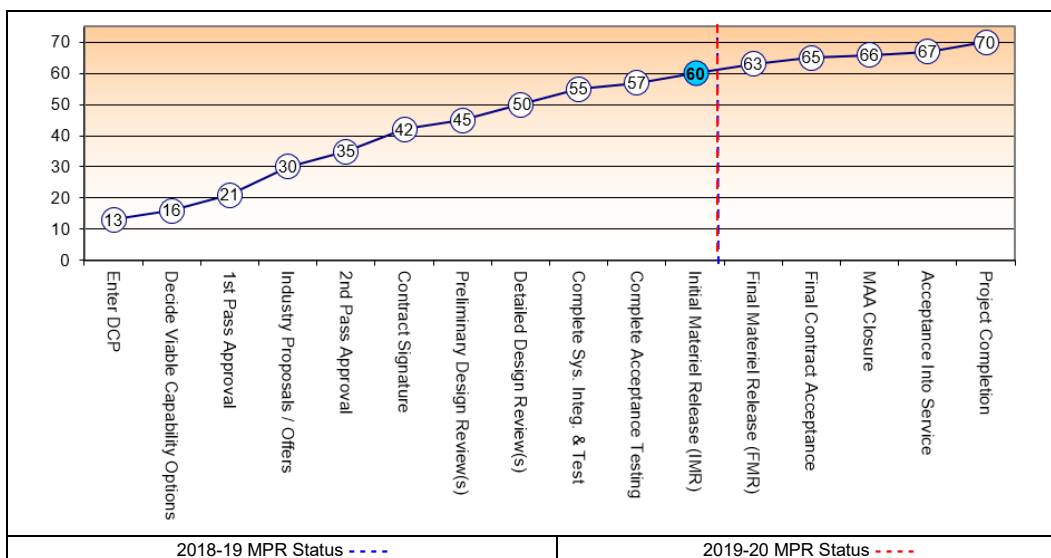
### 5.2 Major Project Issues

Description	Remedial Action
N/A	N/A
Note	
Major risks and issues in Section 5 are excluded from the scope of the Auditor-General's Independent Assurance Report.	

## Section 6 – Project Maturity

### 6.1 Project Maturity Score and Benchmark

Maturity Score		Attributes							Total
		Schedule	Cost	Requirement	Technical Understanding	Technical Difficulty	Commercial	Operations and Support	
Project Stage	Benchmark	10	8	8	8	9	8	9	60
Initial Materiel Release	Project Status	9	9	8	8	9	8	10	61
	Explanation	<p><b>Schedule:</b> The MH-60R production line is mature. The Project negotiated early delivery dates for ADF MH-60R.</p> <p><b>Cost:</b> The overall Estimate at Completion is projected to be within project guidance. The Project has benefited from economies of scale from the US Government multi-year buys of aircraft and key components.</p> <p><b>Operations and Support:</b> The capability achieved IOC and MH-60R Flights are now embarked on RAN Fleet Units.</p>							



## Section 7 – Lessons Learned

### 7.1 Key Lessons Learned

Project Lesson	Categories of Systemic Lessons
<p>Whilst an FMS program affords a number of advantages, the transfer of a significant amount of project management and engineering functions to the US Government implementing agency (NAVAIR PMA-299) and the weak bargaining position of the Commonwealth, increases the project's exposure to risk (technical, schedule and cost). The resultant level of risk and complexity is often understated and poorly understood.</p> <p>The level of Commonwealth contract and financial management involvement and oversight of industry is very low in comparison to that mandated for Direct Commercial Sale contracts, yet both procurement methods confront similar issues.</p> <p>Adequate Commonwealth participation in key project management and technical oversight activities in the US, as provided for in the Government Second Pass submission, is critical to provide the required level of contract management.</p>	Contract Management
The recruitment process lead times for candidates not already within the ADF or APS can create significant extended vacancies within the Project workforce, and this is exacerbated by the relatively short notice that Defence personnel are obliged to provide for internal transfers.	Resourcing
By procuring MOTS equipment, adhering to the project's clearly defined scope as detailed by government at Second Pass, and effectively using the Program Management Steering Group to prevent potential scope creep, the project has been able to meet or exceed its financial and schedule obligations as detailed within the project's Materiel Acquisition Agreement.	Off-The-Shelf Equipment
Linking ship integration to the project has assured continued support and oversight of that aspect from subject matter experts. As this projects final milestones are linked to future ship integration and the delivery of capability on that vessel it has been invaluable to have a Project Team member embedded within the parent Ship Project. By actively participating in the development of the ship's Aviation configuration our project has been able to minimise disruptions to the ship build cycle and Project schedule slippages.	Schedule Management

## Section 8 – Project Line Management

### 8.1 Project Line Management as at 30 June 2020

Position	Name
Division Head	Mr Shane Fairweather
Branch Head	CDRE Darren Rae
Project Director	CAPT Adrian Capner
Project Manager	CMDR Ken Steinman

## Project Data Summary Sheets

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## Project Data Summary Sheet<sup>161</sup>

Project Number	<b>LAND 121 Phase 4</b>
Project Name	<b>Protected Mobility Vehicle – Light</b>
First Year Reported in the MPR	2016-17
Capability Type	Replacement
Acquisition Type	Developmental
Capability Manager	Chief of Army
Government 1st Pass Approval	Oct 08
Government 2nd Pass Approval	Aug 15
Budget at 2nd Pass Approval	\$1,945.0m
Total Approved Budget (Current)	<b>\$1,987.5m</b>
2019-20 Budget	<b>\$239.9m</b>
Project Stage	<b>Initial Materiel Release</b>
Complexity	ACAT I



### Section 1 – Project Summary

#### 1.1 Project Description

LAND 121 Phase 4 will acquire and deliver into service 1100 Protected Mobility Vehicles – Light (PMV-L) and 1058 companion trailers for command, liaison, reconnaissance and utility roles; and the associated training and support systems. Stage One (Engineering and Manufacturing Development) of the project delivered 10 vehicles and five trailers for various test and evaluation activities. Stage Two (Low-Rate Initial Production) delivered an additional six vehicles and four trailers for reliability testing and verification / validation activities. Stage Two will also deliver the first 100 production vehicles and trailers. Stage Three (Full-Rate Production) will deliver the remaining 1000 production vehicles and 958 trailers.

The PMV-L will replace around one third of the current Land Rover fleet, and represents a new capability that will provide the Australian Defence Force (ADF) with a highly protected and deployable light vehicle fleet designed to provide an optimum balance of six fundamental requirements: survivability, mobility, useability, payload, sustainability and communications.

The PMV-L is the ADF's only protected vehicle capable of being lifted by ADF Chinook helicopters. The vehicle also pioneers a next-generation open architecture communications management system, the Integral Computing System (ICS), which integrates the vehicle's various communications systems through a common interface.

The PMV-L fleet will consist of two variants which may perform specific mission roles:

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

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

#### 1.2 Current Status

##### Cost Performance

###### In-year

As at **30 June 2020**, financial year **2019/20** expenditure was **\$220.3m** against the forecasted expenditure of **\$239.9m**. The variation is primarily due to delayed Contract Change Proposal negotiations and COVID-19 impacts on training and support.

###### Project Financial Assurance Statement

As at **30 June 2020**, project **LAND 121 Phase 4** has reviewed the project's approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial and contractual obligations of Defence for this project, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget remaining for the project to complete against the agreed scope.

#### 161 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 Assurance Report by the Auditor-General in Part 3 of this report.

Part 3. Project Data Summary Sheets	<p><b>Contingency Statement</b> The project has not applied contingency in the financial year.</p>
	<p><b>Schedule Performance</b> Under Stage One (Engineering and Manufacturing Development) of the LAND 121 Phase 4 Acquisition Contract, Thales Australia delivered 10 vehicles and five trailers on schedule for the purpose of further development and testing. As part of this stage Thales Australia conducted a Reliability Growth Trial (RGT). During RGT, the performance of the vehicles exceeded the number of critical failures allowable under the contract. Defence required Thales Australia to remediate these critical failures in order to fulfil the contractual reliability requirements of this Stage. This remediation activity resulted in an additional RGT, extending Stage One by a further four months.</p> <p>The RGT was separated into the following three activities:</p> <ul style="list-style-type: none"> <li>RGT Number One was conducted over the period July to December 2016 and provided Thales with the opportunity to resolve any issues with the vehicles ahead of the formal trial activities that commenced under RGT Number Two.</li> <li>RGT Number Two commenced in November 2016. In January 2017, the pilot Hawkei vehicles had exceeded the seven allowable critical failures under the contract. Identified key root causes include supplier quality issues and immature components affecting hardware and software integration. A six-week corrective action period was implemented to allow Thales to undertake engineering upgrades.</li> <li>RGT Number Three (May to July 2017) followed this, which demonstrated reliability improvements on a number of sub-systems, but a number of recurring failures were evident.</li> </ul> <p>Thales Australia was granted exit of Stage One on 5 September 2017, with the caveat that Thales Australia continued to address the reliability issues. A Reliability Demonstration Test was conducted from October 2017 until November 2018 to confirm that the reliability improvements have been implemented prior to Production Reliability Acceptance Testing and progress into Full-Rate Production. Delays have been incurred due to the reliability issues. The achievement of key milestones is reliant on the resolution of these issues.</p> <p>The RDT was completed in November 2018, with a number of residual reliability issues outstanding. Thales provided sufficient Objective Quality Evidence to resolve these outstanding issues to enable <b>the final component of the reliability program, the Production Reliability Acceptance Test (PRAT), to commence in May 2019. The driving component of the PRAT concluded on 29 March 2020, with all eight vehicles completing the required test distance. The PRAT was formally completed on 10 June 2020 when the Commonwealth approved the Integrated Reliability, Maintainability and Testability Report (IRMTR).</b></p> <p>Acceptance of the Stage Two test and evaluation activities (AV&amp;V, including PRAT) by Defence is required prior to exiting Stage Two.</p> <p><b>Thales successfully exited Support System Detailed Design Review (Maintainer) on 19 June 2020.</b></p> <p>Ongoing reliability issues <b>have</b> initiated remedies under the contract, including stop payments and liquidated damages.</p> <p><b>Army as the Capability Manager, endorsed the declaration of Initial Materiel Release (IMR) with caveats on 26 May 2020. The deficiencies relate to delays in the delivery of some elements of the Hawkei Support System, and Verification and Validation activities, primarily due to COVID-19 restrictions.</b></p> <p><b>IMR was re-scheduled to May 2020</b> due to Hawkei reliability issues, design maturity and the production delays <b>caused by Steyr Motors' voluntary administration.</b> These issues <b>also caused</b> Initial Operating Capability (IOC) <b>to be re-scheduled by 12 months to December 2020.</b></p>
	<p><b>Materiel Capability Delivery Performance</b> 16 PMV-L pre-production baseline vehicles and nine trailers <b>were</b> delivered for development and testing purposes under Stages One and Two. The acceptance process for the Low-Rate Initial Production (LRIP) vehicles and trailers commenced in January 2018, with the first vehicles being formally accepted by the Commonwealth in March 2018. The Commonwealth has accepted <b>the 138 vehicles and 138 trailers required for IMR</b> (out of a total of 1100 vehicles and 1058 trailers planned for delivery into service).</p> <p>Defence conducted a trial involving the deployment of two Hawkei vehicles to Iraq and Afghanistan. The vehicles were deployed into Iraq as part of Task Group Taji and then redeployed in April 2018 to the Australian contingent in Kabul, Afghanistan. This trial commenced in December 2017 and concluded in August 2018. The key trial objectives included the identification of operational and support issues and deployment considerations for the Hawkei capability.</p> <p><b>A Hawkei Operational Test and Evaluation activity is planned to commence in August 2020. This activity will inform Army's decision to declare IOC in December 2020.</b></p> <p>Thales advised the Commonwealth on 29 November 2018 that the Hawkei engine supplier, Steyr Motors, had entered into voluntary administration, <b>which would result in a delay in the supply of engines. Thales advised Defence that it had acquired Steyr Motors on 23 August 2019. Thales' procurement of Steyr Motors will ensure the continuity of engine supply and the long-term sustainability of the Hawkei program.</b> The IMR milestone <b>was re-scheduled</b> to May 2020 due to Hawkei reliability issues, design maturity and production delays caused by Steyr Motors entering voluntary administration.</p> <p>The Hawkei support system continues to be developed. Operator Training commenced at the Army School of Transport in September 2018. Maintainer Training <b>commenced in November 2019 at the Army School of Electrical and Mechanical Engineers.</b></p> <p><b>The rollout of 35 Hawkei mission systems to 3 Brigade in Townsville for Operational Test and Evaluation has been completed.</b></p> <p><b>The Commonwealth continues to work closely with Thales to finalise the design baseline including residual reliability issues, to enable the transition to Full-Rate Production in July 2020.</b></p>
	<p><b>Note</b> Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.</p>
	<p>1.3 Project Context</p>
	<p><b>Background</b> LAND 121 Phase 4 was established to address a new capability requirement within the ADF's land mobility assets emanating from the absence of lightweight and light class field vehicles with the requisite levels of ballistic and blast protection.</p>

## Project Data Summary Sheets

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At First Pass in October 2008, Government agreed for Defence to pursue the development of a 'next generation' PMV-L by joining the US Joint Light Tactical Vehicle (JLTV) Program (Option One) and at the same time retain the possibility of acquiring a Market Available Vehicle (MAV) in the event JLTV proves unsuitable (Option Two). In May 2009, Government directed that an Australian indigenous option for PMV-L be considered. In June 2009, a Manufactured and Supported in Australia (MSA) Option (Option Three) was included in LAND 121 Phase 4 through the release of a Request for Proposal. In 2009, Defence paid \$43.0m to pursue the development of a 'next generation' PMV-L by joining the US Joint Light Tactical Vehicle (JLTV) Program. The funding was provided by Capability Development Group and has not formed part of the LAND 121 Phase 4 project budget. First to Interim Pass funding was provided in November 2009 following approval of MAA V2.0, where Government agreed that LAND 121 Phase 4 would return to Government for an Interim Pass decision on which option is to be pursued to Second Pass.

In May 2010, Government agreed that the MSA Option be further investigated prior to Interim Pass through the conduct of initial prototyping activities. On 30 June 2010, a draft schedule for each option to deliver the PMV-L capability was submitted to the Government for consideration. Stage One MSA funding was provided in July 2011 following approval of Materiel Acquisition Agreement (MAA) V2.1. Stage One of the MSA Option consisted of assessing six developmental Line of Departure vehicles (LOD) that met the Australian content requirement. Two from each of the three companies - Force Protection Europe Ltd, General Dynamics Land Systems-Australia and Thales Australia Ltd against function and performance specifications and value for money. Through the procurement process, it was determined that there were no off-the-shelf options available that met all ADF requirements.

At Interim Pass in December 2011, Government refined its direction to the following:

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

Interim pass funding was provided in April 2012 following approval of MAA V3.0. Defence entered into Stage Two of the MSA Option with Thales Australia to carry out further development of their PMV-L, culminating in a program of trials and testing of the prototypes in late 2013. Additional development work and testing were carried out in 2014 under the MSA Stage Two through a Risk Reduction Activity (RRA) aimed at reducing residual technical risk to an acceptable level.

In August 2015, Government provided Second Pass Approval for LAND 121 Phase 4 to acquire Thales Australia's PMV-L. Second Pass funding was provided in September 2015. Subsequently, LAND 121 Phase 4 signed a contract in October 2015 with Thales Australia to acquire and support 1100 PMV-L vehicles and 1058 trailers.

The Acquisition Contract contains three distinct stages that reflect the developmental nature of the PMV-L capability, and which minimises production rework:

- Stage One: Engineering and Manufacturing Development. Includes the provision of 10 vehicles and five trailers, including test vehicles and trailers; the conduct of a vehicle RGT and other developmental test and evaluation activities. Acceptance of these results by Defence was required prior to exiting Stage One.
- Stage Two: Low-Rate Initial Production (LRIP). Includes the production of 100 vehicles and 100 trailers, plus six test vehicles and four trailers based on an approved production baseline; the conduct of a PRAT, and final acceptance testing and evaluation activities.
- Stage Three: Full-Rate Production (FRP). The production of the remaining vehicles and trailers based on the approved FRP baseline, and the achievement of IMR and Final Materiel Release (FMR). This stage will also include the uplift of all LRIP vehicles and trailers to the FRP build standard.

Support requirements for the PMV-L have been incorporated into the existing Protected Mobility Vehicle-Medium (Bushmaster) Through Life Support Contract. It is anticipated that integrating the support arrangements for both fleets will reduce the overall cost of ownership of the vehicle systems by approximately \$270 million over the 15-year life of the vehicle systems.

#### Uniqueness

LAND 121 Phase 4 is a developmental project specifically designed to meet the ADF's requirements. The uniqueness of the PMV-L stems from the combination of the following in a single vehicle:

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

#### Major Risks and Issues

The Project currently has **two** 'high' rated risks and **one** 'high' rated issue (pre-mitigation rating). The **two** 'high' rated risks in section 5.1 are:

- There is a chance that Army's Directed Training Requirements will not be met, affecting capability, cost, schedule and reputation.**
- There is a chance that the COVID-19 imposed travel restrictions and social distancing requirements may impact the delivery of the Support System and conduct of Operational Test and Evaluation. This may affect the achievement of IMR and IOC. This is also disclosed as an issue in Section 5.2.**

The 'high' rated issue is:

- Issues have arisen as a result of the IMR declaration with caveats.**

#### Other Current Related Projects/Phases

LAND 121 is a multi-phased program providing the ADF with current-generation high-capability field vehicles, modules and trailers. The other current LAND 121 projects are:

- LAND 121 Phase 3B – This project is providing the ADF with 2,707 protected and unprotected medium and heavy vehicles, along with 1,753 matched trailers. This will provide payloads of between four and seventy tonnes for a range of logistics functions, including vehicle recovery, freight, bulk liquid distribution and personnel carriage.

<ul style="list-style-type: none"> <li>LAND 121 Phase 5B – This project is a follow-on acquisition from LAND 121 Phase 3B, and is providing the ADF with an additional 1,044 medium and heavy vehicles, 872 modules and 812 trailers.</li> </ul> <p>LAND 200 Tranche 2 – This project expands LAND 200 Tranche 1 capability across Army with new collaborative planning, control and monitoring tools for Brigade and Divisional level headquarters and integrates the system into additional platforms. The two major sub-systems of the Battlefield Command Systems are the Battle Management System and the Tactical Communications Network.</p>
<b>Note</b>
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
<b>Project Budget</b>			
May 08	Original Approved	1.8	
Nov 09	Real Variation - Scope	5.7	1
Jul 11	Real Variation - Scope	31.5	2
Apr 12	Real Variation - Scope	48.4	3
Sep 15	Government Second Pass Approval	1,857.6	
	<b>Total at Second Pass Approval</b>	<u>1,945.0</u>	4
Jul 10	Price Indexation	0.4	5
Jun 20	Exchange Variation	<u>42.2</u>	
Jun 20	<b>Total Budget</b>	<u>1,987.5</u>	
<b>Project Expenditure</b>			
Prior to Jul 19	Contract Expenditure - Thales Australia (Prime Contract)	(441.1)	
	Contract Expenditure - Thales Australia prototyping activities (MSA Stage One and Stage Two Contract)	(58.7)	6
	Other Contract Payments/Internal Expenses	(52.6)	7
		<u>(552.4)</u>	
FY to Jun 20	Contract Expenditure - Thales Australia (Prime Contract)	(209.0)	
	Other Contract Payments/Internal Expenses	(11.3)	8
		<u>(220.3)</u>	
Jun 20	<b>Total Expenditure</b>	<u>(772.7)</u>	4
Jun 20	<b>Remaining Budget</b>	<u>1,214.8</u>	
<b>Notes</b>			
1	This amount reflects funding approval at First Pass Approval.		
2	This amount reflects approval to undertake MSA Stage One prototyping.		
3	This amount reflects funding approval at Interim Pass for MSA Stage Two prototyping.		
4	The Budget and Expenditure amounts do not reflect the \$43.0m paid in 2009. Due to the payment being provided by Capability Development Group and was not part of the LAND 121 Phase 4 project budget.		
5	Up until July 2010, indexation was applied to project budgets on a periodic basis. The cumulative impact of this approach was \$0.3m. In addition to this amount, the impact on the project budget as a result of out-turning was a further \$0.1m having been applied to the remaining life of the project.		
6	These expenditures relate to pre Second Pass costs associated with exploring the Government initiated MSA Option (Option Three) and the contracts are now closed.		
7	Expenses comprise of: MAV prototyping activities (\$17.7m); External Service Providers (\$12.8m), Non-Prime contracts (\$7.1m); costs related to testing / trials (\$5.6m); Project administrative costs (\$5.5m); Legal costs (\$2.1m) and US JLTV Program (\$1.8m).		
8	Expenses comprise of: External Service Providers (\$4.7m); Support Contract Phase-In costs (\$3.3m); Costs related to testing/trials (\$2.0m); Non-Prime contracts (\$0.9m); and Project administrative costs (\$0.5m).		

### 2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Defence's Explanation of Material Movements
292.3	240.3	239.9	PBS – PAES: The forecast variation is primarily due to the revised payment milestones associated with the delays in finalising the Hawkei reliability program and subsequent commencement of Full-Rate Production. PAES – Final Plan: The forecast variation is due to Foreign Currency changes.
Variance \$m	(52.0)	(0.4)	Total Variance (\$m): (52.4)
Variance %	(17.8)	(0.2)	Total Variance (%): (17.9)

### 2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(7.0)	Australian Industry	
			Foreign Industry	
			Early Processes	

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### 3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
Maintenance Demonstration	PMV-L, Trailer and ICS	Dec 16	Dec 16	Jul 17	7	1
Reliability Growth Trial (RGT)	PMV-L and Trailer	Mar 17	Jul 17	N/A	N/A	2
Reliability Demonstration Test (RDT)	PMV-L and Trailer	Feb 18	N/A	Nov 18	9	3
Development Test & Evaluation (DT&E)	PMV-L, Trailer and ICS	Mar 17	Sep 17	Sep 17	6	4
Initial Maintenance Evaluation	PMV-L, Trailer and ICS	Oct 17	Jan 18	Jun 18	8	5
Second Maintenance Evaluation	PMV-L, Trailer and ICS	Jan 19	N/A	Jul 19	6	5,6
Acceptance Verification and Validation (AV&V)	PMV-L, Trailer and ICS	Jun 18	Jan 19	Jul 20	25	7,8
Production Reliability Acceptance Test (PRAT)	PMV-L and Trailer	Jun 18	Jan 19	Jun 20	24	8,9
Low-Rate Initial Production (LRIP) Acceptance Last Batch	PMV-L, Trailer and ICS	Jun 18	Jan 19	Oct 19	16	7,8
Full-Rate Production (FRP) Acceptance Last Batch	PMV-L, Trailer and ICS	Oct 20	May 21	Sep 21	11	7,8
<b>Notes</b>						
1	The variance is due to the Commonwealth rejecting the first two versions of the Maintenance Demonstration Acceptance Verification Reports (AVR) submitted on 24 January 2017 and 30 March 2017. The approved version of the report was submitted to the Commonwealth on 01 June 2017, with the Notice of Approval signed on 03 July 2017.					
2	RGT was separated into the following three activities: <ul style="list-style-type: none"> <li>RGT Number One was conducted over the period July to December 2016 and provided Thales with the opportunity to resolve any issues with the vehicles ahead of the formal trial activities that commenced under RGT Number Two.</li> <li>RGT Number Two commenced in November 2016. In January 2017, the pilot Hawkei vehicles had exceeded the seven allowable critical failures under the contract. Identified key root causes include supplier quality issues and immature components affecting hardware and software integration. A six-week corrective action period was implemented to allow Thales to undertake engineering upgrades.</li> <li>RGT Number Three (May to July 2017) followed this, which demonstrated reliability improvements on a number of sub-systems, but a number of recurring failures were evident.</li> </ul>					
3	The RDT was introduced as a Contract Change to confirm that failures identified during the RGT had been rectified before entering into the Production Readiness Acceptance Test. The RDT will prove that the implemented solutions for Critical Failure and Effective Function Failure described in the Reliability Remediation Plan have been resolved to the Commonwealth's satisfaction. The nine months delay in completing RDT is due to the delay in remediating the outstanding reliability issues.					
4	As part of the extension of Stage One (Engineering and Manufacturing Development), DT&E has also been extended to facilitate further development testing and to mitigate against the AV&V activities required under Stage Two (LRIP).					
5	The approval of AVR for the Initial Maintenance Evaluation was delayed by seven months due to the initial submission of the report being rejected by the Commonwealth, primarily due to the incompleteness of the Interactive Electronic Technical Publication (IETP) presented by Thales Australia. A second Maintenance Evaluation (ME2) was conducted in September 2018 to ensure the changes requested by the Commonwealth from the Initial Maintenance Evaluation were incorporated into the IETP. The Commonwealth received the final report from Thales supporting the achievement of this activity on 21 June 2019. <b>The Commonwealth approved the ME2 AVR on 03 July 2019.</b>					
6	<b>Thales' compliance against the deficiencies identified in the ME2 AVR by the Commonwealth is part of finalising the Hawkei Full-Rate Production baseline and transition to Stage 3 (FRP).</b>					
7	AV&V has been delayed by 25 months due to the requirement to extend reliability testing, which impacted on the date that the LRIP vehicle build state was established between the Commonwealth and Thales. The delay in establishing the vehicle build state impacted on vehicle availability to conduct AV&V activities. The reliability issues, design maturity and production delays have further impacted the completion of AV&V. <b>COVID-19 movement restrictions have delayed the completion of sea, air and rail Verification and Validation. These activities are considered low-risk for compliance against the specification and will be finalised prior to IOC.</b>					
8	As part of the extension of Stage One (Engineering and Manufacturing Development), the start dates of some Stage Two (LRIP) and Stage Three (FRP) activities have also been delayed. Defence senior leadership is working closely with Thales to assess the vehicle's progress through PRAT, a pre-requisite for FRP.					
9	<b>PRAT was finalised on 10 June 2020 with the Commonwealth's approval of the Integrated Reliability Maintainability and Testability Report from Thales Australia.</b>					

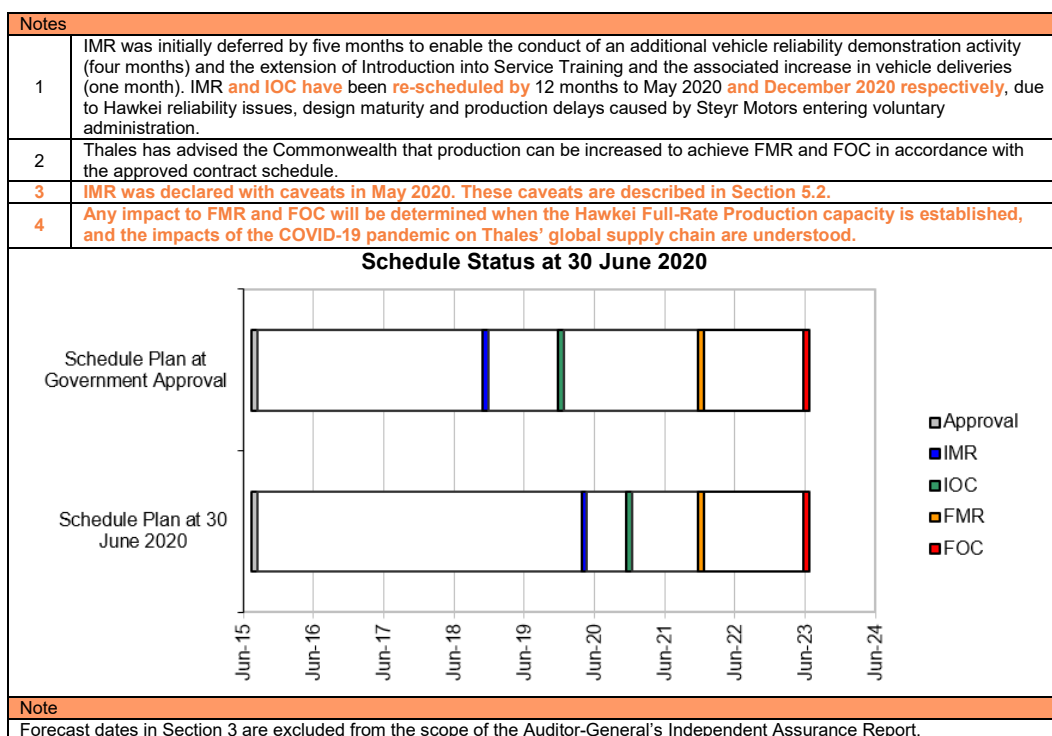
### 3.3 Progress Towards Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Dec 18	May 20	17	1,3
Initial Operational Capability (IOC)	Dec 19	Dec 20	12	1
Final Materiel Release (FMR)	Dec 21	Dec 21	0	2,4
Final Operational Capability (FOC)	Jun 23	Jun 23	0	2,4

## Project Data Summary Sheets

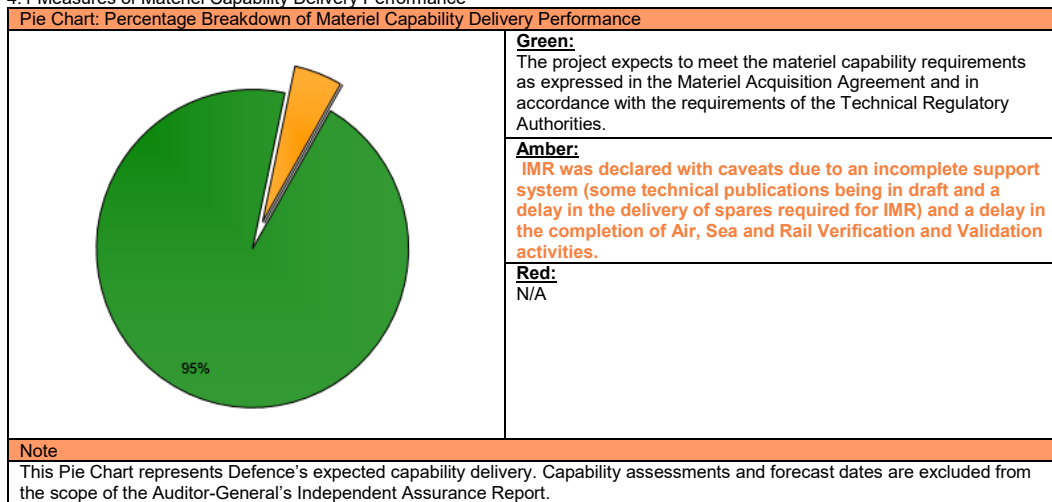
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## Section 4 – Materiel Capability Delivery Performance

### 4.1 Measures of Materiel Capability Delivery Performance



### 4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	<p>IMR was achieved with caveats in May 2020.</p> <p>By IMR, the following will be delivered:</p> <ul style="list-style-type: none"> <li>108 PMV-L and 108 Trailers to be delivered in accordance with the Force Generation Cycle;</li> <li>22 PMV-L and 22 Trailers for Introduction Into Service Training (increased from 14 PMV-L and 14 Trailers);</li> </ul>	Achieved with caveats

	<ul style="list-style-type: none"> <li>Eight PMV-L and eight Trailers for the conduct of Verification and Validation (V&amp;V), and PRAT; and</li> <li>Logistics support arrangements, including Training, Supply and Maintenance Systems.</li> </ul> <p><b>The caveats to IMR are described in Section 5.2.</b></p>	
Initial Operational Capability (IOC)	<p>IOC is a future dated milestone projected for December 2020.</p> <p>Declaration of IOC will be made by the Capability Manager following the conduct of a Battle Group sized Operational Test and Evaluation (OT&amp;E) activity to validate the Hawkei Fundamental Input to Capability components. The OT&amp;E assessment criteria is to be defined by the Capability Manager.</p>	Not yet achieved
Final Materiel Release (FMR)	<p>FMR is a future dated milestone projected for December 2021.</p> <p>By FMR, the following will be delivered:</p> <ul style="list-style-type: none"> <li>1100 PMV-L and 1058 Trailers; and</li> <li>Introduction Into Service (IIS) Training and transfer of IIS training packages.</li> </ul>	Not yet achieved
Final Operational Capability (FOC)	<p>FOC is a future dated milestone projected for June 2023.</p> <p>Declaration of FOC will be made by the Capability Manager supported by the results of OT&amp;E and confirmation by the Delivery Group (CASG) that the Fundamental Input to Capability components have been delivered as agreed. The FOC criteria are to be defined by the Capability Manager.</p>	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 chance that the PMV-L will fail to successfully complete the Reliability Growth Program (RDT and PRAT), which will impact on schedule and performance. This could result from vehicle performance deficiencies or additional design modifications needing to be implemented into the developmental vehicle.	<ul style="list-style-type: none"> <li>RDT was completed in November 2018 with reliability issues outstanding. This caused a delay to commencing PRAT while residual failures were remediated. <b>The issue</b> disclosed in Section 5.2 <b>is now resolved</b>. This risk <b>was</b> treated through: <ul style="list-style-type: none"> <li>Close Commonwealth supervision and involvement during the conduct of the Reliability Growth Program.</li> <li>Commonwealth and Supplier senior leadership engagement to maintain oversight of critical reliability issues, responding to help needed, and resource requirements / prioritisation.</li> </ul> </li> <li><b>This risk is now retired with the completion of PRAT on 10 June 2020.</b></li> </ul>
There is a chance that production delays from vehicle reliability, quality issues, and component availability will further delay the achievement of the Initial Materiel Release and Initial Operating Capability milestones.	<ul style="list-style-type: none"> <li>Lower than expected production rate due to component availability and outstanding reliability issues has resulted in IMR and IOC <b>being re-scheduled by 12 months</b>. This is now disclosed as an issue in Section 5.2. There remains a risk that further issues will cause further delays to IMR and IOC. This risk <b>has been downgraded as a result of the following actions</b>: <ul style="list-style-type: none"> <li>Commonwealth and supplier senior leadership engagement to maintain oversight of critical reliability and quality issues, responding to help needed, and resource requirements / prioritisation.</li> <li>Embed Commonwealth production and quality assurance representatives at the production line.</li> </ul> </li> <li>Close engagement between the Project Office and Capability Manager to ensure the milestone requirements and capability delivery priorities are aligned.</li> </ul>
There is a chance that the Hawkei Full-Rate Production baseline will not fully meet the user's expectations, due to scope, budget and vehicle design constraints. This will impact on cost, schedule and reputation.	<ul style="list-style-type: none"> <li>Conduct design traceability activities, in conjunction with the Capability Manager to validate scope and manage user expectations.</li> <li><b>The Commonwealth formally confirmed its position to Thales on the Hawkei Full-Rate Production baseline. The baseline will be submitted to the Commonwealth for approval at Full-Rate Production Readiness Review.</b></li> <li><b>This risk has been downgraded as the Hawkei design baseline is nearing finalisation and the user has increased confidence in the system being delivered.</b></li> </ul>

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There is a chance that the LAND 121 Phase 4 Program may be discontinued impacting on cost, schedule, performance and reputation. This will result in the PMV-L capability not being acquired.	<ul style="list-style-type: none"> <li>Continuous engagement with Thales through Strategic Relationship Board meetings.</li> <li><b>PRAT was completed on 10 June 2020.</b></li> <li><b>Thales advised Defence that it had acquired Steyr Motors on 23 August 2019. Thales' procurement of Steyr Motors will ensure the continuity of engine supply and the long-term sustainability of the Hawkei program.</b></li> <li><b>This risk has been downgraded and is no longer assessed as a major risk.</b></li> </ul>
<b>Emergent Risks (risk not previously identified but has emerged during 2019-20)</b>	
<b>Description</b>	<b>Remedial Action</b>
There is a chance that Army's Directed Training Requirements (DTR) will not be met, affecting capability, cost, schedule and reputation.	<ul style="list-style-type: none"> <li>Adjustment of training milestones in the MAA, as agreed to between the Project Office and the Capability Manager.</li> <li>Establishment of regional training teams.</li> <li>Working group convened between the Project Office, Capability Manager and Army Logistic Training Centre to develop solutions to address the risk.</li> </ul>
There is a chance that disruptions as a result of the COVID-19 pandemic will cause delays in the achievement of all project milestones.	<ul style="list-style-type: none"> <li>Project and Branch senior leadership continue to provide oversight and regularly engage with Thales leadership to review action plans.</li> <li>Close engagement between the Project Office and Capability Manager to ensure the milestone requirements and capability delivery priorities are aligned.</li> </ul>

## 5.2 Major Project Issues

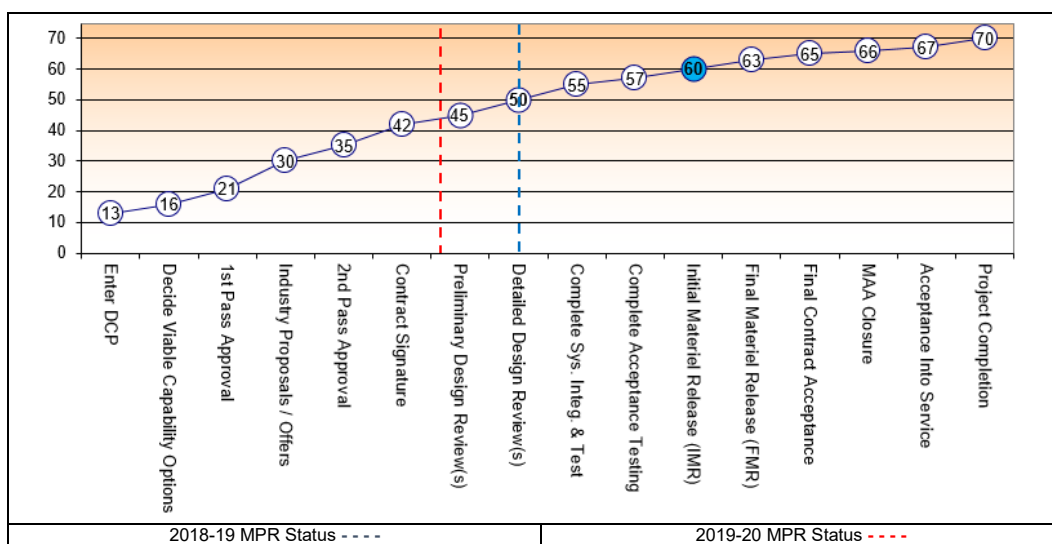
<b>Description</b>	<b>Remedial Action</b>
Reliability Program development was not completed on time, resulting in delay to entering PRAT.	<ul style="list-style-type: none"> <li><b>PRAT commenced on 18 May 2019 and was finalised on 10 June 2020.</b></li> <li><b>This issue is now resolved.</b></li> </ul>
The delays in the provision of technical and logistic support data, due to design maturity and reliability issues, has impacted the development of the PMV-L through-life-support package.	<ul style="list-style-type: none"> <li>Close Commonwealth oversight and support for the development and provision of the associated through life support contract deliverables.</li> <li>Implement interim support arrangements in consultation with the Capability Manager to ensure the Hawkei is sustained during the early stages of rollout.</li> <li><b>This issue is now resolved.</b></li> </ul>
ICS development has been delayed due to the ICS support system and maintenance documentation not being completed to schedule.	<ul style="list-style-type: none"> <li>Alignment of ICS development with C4I and ILS development. Working groups hold regular meetings to manage the issue.</li> <li><b>Execution of a Contract Change Proposal has incorporated ICS maintenance tools into the L121-4 Acquisition Contract.</b></li> <li><b>Capability Manager endorsement of the maintenance concept for the C4I system.</b></li> <li><b>These consolidated issues have been downgraded.</b></li> </ul>
The vehicle reliability issues and component delays have impacted the project schedule and delayed the achievement of IOC, by 12 months from December 2019 to December 2020.	<ul style="list-style-type: none"> <li>Close engagement between the Project Office, Prime Contractor and Capability Manager to ensure the milestone requirements and capability delivery priorities are aligned.</li> <li>Defence and the Prime Contractor are working collaboratively to resolve these issues.</li> <li><b>IOC has been re-scheduled by 12 months to December 2020.</b></li> <li><b>These consolidated issues have been resolved and downgraded.</b></li> </ul>
The Introduction Into Service of the Hawkei has been affected by the Introduction Into Service of other LAND 121 vehicles, impacting on schedule and reputation.	<ul style="list-style-type: none"> <li>Dedicated assessment of the LAND 121 training program to ascertain the way ahead.</li> <li>Additional funding and personnel allocated to Introduction Into Service tasks.</li> <li><b>A LAND 121 program review of training resulted in the consolidation of all LAND 121 Maintenance Training.</b></li> <li><b>This issue is now resolved.</b></li> </ul>
Some capability requirements have not been met by Thales' current design at this stage of the design process.	<ul style="list-style-type: none"> <li>Requirements will need to be considered against suitable balance of capability need and feasible engineering options.</li> <li>Issues are openly discussed at Project Management Stakeholder Group meetings to seek the Capability Manager's direction as the project customer.</li> <li>Thales continues to progress design maturity to meet required specifications.</li> <li><b>These consolidated issues has been resolved and downgraded.</b></li> </ul>

Issues have arisen as a result of the IMR declaration with caveats.	<ul style="list-style-type: none"> <li>Sea, air and rail Verification and Validation has been delayed due to COVID-19 movement restrictions. The outstanding activities are considered low-risk for compliance against the specification and will be finalised prior to IOC.</li> <li>The delivery of 30% of spares, consumables and Support and Test Equipment was initially delayed due to COVID-19 global supply chain impacts. Thales will provide internal production and warehouse stocks for any identified component shortfalls.</li> <li>The Hawkei mission system Complete Equipment Schedule (CES) has been published in draft for IMR, this represented a caveat to the IMR declaration. The fully approved CES will be published prior to IOC.</li> <li>An incomplete Hawkei Repair Parts Scale (RPS) has been published for IMR, this represented a caveat to the IMR declaration. The final RPS will be published prior to IOC.</li> <li>As at 30 Jun 20, these caveats were still extant.</li> <li>Project and Branch senior leadership continue to provide oversight and regularly engage with Thales leadership to review action plans.</li> </ul>
<b>Note</b>	
Major risks and issues in Section 5 are excluded from the scope of the Auditor-General's Independent Assurance Report.	

## Section 6 – Project Maturity

### 6.1 Project Maturity Score and Benchmark

Maturity Score		Attributes							Total
		Schedule	Cost	Requirement	Technical Understanding	Technical Difficulty	Commercial	Operations and Support	
Project Stage	Benchmark	10	8	8	8	9	8	9	60
Initial Materiel Release	Project Status	7	8	7	7	7	7	7	50
	Explanation	<ul style="list-style-type: none"> <li><b>Schedule:</b> IMR was rescheduled by 12 months to May 2020, due to Hawkei reliability issues, design maturity and production delays caused by the Steyr Motors voluntary administration. These issues have also caused IOC to be rescheduled by 12 months to December 2020. IMR with caveats was declared on 26 May 2020. Any impact to Final Materiel Release and Final Operating Capability will be determined when the Hawkei Full-Rate Production capacity is established.</li> <li><b>Requirement:</b> The baseline design of this developmental capability is yet to be finalised and endorsed by the Capability Manager.</li> <li><b>Technical Understanding:</b> COVID-19 movement restrictions have delayed the completion of sea, air and rail Verification and Validation.</li> <li><b>Technical Difficulty:</b> Vehicle design and Verification and Validation will not be finalised until the exit of the Full-Rate Production Readiness Review.</li> <li><b>Commercial:</b> Maintaining the contract against the ongoing reliability issues and production delays has been commercially challenging.</li> <li><b>Operations and Support:</b> The completion of the vehicle baseline design will enable the Support System to be finalised. Thales successfully exited the Support System Detailed Design Review on 19 June 2020. The Project Office continues to work with Thales to finalise the support system to inform Initial Operating Capability.</li> </ul>							



## Section 7 – Lessons Learned

### 7.1 Key Lessons Learned

Description	Categories of Systemic Lessons
<p><b>Developmental Capability.</b> The PMV-L is a technically complex development project that requires active engagement with the contractor, multiple interagency stakeholders and projects from other domains.</p> <p>Maintaining close collaboration and communication with all stakeholders is critical for understanding the technical requirements for a first-of-type capability, and facilitating proactive risk management and contingency planning.</p>	First of Type Equipment
<p><b>Adequate Resourcing.</b> First-of-type projects contain significant levels of complexity and require substantial effort to fulfil the right balance of technical, performance, risk, cost and schedule requirements. Appropriate investment is required by projects and the contractor from the outset to ensure such requirements are not over-optimistically represented or underestimated.</p> <p>Projects operating in a developmental environment are to pay greater attention to workforce management and project governance. The project is also to frequently assess contractor resources, capabilities and capacity in the lead up and during project delivery.</p>	Governance Contract Management First of Type Equipment
<p><b>Support from External Subject Matter Experts.</b> A number of external subject matter experts with vast Defence and commercial experience were engaged during Tender Evaluations and Negotiations, and the Acquisition Phase, for advice and to provide independent assessments of technical, commercial and financial matters.</p> <p>Active participation of external advisors during Tender Evaluations and Negotiations, and the Acquisition Phase, considerably improved the project's understanding and approach towards commercial, industry and programmatic issues.</p>	First of Type Equipment
<p><b>Integrated ICS Team.</b> The uncertainty in developing the ICS concept would have benefited from having an integrated and centralised team consisting of:</p> <ul style="list-style-type: none"> <li>PMV-L project staff</li> <li>Staff from other interrelated communication projects</li> <li>Capability Manager specialists</li> <li>External subject matter experts/contractors</li> <li>Specialist staff such as engineers.</li> </ul>	Resourcing Contract Management
<p><b>Vehicle Acceptance Resourcing and Planning.</b> The early planning and generation of dedicated Commonwealth Production Liaison and Vehicle Acceptance staff (and processes) enables improved planning in conjunction with the OEM for Vehicle Acceptance and QA processes. This improves transition from design into the production and vehicle acceptance stage of the program.</p>	Contract Management Governance Resourcing
<p><b>Hawkei Reliability Growth.</b> Reliability programs must incorporate sufficient schedule for reliability growth of the capability to set the conditions for a successful outcome. Reliability fixes must be supported by Objective Quality Evidence before proceeding to the next reliability test.</p>	Schedule Management Requirements Management

Section 8 – Project Line Management

8.1 Project Line Management as at 30 June 2020

Position	Name
Division Head	MAJGEN Andrew Bottrell
Branch Head	Ms Sarah Myers
Project Director	COL John-Paul Ouvrier

Project Data Summary Sheet<sup>162</sup>

Project Number	AIR 8000 Phase 2
Project Name	BATTLEFIELD AIRLIFT – CARIBOU REPLACEMENT
First Year Reported in the MPR	2013-14
Capability Type	Replacement
Acquisition Type	MOTS
Capability Manager	Chief of Air Force
Government 1st Pass Approval	Apr 12
Government 2nd Pass Approval (or key Government pre-Second Pass Approval)	Apr 12
Budget at 2 <sup>nd</sup> Pass Approval (or key Government pre-Second Pass Approval)	\$1,156.5m
Total Approved Budget (Current)	\$1,439.2m
2019-20 Budget	\$91.7m
Project Stage	Initial Materiel Release
Complexity	ACAT II



## Section 1 – Project Summary

## 1.1 Project Description

This project was approved to replace the retired Caribou capability and provide the Australian Defence Force (ADF) with an enhanced intra-theatre and regional airlift capability through acquisition of a fleet of ten new Light Tactical Fixed Wing aircraft. The Government approved solution is acquisition through United States Air Force (USAF) Foreign Military Sales (FMS) of the Leonardo built C-27J aircraft modified by L-3 Product Integration Division (PID) to the United States (US) Department of Defense Joint Cargo Aircraft (JCA) C-27J configuration, known as Spartan. The JCA C-27J is a Military Off The Shelf (MOTS) acquisition offering enhanced self-protection and interoperability that meets Australian requirements. The aircraft was operated by 35 Squadron at its Interim Main Operating Base (MOB) at Royal Australian Air Force (RAAF) Base Richmond and is now operated from its Final MOB at RAAF Base Amberley. Government agreed in May 2016 to delay Final Operating Capability (FOC) until December 2019. Project acquisition includes the ten aircraft, a training system, support system materiel elements, and three years of initial FMS training and support services from the aircraft In-Service Date (ISD), through Initial Operational Capability (IOC) to FOC.

To date the project has delivered 10 aircraft, the initial training and support services, an interim training system, and the support system materiel elements. The project will mature beyond FOC in order to deliver capability improvements.

## 1.2 Current Status

## Cost Performance

## In-year

The end of financial year underspend of \$19.1m is due to the effect of COVID 19 on contractual arrangements with overseas suppliers creating delays against the Mode 5/IFF and Fuselage Trainer contracts, and delays in contract development activity for the Structural Substantiation Program. Also contributing are lower than forecast requirement to seek contractor certification support, lower than forecast FMS spend, delays in agreeing a sustainment contract for the C27J fuselage trainer and in longer lead time than expected for spares deliveries.

## Project Financial Assurance Statement

As at 30 June 2020, Project AIR 8000 Phase 2 has reviewed the approved scope and budget for those elements required to be delivered by the project. Having reviewed the current financial and contractual obligations of the project, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there are budget pressures for current obligations and Defence is revalidating the remaining scope against the revised force structure plan and will present these options to Government in December 2020.

## Contingency Statement

The project has not applied contingency in the financial year.

## 162 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 Assurance Report by the Auditor-General in Part 3 of this report.

**Schedule Performance**

The original schedule of IMR and IOC were declared with caveats in December 2016. The IOC declaration encompassed the material caveats described by the project at IMR. FOC at end of 2017, as originally planned, was unachievable as a result of: Leonardo aircraft production delays associated with the transfer of the fuselage assembly line; reduced training throughput due to aircraft availability; the delayed start to US-based training in 2014; and delays associated with establishing facilities at the Main Operating Base at RAAF Base Amberley. Under a revised schedule agreed by Government, FOC **was** to be achieved by December 2019 (24 months behind original schedule), noting the capability would continue to mature beyond FOC, including delivery of the mature training system.

**FMR was not achieved in October 2019, and FOC was not declared in December 2019.**

**Key achievements of financial year 2019-20 centred on contracts signed under the Enduring Leonardo Contract (ELC) deed to support the ongoing development of the Avionics Block Upgrade design. The Fuselage Trainer has been delivered by L3-Oceania however, COVID-19 travel restrictions have delayed contractor final testing and commissioning. The Wing and Fuselage test articles have been accepted and Wing test article delivered to Australia, these are significant achievements against the Structural Substantiation Program. A military type certificate was issued in June 2020, and Configuration Control Board approval (February 2020) achieved for the modification incorporation of the Mode 5 IFF upgrade. An amended date for FMR and FOC declaration is anticipated to be advised after completion of capability revalidation activity currently underway by Defence, the project anticipates a revised execution strategy for the residual acquisition activity after December 2020.**

**Material Capability Delivery Performance**

The C-27J aircraft is a relatively mature and well tested MOTS product. Notwithstanding, the project office is working through a number of capability baseline considerations identified post-establishment of the FMS Case. These baseline issues are associated with the configuration and certification status of the USAF JCA C-27J program, which were not finalised by the USAF at the time of divestiture. All ten aircraft have been accepted, with the last aircraft accepted in December 2017.

The project remains committed to the timely delivery of capabilities to support the operational intent of the C-27J. **The project did not achieve FMR in October 2019 with further work continuing in order to support the Mode 5 IFF modification upgrade and final spares delivery (less than 1% remaining). The project has completed transition of spares acceptance to sustainment. The project achieved military type certification in June 2020.**

**The capability will continue to mature post FOC noting Defence is revalidating the business case and execution strategy for this residual acquisition activity during 2020.**

**Note**

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

**1.3 Project Context****Background**

A requirement to replace Defence's battlefield airlift capability was first identified in the 1980s. Defence ensured the battlefield airlift capability was maintained via a sustainment commitment to the Caribou until their retirement in 2009 and lease of additional B300 King Air aircraft until suitable replacement platforms and appropriate Defence Capability Plan funding could be allocated.

Government authorised Defence to issue a Letter of Request seeking price and availability information from the USAF for the C-27J on 30 September 2011. Defence approached Airbus Military for price and availability data for the Airbus Military C295 aircraft. Raytheon data for C-27J was solicited via Direct Commercial Inquiry. On 10 May 2012 Government announced it had approved the purchase of ten C-27J battlefield airlift aircraft via FMS from the US Government to replace the Caribou aircraft, at a total program cost of up to A\$1.4 billion.

Leonardo manufactured the C-27J Military Industrial Baseline Aircraft configuration which was then flown to the US for modification. L-3 PID, acting as the prime contractor to the US Government, was responsible for post-production integration of US improved mission systems. The design and integration work by L-3 PID enhanced the effectiveness of the baseline aircraft, ensuring that the US JCA variant, as offered through the FMS agreement, meets the battlefield airlift capability needed by Defence.

The USAF's potential to divest the C-27J was a known consideration that was factored into the business case presented to and approved by Government at project combined First and Second Pass in April 2012. In early 2013 the USAF confirmed its intention to divest their C-27J fleet and accelerated its schedule for withdrawal. Subsequently, in mid-2013, the USAF advised that it would not complete Military Type Certification (MTC) and that L-3 PID was, contrary to earlier advice, required by the Air National Guard to vacate the facilities occupied by the C-27J training school located at Robins Air Force Base, Georgia USA. This resulted in a late notice requirement for relocation of the L-3 training school to L-3 facilities in Arlington and Waco Texas, which resulted in a three-month delay to ISD (achieved June 2015).

Military Type Certification (MTC) was leveraging the Federal Aviation Authority civilian certification and USAF work completed at the time of its decision to cease its MTC. The USAF decision not to complete MTC has materially increased the cost, effort and schedule risk associated with the project achieving MTC. The Commonwealth has secured significant Intellectual Property licensing rights to technical data from Leonardo and L-3 PID to aid in MTC and through-life support of the C-27J. **MTC was achieved in June 2020.**

Training Systems were impacted by the USAF's inability to acquire a suitable system for the Commonwealth. Consequently, the decision was made to manage and undertake training in Australia and acquire the mature training system via commercial arrangements. The accepted Interim Training System currently offers training to aircrew and maintenance personnel at a dedicated training facility at RAAF Base Amberley and in Italy.

Defence continues to build a close commercial and working relationship with Leonardo S.p.A., the original equipment manufacturer of the C-27J Spartan. In early 2019, Defence established a four-person C-27J Resident Project Team, located in Leonardo's facilities in Turin, Italy. This has contributed to the Project retiring numerous Risks and Issues associated with contracting, delivery of spares and support, Government approved aircraft upgrades, and OEM technical support.

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The project was unable to achieve FOC as planned during 2019. Defence has formally advised Government of the inability to achieve FOC and will inform Government of a revised FOC schedule in December 2020 after reviewing available options during 2020.

#### Uniqueness

The C-27J is a MOTS aircraft acquisition with a limited number of changes to meet Australian requirements, such as: paint scheme; upgraded Radar Warning Receiver; updates to address obsolescence; and upgrade to the Mode 4 IFF system.

The uniqueness of the project **can be measured by:**

1. The degree of Australian-specific contracting effort that was conducted by the USAF C-27J FMS Program Office to establish initial FMS training and support services as a result of USAF C-27J divestiture (generally, FMS leverages off a contemporary US military procurement). USAF contracting of US-based initial training from L-3 PID utilising the ADF Airworthiness Management System is also atypical. Historically, the USAF airworthiness management system has been utilised for such training arrangements; however, due to USAF C-27J divestiture, this option was no longer possible. Both the USAF and L-3 were unfamiliar with Australian airworthiness management system requirements.

2. The degree of IFF system upgrade activities from Mode 4 to Mode 5 on a delivered in-service sustainment product that are required to meet project outcomes given the limited availability of an off-the-shelf design for the C-27J platform globally.

#### Major Risks and Issues

The Government endorsed acquisition strategy accepted a number of risks stemming from, or exacerbated by, the likelihood of USAF C-27J divestiture. Notwithstanding these risks, the benefits of acquiring the USAF JCA-configured C-27J via FMS were assessed to outweigh these risks, and their likelihood of occurring was taken into account when developing initial project strategies and plans. However, the accelerated pace of USAF C-27J divestiture resulted in greater impact to the program than originally anticipated.

Current major project residual risks and issues are as follows:

**C-27J Capability Baseline.** The project has reviewed the C-27J capability baseline and identified a number of known incomplete capability requirements, some of which will be matured beyond FOC. Following confirmation of divestment, USAF ceased MTC activity and rectification of those incomplete capability requirements. The project has undertaken a detailed analysis to quantify and characterise the structural life-of-type of the airframe and proposed capability upgrades. These include Electronic Warfare Self Protection systems which impact project budget and schedule. They are not anticipated to be an impediment to achieving the overall capability defined in approved scope, but the capability is expected to mature beyond FOC.

**USAF divestiture of C-27J.** The C-27J capability delivery has been affected by US Government divestiture of their C-27J program leading to an impact on project schedule and cost. The USAF decision to divest of C-27J effectively decreases the global fleet by approximately 150 aircraft to an estimated 80 aircraft, reducing opportunities for sustainment and training cost sharing.

**Training.** Delays in establishment of training services contracts under FMS impacted the training schedule and student throughput. Once established, the courseware standard delivered required active involvement by the Commonwealth to implement ongoing improvements.

During 2016-17 the Government agreed that alternative approaches to the training delivered under FMS were required. The project transitioned training from the USA to RAAF Richmond in July 2017, with the simulator element undertaken in Italy.

The project continues to investigate opportunities to deliver a mature training system at RAAF Amberley. Work is in progress to procure the Operational Flight Trainer through the Enduring Leonardo Contract. An opportunity to procure a Fuselage Trainer was entered into with L-3 Oceania for delivery in 2019-2020. These activities will form the basis of mature training system delivery post-FOC.

**COVID-19.** Key suppliers in Italy have been directly affected by reduced ability to deliver on schedule due to COVID-19 requiring workplace closures, and social distancing requirements. This has resulted in a reduction in outputs from March to June 2020. Suppliers in Australia have also been affected by workplace and interstate travel restrictions. International travel restrictions on the Commonwealth, international commercial and military partners has reduced the ability of the project to conduct in-person contract acceptance activities. Every possible measure has been taken to reduce the impact to cost and schedule to project outcomes.

**FMR/FOC requirements.** The C-27J Capability will be affected by the inability to complete all requirements on schedule.

#### Other Current Related Projects/Phases

N/A

#### Note

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

## Section 2 – Financial Performance

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

Date	Description	\$m	Notes
<b>Project Budget</b>			
Apr 12	Original Approved (Second Pass Approval)	1,156.5	
Jun 20	Exchange Variation	283.7	
Nov 19	Real Variation - Transfer	(1.0)	4
Jun 20	<b>Total Budget</b>	<b>1,439.2</b>	
<b>Project Expenditure</b>			
Prior to Jul 19	Contract Expenditure - US Government	(651.3)	1
	Contract Expenditure - Leonardo Intellectual Property and Technical Data	(72.1)	1



FY to Jun 20	Contract Expenditure - Leonardo - Structural Substantiation Program (Fuselage)	(16.2)	1
	Contract Expenditure - Leonardo - Mode 5 IFF Upgrade	(11.5)	1
	Other Contract Payments/Internal Expenses	(82.4)	2
		(833.5)	
	Contract Expenditure - US Government	(8.2)	1
	Contract Expenditure - Leonardo - Flight Loads Test Program	(7.6)	1
	Contract Expenditure - Leonardo - Avionics Risk Reduction Activity	(6.5)	1
	Contract Expenditure - Leonardo - Mode 5 IFF Upgrade	(7.0)	1
	Contract Expenditure - Leonardo - Management of Services	(5.0)	1
	Contract Expenditure - Leonardo - Structural Substantiation Program (Fuselage)	(2.5)	1
Jun 20	Other Contract Payments/Internal Expenses	(35.8)	3
	<b>Total Expenditure</b>	(72.6)	
		(906.1)	
Jun 20	<b>Remaining Budget</b>	533.1	

#### Notes

1	The scope of these contracts is explained further in Section 2.3 – Details of Project Major Contracts.
2	Other expenditure comprises: operating expenditure, minor contract expenditure and other capital expenditure not attributed to the listed contracts.
3	Other expenditure comprises: Support and Test Equipment, spares and global freight costs (\$14.2m), contractor support costs for Structural Substantiation Program, loadmaster seat development, aircraft modification and certification purposes (\$9.3m), training devices related procurement and support costs (\$6.6m), and other project management support and administrative costs (\$5.7m) contribute to the other expenditure.
4	Transfer to Defence Science and Technology Group for the provision of ongoing contractor technical support for the Structural Substantiation Program.

#### 2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
93.5	92.1	91.7	PBS - PAES: The variation is primarily due to a combination of adjustments to remaining aircraft spares, aircraft updates, certification, structural substantiation program and training device schedules and other minor changes.  PAES - Final Plan: Variance is primarily due to refinement to implementation schedules for aircraft modification programs and reduced contractor support costs as an outcome of contract negotiations.
Variance \$m	(1.4)	(0.4)	Total Variance (\$m): (1.8)
Variance %	(1.5)	(0.4)	Total Variance (%): (1.9)

#### 2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(0.7)	Australian Industry	The major factors contributing to the variance are the effect of COVID 19 on contractual arrangements with Leonardo including spares procurements, Structural Substantiation Program test article and Mode 5 IFF deliveries. Also contributing to the variance are schedule delays against the C27J fuselage trainer acquisition contract, agreeing a sustainment contract for the C27J fuselage trainer, reduced contractor support requirements and reduced FMS disbursements driving lower spend.
		(4.1)	Foreign Industry	
			Early Processes	
		(11.4)	Defence Processes	
		(2.9)	Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
91.7	72.6	(19.1)	Additional Government Approvals	
		(20.8)	Total Variance	
			% Variance	

#### 2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 20 \$m			
US Government	May 12	882.4	664.5	Reimbursement	FMS	1,2,3,
Leonardo IP Technical Data	May 12	62.0	72.1	Firm Price	Modified ASDEFCON (Complex)	1,

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Leonardo <b>Mode 5 IFF</b>	Sept 17	18.7	<b>23.2</b>	Firm Price	ASDEFCON (Complex)	1,4
Leonardo <b>Aircraft Fuselage Test Article</b>	Dec 17	16.9	<b>18.7</b>	Firm Price	ADEFCON (Shortform Goods)	1,5
Leonardo <b>Management of Services</b>	Feb 19	27.4	27.9	Firm price	Modified ASDEFCON (Complex)	1
Leonardo <b>Flight Loads Test Program</b>	Mar 19	19.8	<b>20.1</b>	Firm price	Modified ASDEFCON (Complex)	1
Leonardo <b>Avionics Risk Reduction</b>	<b>Sept 19</b>	<b>16.2</b>	<b>16.4</b>	<b>Firm Price</b>	<b>Modified ASDEFCON (Complex)</b>	<b>1</b>

**Notes**

- Contract value as at **30 June 2020** is based on actual expenditure to **30 June 2020** and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable).
- Amendment 4 to FMS case AT-D-SGU was approved in May 2017 reducing the case value to \$US655.5m. The Amendment reflects removal of training device acquisition funding and an overall release of management reserve funding no longer require under the case. The amendment also reflects the CoA's intention to close the case early.
- Amendment 5 to FMS case AT-D-SGU was approved on 2 July 2018 reducing the FMS Case value to \$US617.7m. The Amendment releases further management reserve funding no longer required under the case. The amendment also reflects the CoA's intention to close the case early. Amendment 6, was approved in May 19 and has further reduced the FMS case to a value of \$US601.9m. **There were no amendments to the case in the 2019-2020 financial year. The change to the contract value from the prior year is due to foreign exchange movements.**
- Mode 5 IFF upgrade contract. Contract Change 1 was approved in October 2018 updating the milestone payment schedule introducing new maintenance related activities and DASR certification requirements.
- Aircraft Fuselage Test Article Contract Change 1 was approved Nov 19 adding additional production requirements to address shortfalls found in initial reviews of the test article deliverables.**

Contractor	Quantities as at		Scope	Notes
	Signature	30 Jun 20		
US Government	10	10	10 C-27J Aircraft and associated training, training equipment, spares, ground support equipment and initial support	
Leonardo- <b>IP Technical Data</b>	N/A	N/A	C-27J Intellectual Property and Technical Data	
Leonardo <b>Mode 5 IFF</b>	10	10	Mode 5 IFF modification for 10 C-27J aircraft	
Leonardo <b>Aircraft Fuselage Test Article</b>	1	1	Aircraft Fuselage procurement in support of C-27J Structural Substantiation Program	
Leonardo <b>Management of Services</b>	N/A	N/A	Provision of Project Management Services in support of the Enduring Leonardo Contract (ELC)	
Leonardo <b>Flight Loads Test Program</b>	1	1	Provision of a Flight Loads Test Program in support of the C-27J Structural Substantiation Program	
Leonardo <b>Avionics Risk Reduction</b>	<b>N/A</b>	<b>N/A</b>	<b>Provision of risk reduction activities in support of development of the C-27J Avionics Block Upgrade.</b>	
<b>Major equipment accepted and quantities to 30 Jun 20</b>				
Ten aircraft accepted plus a substantial amount of the IP rights and Technical data received.				
<b>Notes</b>				
1	N/A			

**Section 3 – Schedule Performance**

## 3.1 Design Review Progress

Review	Major System/Platform Variant	Original Planned	Current Planned	Achieved /Forecast	Variance (Months)	Notes
System Requirements	Operational Flight Trainer	TBA	TBA	TBA	TBA	1,2
	Fuselage Trainer	N/A	N/A	N/A	N/A	1,3
Preliminary Design	Operational Flight Trainer	TBA	TBA	TBA	TBA	1,2
	Fuselage Trainer	N/A	N/A	N/A	N/A	1,3
Critical Design	Operational Flight Trainer	TBA	TBA	TBA	TBA	1,2
	Fuselage Trainer	N/A	N/A	N/A	N/A	1,3
<b>Notes</b>						

1	Contracts for the acquisition of the Operational Flight Trainer device has yet to be established. Training devices are not included in the revised FOC definition approved by Government in May 2016. <b>Work continues for the installation and maintenance for the Fuselage Trainer through L-3 Oceania.</b> No design process is required for the Fuselage Trainer as a decommissioned US-based system has been acquired for refurbishment by the Commonwealth from L-3 Oceania.
2	<b>As of 30 June 2020, collaborative development of detailed requirements for the Operational Flight Trainer acquisition has resulted in Statement of Work submission to Leonardo S.p.A and work commenced by Leonardo S.p.A to select suppliers to satisfy requirements. Final contract negotiations are anticipated in Quarter 1 2021.</b>
3	<b>The Fuselage Trainer was a COTS purchase. No design reviews were required.</b>

### 3.2 Contractor Test and Evaluation Progress

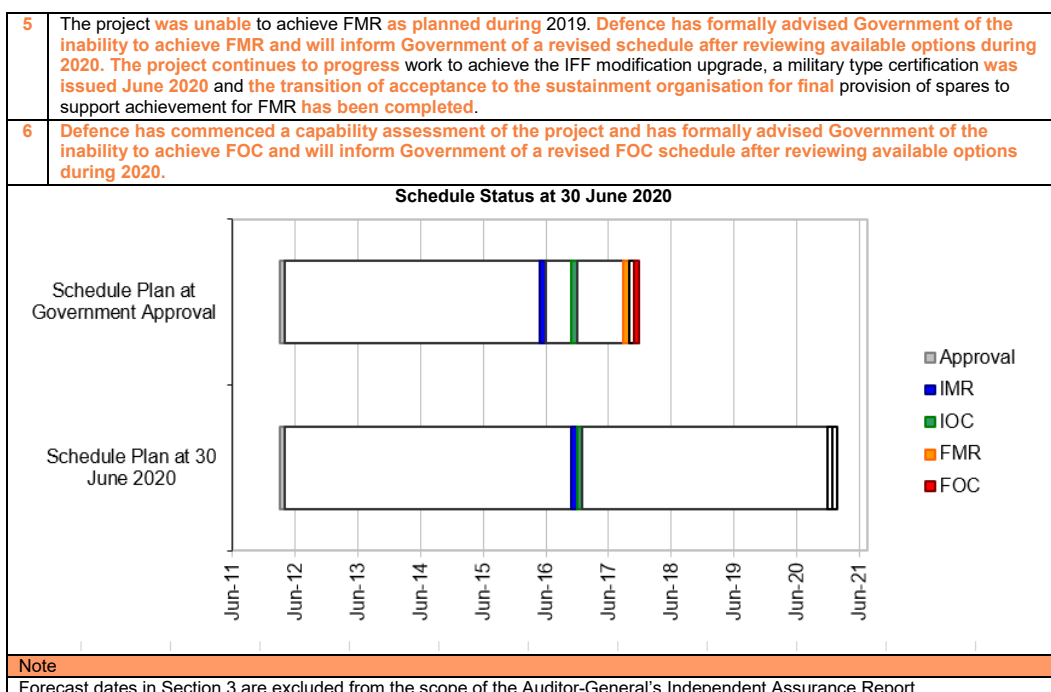
Test and Evaluation	Major System/Platform Variant	Original Planned	Current Planned	Achieved /Forecast	Variance (Months)	Notes
System Integration	Operational Flight Trainer	TBA	TBA	TBA	TBA	1,2
	Fuselage Trainer	May 20	N/A	Oct 20	5	1,6,7
Acceptance	C-27J Aircraft 1 (A34-001)	Jul 14	N/A	Nov 14	4	
	C-27J Aircraft 2 (A34-002)	Sep 14	N/A	Dec 14	3	
	C-27J Aircraft 3 (A34-003)	Nov 14	N/A	Aug 15	9	3
	C-27J Aircraft 4 (A34-004)	Feb 15	N/A	Mar 16	13	4
	C-27J Aircraft 5 (A34-005)	Aug 15	N/A	Aug 16	12	5
	C-27J Aircraft 6 (A34-006)	Oct 15	N/A	Nov 16	13	5
	C-27J Aircraft 7 (A34-007)	Dec 15	N/A	Mar 17	15	5
	C-27J Aircraft 8 (A34-008)	Feb 16	N/A	Aug 17	18	3,5
	C-27J Aircraft 9 (A34-009)	Apr 16	N/A	Oct 17	18	3,5
	C-27J Aircraft 10 (A34-010)	May 16	N/A	Dec 17	19	3,5
	Operational Flight Trainer	TBA	TBA	TBA	TBA	1,2
	Fuselage Trainer	May 20	N/A	Oct 20	5	1,6,7
Notes						
1	<b>The acquisition contract for the Fuselage Trainer was established on 29 July 2019. Contracts for the acquisition of the remaining training devices are under development.</b>					
2	See Section 3.1 Note 2.					
3	Delivery of Aircraft was delayed due to the requirement for repair of the life raft door following damage sustained during the acceptance test flight, and the requirement for delivery of minor waiver data to support aircraft acceptance (later rectified through a contract change proposal).					
4	Delivery of Aircraft 4 was delayed due to availability of required spares from Leonardo to rectify a number of discrepancies and the prioritisation of aircraft components for use on other aircraft.					
5	Leonardo's decision to close its Naples fuselage production facility and consolidate all C-27J production at its Turin facility resulted in a delay to delivery of Aircraft 5 through 10. However, Leonardo's production consolidation was beneficial to the overall production of aircraft. From Aircraft 5, there were considerable improvements in aircraft build quality and the project was able to recover some lost production schedule. Improvements continued as a result of Leonardo's consolidation decision and management of its supply chain.					
6	<b>Variance due to delays in shipment of the Fuselage Trainer from the United States (e.g. quarantine delays), and delayed completion of installation activities and documentation. Acceptance was planned to be completed by May 20 prior to COVID-19.</b>					
7	<b>COVID-19 travel restrictions came into force in Mar 20 immediately prior to the commencement of formal acceptance testing which is now paused subject to interstate travel restrictions. Once travel restrictions are lifted, there is expected to be 2 months of activity to achieve acceptance.</b>					

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

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
In-Service Date (ISD)	Mar 15	Jun 15	3	1
Initial Materiel Release (IMR)	Jun 16	Dec 16	6	2
Initial Operational Capability (IOC)	Dec 16	Dec 16	0	3
Final Materiel Release (FMR)	Oct 17	TBA		4,5
Final Operational Capability (FOC)	Dec 17	TBA		4,6
Notes				
1	Variance due to delays in establishing FMS support and training arrangements in the US.			
2	Variance due to delay in delivery of Aircraft and adequate support. IMR was declared with caveats relating to deficiencies in supply support and training courseware.			
3	IOC was declared with caveats in December 2016 with four aircraft delivered to Australia. The IOC caveats encompassed the limitations described by the project at IMR, which have been resolved.			
4	Variance due to delays in aircraft production, and construction of facilities at RAAF Amberley. In May 2016, noting the decision by Leonardo to consolidate aircraft production at its Turin facility and cognisant of issues surrounding USAF C-27J divestiture, Government agreed to delay FOC to December 2019 and redefine FOC to exclude the mature training system including the flight simulator. Scoping work for capability improvements in avionics and electronic self-protection systems may contribute to capability maturity post-FOC. These changes are included in project management documentation.			

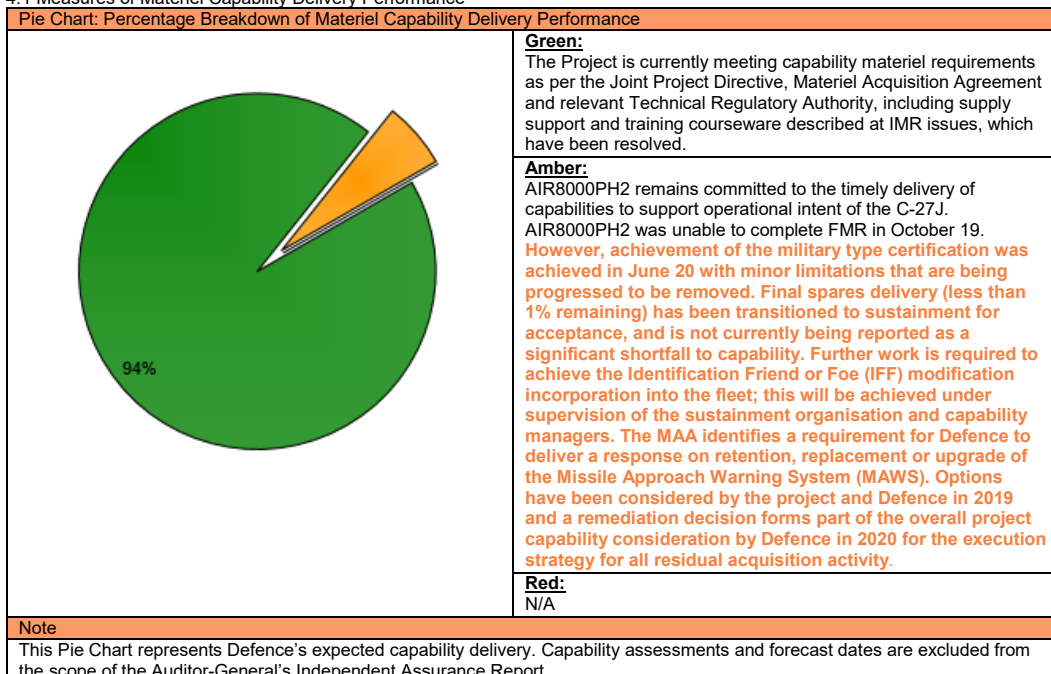
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## Section 4 – Materiel Capability Delivery Performance

### 4.1 Measures of Materiel Capability Delivery Performance



#### 4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	Delivery of three aircraft and sufficient logistics support (including trained personnel) to support initial operations. IMR was declared with caveats in December 2016. Caveats were resolved Quarter 2 2017.	Achieved
Initial Operational Capability (IOC)	Initial operations from interim Main Operating Base (MOB) (RAAF Richmond). Three C-27J aircraft delivered to the Interim MOB with sufficient operational crews, maintenance teams, training, and support infrastructure. The squadron will conduct air logistics support and airborne operational roles.	Achieved
Final Materiel Release (FMR)	All 10 aircraft delivered and associated logistics support (including trained personnel) to support mature level of operations. Aeromedical Evacuation and Search and Rescue roles enabled, and logistics support available at the final Main Operating Base. <b>The project was unable to achieve FMR was forecast for October 2019. Defence will inform Government of a revised schedule after reviewing available options during 2020.</b>	Not yet achieved
Final Operational Capability (FOC)	Mature level of operations from the final MOB. MOB Operational Facilities complete and occupied. Sufficient spares and maintenance equipment to maintain mature operations. A training system sufficient to maintain mature operations is achieved. <b>The project was unable to achieve FOC as forecast for December 2019. Defence has formally advised Government of the inability to achieve FOC and will inform Government of a revised FOC schedule after reviewing available options during 2020.</b>	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
<b>C-27J Capability Baseline.</b> The project has reviewed the C-27J capability baseline and identified a number of known incomplete capability requirements, some of which will be matured beyond FOC. The review identified limitations to the structural life-of-type of the airframe and proposed capability upgrades including Electronic Self Protection systems impacting project budget and schedule.	<p>A capability baseline confirmation process was established to address the known deficiencies. The baseline confirmation process has culminated in a plan to address deficiencies. Each deficiency will be assessed based on its acceptability or importance to capability in order to determine a priority for rectification.</p> <p>A Structural Substantiation Program will test the life-of-type of the airframe. Post mitigation review of the structural life-of-type assesses the wing risk as medium and the fuselage risk as low as it is assumed that testing will be completed before the fuselage life of type is reached.</p> <p>As approved by Government in the original 2012 project approval, an upgrade to the Mode 5 IFF system was signed in September 2017 with the Original Equipment Manufacturer of the aircraft. Additional resources are being applied to Mode 5 IFF delivery (which incorporates AIMS) in an attempt to meet FOC and Chief of Air Force directive.</p> <p>The Project monitored the sustainment TLS provider ramp up forecasting possible additional workload prior to the TLS provider reaching certified engineering entity status.</p> <p>Management and mitigation activities for the whole of project affordability assess the risk to achieving <b>reassessed</b> capability requirements <b>within approved budget</b> as low. <b>Defence is revalidating the remaining scope against the revised force structure plan and will present these options to Government in December 2020.</b></p>
Training. Delays in establishment of contracts between the US Government and L-3 has impacted the training schedule and student throughput. The courseware standard delivered required active involvement by the Commonwealth to implement ongoing improvements and meet perceived gaps in US based training.	The project transitioned training from the USA to RAAF Richmond in July 2017, with the simulator element undertaken in Italy. Continuity of training leading up to cessation in the US was actively managed, planned and tested to ensure continuity without impact to capability.

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	<p>During 2016-17 the Government agreed that alternative approaches to FMS were required. The project continues to investigate opportunities to deliver a mature training system at RAAF Amberley. Work is in progress to procure the Operational Flight Trainer through the Enduring Leonardo Contract. An opportunity to procure a Fuselage Trainer <b>was entered into with L-3 Oceania for delivery in 2019-2020</b>. These activities will form the basis of mature training system delivery post-FOC.</p> <p>The Estate and Infrastructure Group has completed construction of the Training Support Facility at RAAF Amberley, and the facility was accepted by the project in February 2018.</p>
<b>Emergent Risks (risk not previously identified but has emerged during 2019-20)</b>	
<b>Description</b>	<b>Remedial Action</b>
Project Engineering, Training, SSP, contracting, and IFF Mode 5 activities will be affected by the COVID-19 pandemic (control orders, isolations, shut downs) leading to an impact on achievement of project milestones.	<p>The project transitioned to a series of routine video conferencing meetings to connect project personnel working remotely and also implemented video conferencing with Italian and American partners to continue progressing project outcomes and collaborations.</p> <p>The project explored COVID-19 impacts with contractors and addressed schedule and milestone expectations with contractors in an attempt to reduce the COVID-19 impact.</p>

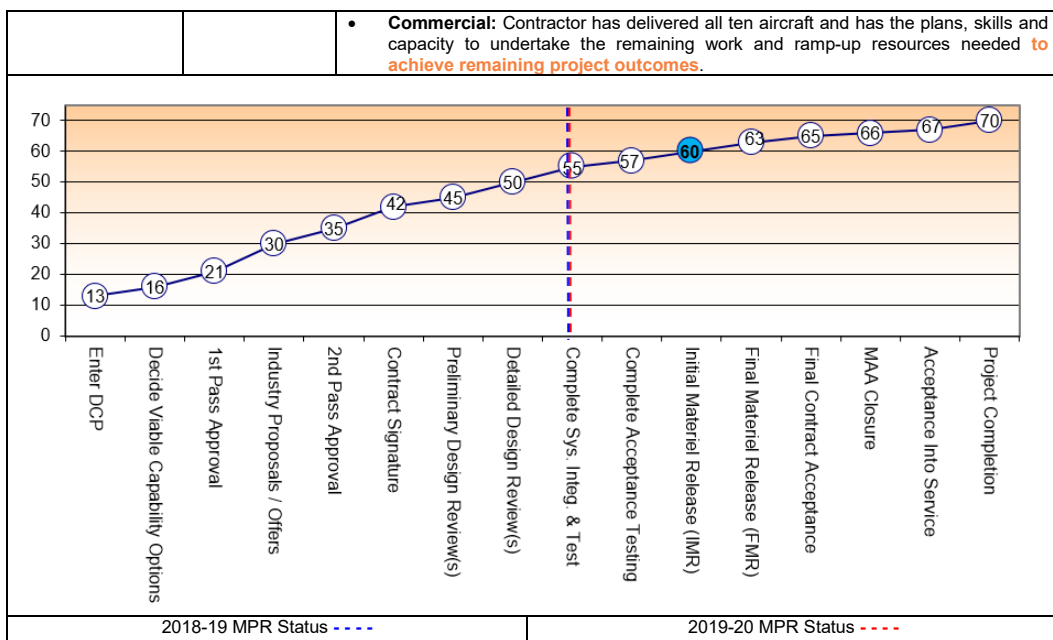
## 5.2 Major Project Issues

<b>Description</b>	<b>Remedial Action</b>
<p><b>USAF Divestiture of C-27J.</b> The USAF C-27J divestiture has had a greater than anticipated impact on project budget and schedule. Accelerated USAF divestiture resulted in incomplete Military Type Certification (MTC) by the USAF with unanticipated impact on airworthiness and training outcomes.</p>	<p>Completion of MTC has required additional Project resourcing to achieve FOC on schedule. <b>MTC was achieved in June 20.</b></p> <p>The delayed start to training in the US translated to a three month delay to achievement of the planned In-Service Date at 35 Squadron.</p> <p>Finalisation and closure of the US-based initial training system has occurred and the interim training system was established in Australia in July 2017.</p> <p>Activities to refine scope of the mature training system, avionics and electronic self-protection systems are progressing to schedule.</p> <p>The final impact to cost will be understood once the contracts for the various systems have been finalised.</p>
<p><b>FMR/FOC requirements.</b> The C-27J Capability will be affected by the inability to complete all requirements on schedule (MTC, IFF mode 5 and spares).</p>	<p><b>Routine regular engagement with Commonwealth and commercial stakeholders to help reduce delays and by working closely with those stakeholders to:</b></p> <ul style="list-style-type: none"> <li>- ensure correct detailed planning,</li> <li>- expedite approval of artefacts,</li> <li>- agree requirements for releases,</li> <li>- agree interim approaches to enable capability as soon as practical, and</li> <li>- reduce unforeseen circumstances.</li> </ul>
<b>Note</b>	
Major risks and issues in Section 5 are excluded from the scope of the Auditor-General's Independent Assurance Report.	

## Section 6 – Project Maturity

## 6.1 Project Maturity Score and Benchmark

Maturity Score		Attributes							Total
		Schedule	Cost	Requirement	Technical Understanding	Technical Difficulty	Commercial	Operations and Support	
Project Stage	Benchmark	10	8	8	8	9	8	9	60
Initial Materiel Release	Project Status	7	7	8	9	9	6	9	55
	Explanation	<ul style="list-style-type: none"> <li>• <b>Schedule:</b> Critical Path activities understood, however, delays to critical milestones have been realised against original schedule. <b>FOC was not achieved in Dec 19 and the project expects an amended date for FOC to be advised after the completion of capability revalidation activity currently underway.</b></li> <li>• <b>Cost:</b> Defence is revalidating the remaining scope and budget against the revised force structure plan and will present these options to Government in December 2020.</li> <li>• <b>Technical Understanding:</b> Knowledge necessary to operate and support the solution has been transferred to ADF and contractors as appropriate.</li> </ul>							



## Section 7 – Lessons Learned

### 7.1 Key Lessons Learned

Description	Categories of Systemic Lessons
<p>The level of risk and complexity contained in an FMS Letter of Offer and Acceptance is often understated and poorly understood. Whilst an FMS program for MOTS equipment and associated support affords a number of advantages, the transfer of a significant amount of project and technical management to the US Government implementing agency, and the weak bargaining position of the Commonwealth, increases the project's exposure to technical, schedule and cost risk. For an FMS program the level of Commonwealth contract and financial management involvement and oversight of industry is very low in comparison to that mandated for Direct Commercial Sale contracts, yet both procurement methods confront similar issues. This accords the FMS customer a 'Best Endeavours' approach to business. Adequate Commonwealth participation in key project management and technical oversight activities in the US, as provided for in the Government Combined First and Second Pass submission, is critical to providing the necessary level of project and contract management. In the case of C-27J, divestiture has further accentuated project risk and complexity, increasing the need for ongoing engagement of the USAF FMS program office and L-3 PID to ensure Commonwealth requirements and risks are adequately understood and managed. The planned downsizing and closing of the USAF's project office and cessation of USAF C-27J activities and contracts further reduces the ability of the USG to achieve customer requirements normally delivered under the FMS system. This drives the Commonwealth's approach to deliver certain outputs via Direct Commercial Sales.</p>	Contract Management
<p>The practice of approving projects with staffing to be found from within existing Divisional resourcing can result in 'late to need' or understaffing at critical project planning and execution phases that is counterproductive to achieving project outcomes. Further, the recruitment process lead times for candidates not already within the ADF or Australian Public Service can create significant extended vacancies within the Project workforce, with this being exacerbated by the relatively short notice that personnel are obliged to provide for internal transfers. This is exacerbated when the Department imposes a recruiting freeze on the workforce. Whilst outsourced services may be suitable in some instances to mitigate this risk, in such circumstances they are not always available, the most efficient, or affordable, and come with an additional administrative overhead. In particular, rapidly approved projects, such as AIR 8000 Phase 2, which gained combined Government Pass approval, should be priority staffed as outlined in the approved project workforce plan, on which the Materiel Acquisition Agreement schedule was developed.</p>	Resourcing

## Project Data Summary Sheets

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Accelerated project approval, through a combined government 1st and 2nd Pass, carries additional project execution risk given the likelihood that data fidelity and planning maturity will be otherwise inherently lower. As such, all effort should be made to understand the associated risk premium versus the benefit an accelerated project approval offers. In the case of AIR 8000 Phase 2 the potential impact of USAF divestiture was not fully appreciated across the full breadth and depth of the project. Any assumption that because procurement is via FMS it is low risk must be fully tested.	Off-The-Shelf Equipment
Contracting with commercial entities that have had no previous experience with how the Commonwealth contracts, manages, controls, and reviews contract performance requires significant awareness, education and adjusting by both parties. Commonwealth acknowledgement that outcomes can be achieved without following the Commonwealth's usual or embedded processes requires substantial effort by Commonwealth personnel to accept the change, mentor and educate other Commonwealth entities, and to act with restraint towards the contractor. Commonwealth personnel having largely only worked with or in one system, the Commonwealth system, and are challenged to accept other ways to achieve the same outcome.  Similarly, processes judiciously established in Defence are not always easily mapped to a civilian entity's system. This requires substantial detailed communication and time commitment to map dissimilar system outcome points between the two organisations' systems by Subject Matter Experts in that field - this takes time and effort that may not have been foreseen.	Contract Management
<b>Although C-27J is a MOTS aircraft the project was required to update a number of systems to achieve the directed outcomes for FMR/FOC.</b>  <b>Where a project has a challenging acquisition and implementation period, the Sponsor and Capability Manager must be closely engaged to ensure the requirements set maintains relevance over time, especially leading up to key capability milestones.</b>	Requirements Management

## Section 8 – Project Line Management

### 8.1 Project Line Management as at 30 Jun 2020

Position	Name
Division Head	AVM <b>Gregory Hoffmann</b>
Branch Head	AIRCDRE Graham Edwards
Project Director	<b>GPCAPT Paul Klose</b>
Project Manager	WGCDR Susan Liddy





## Project Data Summary Sheet<sup>163</sup>

Project Number	<b>AIR 7000 Phase 1B</b>
Project Name	<b>MQ-4C TRITON REMOTELY PILOTED AIRCRAFT SYSTEM</b>
First Year Reported in the MPR	2019-20
Capability Type	New
Acquisition Type	Developmental
Capability Manager	Chief of Air Force
Government 1st Pass Approval	Jul 06
Government 2nd Pass Approval (or key Government pre-Second Pass Approval)	Jun 18 (Tranche 1) Mar 19 (Tranche 2) May 20 (Tranche 3)
Budget at 2 <sup>nd</sup> Pass Approval (or key Government pre-Second Pass Approval)	\$1,246.1m (Tranche 2)
Total Approved Budget (Current)	\$1,311.4m
2019-20 Budget	\$104.3m
Project Stage	Preliminary Design Review
Complexity	ACAT II



MQ-4C Triton

Part 3: Project Data Summary Sheets

### Section 1 – Project Summary

#### 1.1 Project Description

AIR 7000 Phase 1B will acquire three MQ-4C Triton aircraft and associated support systems. A further three aircraft are planned, subject to further approvals by Government. The Triton is a High Altitude Long Endurance (HALE) Remotely Piloted Aircraft System (RPAS) that will complement the P-8A Poseidon to deliver the Maritime Patrol and Response capability. The Triton is being procured through a Cooperative Program with the United States Navy (USN).

#### 1.2 Current Status

##### Cost Performance

###### In-year

The in-year \$8.7m (8.3%) under-achievement against approved budget was mainly due to a USN revised payment schedule in May 2020. This will have no capability impact and all planned activities were achieved in FY19-20.

##### Project Financial Assurance Statement

As at 30 June 2020, project AIR 7000 Phase 1B has reviewed the approved scope and budget for those elements required to be delivered by the project. Having reviewed the current financial and contractual obligations of the project, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget remaining for the project to complete against the agreed scope.

##### Contingency Statement

The project has not applied contingency in the financial year.

##### Schedule Performance

The project was declared a Project of Interest (POI) in March 2020 due to the USN announcing a two year production funding pause, in February 2020, for its Triton program (US Fiscal Years 2021 and 2022). The pause will have capability, schedule and cost implications, and potential sustainment cost and capability impacts. Defence placed Triton project activity on hold whilst analysing the impacts to the Australian program and the broader Maritime Patrol and Response capability. Government considered these impacts within the Tranche 3 proposal in May 2020 and approved the acquisition of a third Triton aircraft.

Schedule risk increased with the facilities program being put on hold until Government approval in May 2020. As a consequence, Government agreed revised milestone dates as part of the May 2020 decision. FOC is subject to further Government consideration in late 2020. Schedule risk to the facilities program remains elevated until Public Works Committee (PWC) approval has been obtained.

The project is undergoing a fundamental review as part of the Maritime Patrol and Response Program. Post the May 2020 Government approval, all project milestone definitions and the project schedule are being re-baselined through a Materiel Acquisition Agreement (MAA) update, after which, the project may be removed from the POI list.

##### Materiel Capability Delivery Performance

The project is expected to achieve the current approved capability scope of three air vehicles and systems, and is expected to meet the full capability of six air vehicles pending future Government decisions.

#### 163 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.

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

### 1.3 Project Context

#### Background

The Air 7000 Program will replace the current Maritime Patrol and Response capability with a complementary mix of crewed P-8A Poseidon (Phase 2B) maritime patrol aircraft and the MQ-4C Triton Remotely Piloted Aircraft System (Phase 1B), designed to operate as a 'family of systems'.

In July 2006, the Government agreed to participate with the US Navy (USN) under a Project Agreement to develop the broad area maritime surveillance (BAMS) capability. In 2008, the Northrop Grumman Global Hawk variant (now designated the MQ-4C Triton) was selected by the USN as the winning tender for the BAMS program.

In February 2009, the Government agreed not to join the USN Cooperative Program (CP) and to defer Phase 1B until after Phase 2B as delays in the USN BAMS program would have meant introducing both aircraft types at the same time. Defence was directed to continue to monitor Triton performance in the USN program.

In February 2014 Government agreed that Defence continue development of a single capability option for Phase 1B for up to seven MQ-4C Triton. Defence subsequently established a Foreign Military Sales (FMS) Technical Services Case with the USN Triton Program Office to secure access to information to support the development of a Gate 2 Business Case. The approved acquisition strategy for the MQ-4C Triton was procurement via FMS. However, the 2014 submission to Government advised Defence's intent to further investigate the value to Defence of entering into a Cooperative Program (CP) with the USN.

Defence White Paper 2016 stated up to seven Triton would be acquired, and in March 2016 Government agreed to the P-8A and Triton force mix, consisting of twelve (12) and six (6) aircraft respectively.

In June 2018, Government provided Second Pass (Tranche 1) Approval to procure the first of six air vehicles, supporting systems and spares, and approval to enter a Triton Development, Production and Sustainment (DPS) CP.

The decision to join the developmental CP was based on benefits including the ability to co-operatively design and develop the MQ-4C Triton RPAS to fulfil the established US and Australian Initial Operational Capability (IOC) requirements to the maximum extent practicable; maximise configuration commonality and promote interoperability; and provide access to the highest level of information.

In March 2019, Government provided Second Pass (Tranche 2) Approval to procure one additional air vehicle (the second of the IIP provisioned six), supporting elements, and development of network infrastructure.

In February 2020 the US Federal Defense budget proposed a pause in production funding for the US Navy MQ-4C Triton project for two years (US Fiscal Years 2021-22). This pause in funding impacts AIR 7000 Phase 1B. As a co-operative partner in the Triton program, Defence worked closely with both the USN and Northrop Grumman regarding the implications of the pause, in order to inform the Gate 2 (Tranche 3) submission to Government.

In May 2020, Government provided Second Pass (Tranche 3) Approval to procure the third air vehicle. Contracts were subsequently executed between the United States Navy and Northrop Grumman Corporation on 27 June 20 for Australia's three approved MQ-4C Triton aircraft and ground systems.

Following the Tranche 3 approval, the project will update the MAA, and support an MPR Program submission due to Government by end-2020.

#### Uniqueness

The MQ-4C Triton is the largest Remotely Piloted Aircraft System (RPAS) to be operated by the RAAF. It is a High Altitude Long Endurance RPAS optimised for use in the maritime environment, and provides far greater on-station endurance at greater ranges when compared to conventionally piloted aircraft.

The RAAF MQ-4C RPAS will be identical to the USN MQ-4C RPAS, except for minor configuration differences due to national requirements (such as different aircraft marking schemes). Other support elements, such as training devices and spares, will also remain as common as technically possible.

AIR 7000 Phase 1B is developing, producing and sustaining the MQ-4C capability through a Government to Government CP with the USN. This arrangement is distinctly different from the traditional Foreign Military Sales (FMS) or Direct Commercial Sales (DCS) arrangements. The benefits of a CP include significantly enhanced insight and influence over the development of the RPAS, better awareness and control of project costs drivers, insight into program risks, better access to technical and sustainment data, leveraging economies of scale in production and sustainment, and access to the USN wholesale spares warehouse.

There are eight Commonwealth personnel embedded in the USN Program organisations as a non-financial contribution to the shared outcomes of the CP. These embedded team members are referred to as Cooperative Program Personnel (CPP). In addition to their roles within the USN Program, CPP may provide input, insight and influence across the MQ-4C program.

#### Major Risks and Issues

The project is currently managing the following major risks:

- Single Information Environment (SIE) Integration
- Triton Operating Permit process
- Immature data to adequately quantify Sustainment Costs
- Initial system qualification
- SATCOM Support
- Operational Test & Evaluation (OT&E), and Network Integration complexity
- Facilities Design and Construction Costs

The project is currently managing the following issue:

- Facilities are incomplete to achieve In-Service Date

#### Other Current Related Projects/Phases

**AIR 7000 Phase 2 – Maritime Patrol and Response Aircraft System:** acquisition of 12 P-8A Poseidon and Through Life Support system. Triton and Poseidon will form part of a 'Family of Systems' to replace the AP-3C Orion Capability.

**AIR 555 Phase 1 – Airborne ISREW Capability:** acquisition of the Peregrine Airborne Intelligence, Surveillance, Reconnaissance and Electronic Warfare (ISREW) capability. Peregrine will be the lead project for Enterprise-level network infrastructure that will be common to Triton.

## Project Data Summary Sheets

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<b>Note</b>
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
<b>Project Budget</b>			
July 06	Original Approved	3.9	1
Aug 09	Real Variation – Real Cost Decrease	(1.3)	2
Feb 14	Government Intermediate Consideration	18.4	3
Mar 16	Government Interim Consideration	1.5	4
Jun 18	Government Second Pass Approval – Tranche 1	901.1	5
	Real Variation – Transfer	1.0	6
Apr 19	Real Variation – Transfer	0.7	6
July 19	Government Second Pass Approval – Tranche 2	320.8	7
	<b>Total at Second Pass Approval</b>	<b>1,246.1</b>	
Jul 10	Price indexation	0.2	9
Jun 20	Real Variation – Real Cost Decrease	(2.2)	8
	Exchange Variation	67.3	
	<b>Total Budget</b>	<b>1,311.4</b>	12
<b>Project Expenditure</b>			
Prior to Jul 19	DPS MoU	(91.1)	10
	Sense and Avoid Capability	(63.5)	
	Triton Prime Contracts	(38.2)	
	Diminishing Manufacturing Source Items	(14.5)	
	USN Production Engineering and Logistics Support	(0.7)	
	Other Contract Payments / Internal Expenses	(34.4)	
		(242.4)	
FY to Jun 20	Triton Prime Contracts	(43.2)	11
	USN Production Engineering and Logistics Support	(18.7)	
	Diminishing Manufacturing Source Items	(6.6)	
	Other Contract Payments / Internal Expenses	(27.1)	
		(95.6)	
Jun 20	<b>Total Expenditure</b>	<b>(338.0)</b>	
Jun 20	<b>Remaining Budget</b>	<b>973.4</b>	12
<b>Notes</b>			
1	Government First Pass Approval to initiate the Project and enter a Project Agreement with USN for development of a broad area maritime surveillance (BAMS) capability.		
2	Government decision to defer the project, excess funds returned to Government after the completion of First Pass approved scope.		
3	Government Intermediate Pass Approval, to continue development of a single capability option for Phase 1B and establishment of a Foreign Military Sales Technical Services Case.		
4	Government Interim Pass, to continue project development of submission, including negotiation of a Cooperative Program Memorandum of Understanding, for Second Pass approval.		
5	Government Second Pass Approval Tranche 1 Funding. Tranche 1 approval to fund 1 aircraft, 3 Main Operating Base Mission Control Stations, 2 Forward Operating Base Mission Control Stations and associated support systems and spares.		
6	Funding transfers from Defence Science and Technology Group (DSTG) to CASG.		
7	Government Second Pass Approval Tranche 2 to fund one additional aircraft and associated support systems.		
8	Force Structure Plan (FSP) amendment in June 2020.		
9	Until July 2010, indexation was applied to project budgets on a periodic basis. The cumulative impact of this approach was \$0.2m, applied only to the portion of the budget approved at First Pass.		
10	Other contract payments/internal expenses to 30 June 2019 were comprised of pre-2 <sup>nd</sup> pass approval expenses \$13.6m, Government Furnished Equipment \$13.5m, Foreign Military Sales case \$4.3m, and local contract support \$3m.		
11	Other contract payments/internal expenses to 30 June 2020 were comprised of Initial Support & Test Equipment & Ground Support Equipment \$11.9m, Mission System Trainer Acquisition & Installation \$7.3m, local contract support and other project management expenses \$5.2m, Initial Training \$2.1m, Foreign Military Sales case \$0.3m, and USN payments for Initial Spares \$0.3m.		
12	Total and remaining budget, as at 30 June 2020, does not include Tranche 3 Government approved funding. This funding had not yet transferred to the corporate finance system.		

### 2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
101.3	105.0	104.3	PBS – PAES: The variance is due to rephasing of planned payments to the US, an increase in major service provider support and foreign currency exchange adjustments. PAES – Final Plan: The variance is due to foreign currency exchange adjustments.

Variance \$m	3.7	(0.7)	Total Variance (\$m): 3.0
Variance %	3.7	(0.7)	Total Variance (%): 3.0

## 2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(8.7)	Australian Industry	An underspend of \$8.7m against the approved budget in FY19-20 was mainly due to a USN revised payment schedule in May 2020. This will have no impact on the FY20/21 budget and all planned activities were achieved in FY19-20.
			Foreign Industry	
			Early Processes	
			Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
			<b>Total Variance</b>	
104.3	95.6	(8.7)	<b>% Variance</b>	
		(8.3)		

## 2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 20 \$m			
US Government (DPS MoU)	Jun 2018	200.0	215.7	Cost Ceiling (Capped)	MoU	1
US Government (Diminishing Manufacturing Source Items)	Nov 2018	0.5	21.0	Variable	MoU	2,3
US Government (Triton Prime Contracts)	May 2019	37.5	486.8	Variable	MoU	3,4
US Government (USN Production Engineering and Logistics Support)	May 2019	0.7	19.4	Variable	MoU	3
US Government (PA-1 Sense and Avoid Capability)	May 2019	61.3	63.5	Cost Ceiling (Capped)	MoU	1

### Notes

- 1 DPS MoU and PA-1 funding is limited to a cost ceiling, which can only be changed upon mutual written consent of the Participants. Australia is responsible for paying a proportion of the total costs based on the relative number of Australian aircraft in the overall fleet.
- 2 Diminishing Manufacturing Source (DMS) Items is a US Government managed program to address availability and obsolescence of components. Signature allowed DMS treatments to be applied for Australian supplies within the US DMS program.
- 3 Contract value as at 30 June 20 is based on actual expenditure to 8 May 2020 and remaining commitment at current budget exchange rates. This includes adjustments for indexation (where applicable).
- 4 In May 2020 the scope of the contract was expanded to include three Air Vehicles, one Main Operating Base (MOB) Mission Control Station (MCS) and one Forward Operating Base (FOB) MCS.

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 20		
US Government (DPS MoU)	N/A	N/A	Australia's contribution to shared costs from 2017-18 to 2027-28 includes contribution to development, production and sustainment for common efforts, and project overhead and administration costs.	1
US Government (Diminishing Manufacturing Source Items)	Various	Various	DMS is managed through monitor and risk mitigation efforts, life of type procurements, design changes to substitute new parts and other treatments. Signature allowed DMS treatments to be applied for Australian supplies within the US DMS program.	2
US Government (Triton Prime Contracts)	Various	Various	For LRIP5 aircraft and ground system long-lead components. Australian elements of the awarded contract include three Air Vehicles, one Main Operating Base (MOB) Mission Control Station (MCS) and one Forward Operating Base (FOB) MCS.	
US Government (USN Production Engineering and Logistics Support)	N/A	N/A	USN labour and services including, but not limited to: Non Recurring Engineering efforts in support of aircraft and system production, logistics modelling and forecasting.	
US Government (PA-1 Sense and Avoid Capability)	N/A	N/A	Australia's contribution to shared costs from 2018-19 to 2023-24 for the development of the Sense and Avoid capability (including weather radar) to enable greater access to airspace and environmental conditions.	1

### Major equipment accepted and quantities to 30 Jun 20

Nil

### Notes

- 1 No equipment delivered as part of this MOU and PA.
- 2 DMS supplies and non-recurring engineering will be incorporated into production aircraft and systems before delivery.

## Project Data Summary Sheets

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## Section 3 – Schedule Performance

### 3.1 Design Review Progress

Review	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
System Requirements	Triton Multi-INT System Requirements Review 2	N/A	N/A	Dec 15	N/A	1
Preliminary Design	Triton Multi-INT Preliminary Design Review	N/A	N/A	Dec 16	N/A	1
Critical Design	Triton Multi-INT Critical Design Review	N/A	N/A	Nov 17	N/A	1
<b>Notes</b>						
1	These milestones were achieved by the USN as part of the developmental program schedule prior to AIR7000-1B Second Pass approval and Australia joining the Cooperative Program.					

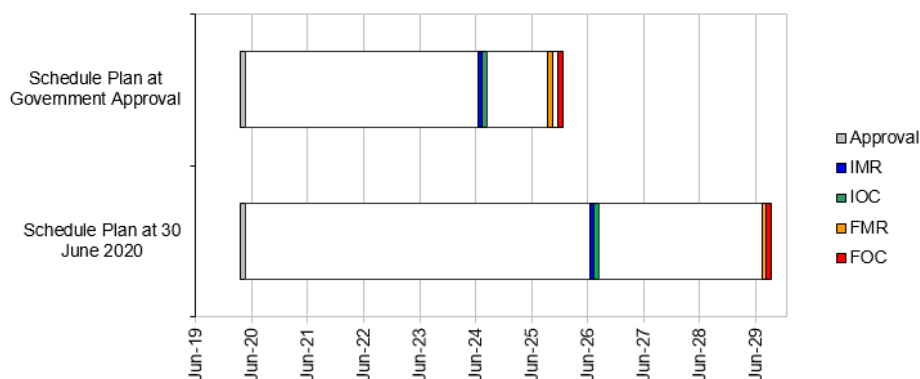
### 3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
System Integration	IFC-4.0 IOT&E	N/A	N/A	Aug 21	N/A	1
Acceptance	Delivery to Edinburgh of Main Operating Base (MOB) Mission Control System #1 (MOB MCS#1)	Oct-Dec 21	N/A	Nov 21	0	
	Commencement of crew training with the USN.	Jul – Sep 22	N/A	Jul 22	0	
	Issue of Airworthiness Instrument (UASOP).	Mar - May 23	N/A	Apr 23	0	
	Delivery of sixth and final MQ-4C Air Vehicle (AV) [Subject to Government Approval of AV 4-6 and sequencing with USN].	TBA	TBA	TBA	N/A	2
<b>Notes</b>						
1	This is a USN and NG Systems Engineering milestone for the Incremental Functional Capability (IFC 4.0), the baseline configuration for the ADF. Project AIR7000 Phase 1B will monitor achievement of this milestone through the CP to inform Australian capability milestones. Original planned is N/A as it was agreed by USN and NG prior to AIR7000-1B Second Pass approval and Australia joining the Cooperative Program.					
2	Government is yet to approve this scope. Subject to Government approval, all project milestone definitions and the project schedule will be re-baselined through an MAA update.					

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

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
In-Service Date (ISD)	Jul 2023	Jan – Dec 2024	12	1
Initial Materiel Release (IMR)	May – Jul 2024	Jul 2025 – Jul 2026	12 – 24	1
Initial Operational Capability (IOC)	Jul 2024	Jul 2025 – Jul 2026	12 – 24	1
Final Materiel Release (FMR)	Aug – Oct 2025	Jul 2028 – Jul 2029	33 – 45	2
Final Operational Capability (FOC)	Dec 2025	Jul 2028 – Jul 2029	31 – 43	2
<b>Notes</b>				
1	In Gate 2 (Tranche 3) Government Approval, ISD was delayed by 12 months (and consequently IMR and IOC by 24 months) due to the impacts of the USN production funding pause announcement in February 2020, resulting in pause of facilities progression.			
2	Government is yet to approve this tranche of the project. Pending Government approval, FOC milestone will be updated. The current variance is due to anticipated aircraft production schedules for the aircraft which are not yet approved.			

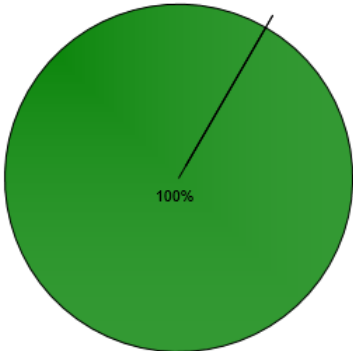
Schedule Status at 30 June 2020



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

## Section 4 – Materiel Capability Delivery Performance

### 4.1 Measures of Materiel Capability Delivery Performance

Pie Chart: Percentage Breakdown of Materiel Capability Delivery Performance	
	<b>Green:</b> The project expects to meet the current capability requirements as expressed in the Materiel Acquisition Agreement, noting that the full capability is yet to be approved by Government.
	<b>Amber:</b> N/A
	<b>Red:</b> N/A
<b>Note</b> This Pie Chart represents Defence's expected capability delivery. Capability assessments and forecast dates are excluded from the scope of the Auditor-General's Independent Assurance Report.	

### 4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	<ul style="list-style-type: none"> <li>2 x Triton Air Vehicles delivered to Australia.</li> <li>2 x Main Operating Base Mission Control System including a Secondary site incorporating a Mission System Trainer installed and ready for use at Edinburgh.</li> <li>1 x Forward Operating Base Mission Control System installed and ready for use at Tindal.</li> <li>Initial Distributed Operator functionality enabled and ready for use.</li> <li>5 x US trained crew (initial focus will be on Test &amp; Evaluation and tactics development).</li> <li>Sufficient Network Technicians to meet the planned rate of effort.</li> <li>Facilities as required to enable commencement of flying operations.</li> <li>Support systems, equipment and spares as required.</li> </ul> IMR is forecast to be achieved Jul 2025 – Jul 2026.	Not yet achieved
Initial Operational Capability (IOC)	The Triton system is able to safely sustain one orbit in the maritime surveillance role, at a rate of effort to support initial operations. IOC is forecast to be achieved in Jul 2025 – Jul 2026.	Not yet achieved
Final Materiel Release (FMR)	<ul style="list-style-type: none"> <li>All Triton Air Vehicles delivered to Australia.</li> <li>All Main Operating Base and Forward Operating Base Mission Control System installed and ready for use.</li> <li>1 x Forward Operating Base configured for expeditionary use.</li> <li>All Mission System Trainers installed at Edinburgh and ready for individual and collective training.</li> <li>All crews trained.</li> <li>Full complement of Network Technicians trained and available to meet the planned rate of effort.</li> <li>All support systems, equipment and spares.</li> </ul> FMR is forecast to be achieved Jul 2028 – Jul 2029.	Not yet achieved
Final Operational Capability (FOC)	The Triton system is able to safely and effectively conduct two orbits, in all roles, at a rate of effort in accordance with strategic and capability guidance. FOC is forecast to be achieved in Jul 2028 – Jul 2029.	Not yet achieved

## Project Data Summary Sheets

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## Section 5 – Major Risks and Issues

### 5.1 Major Project Risks

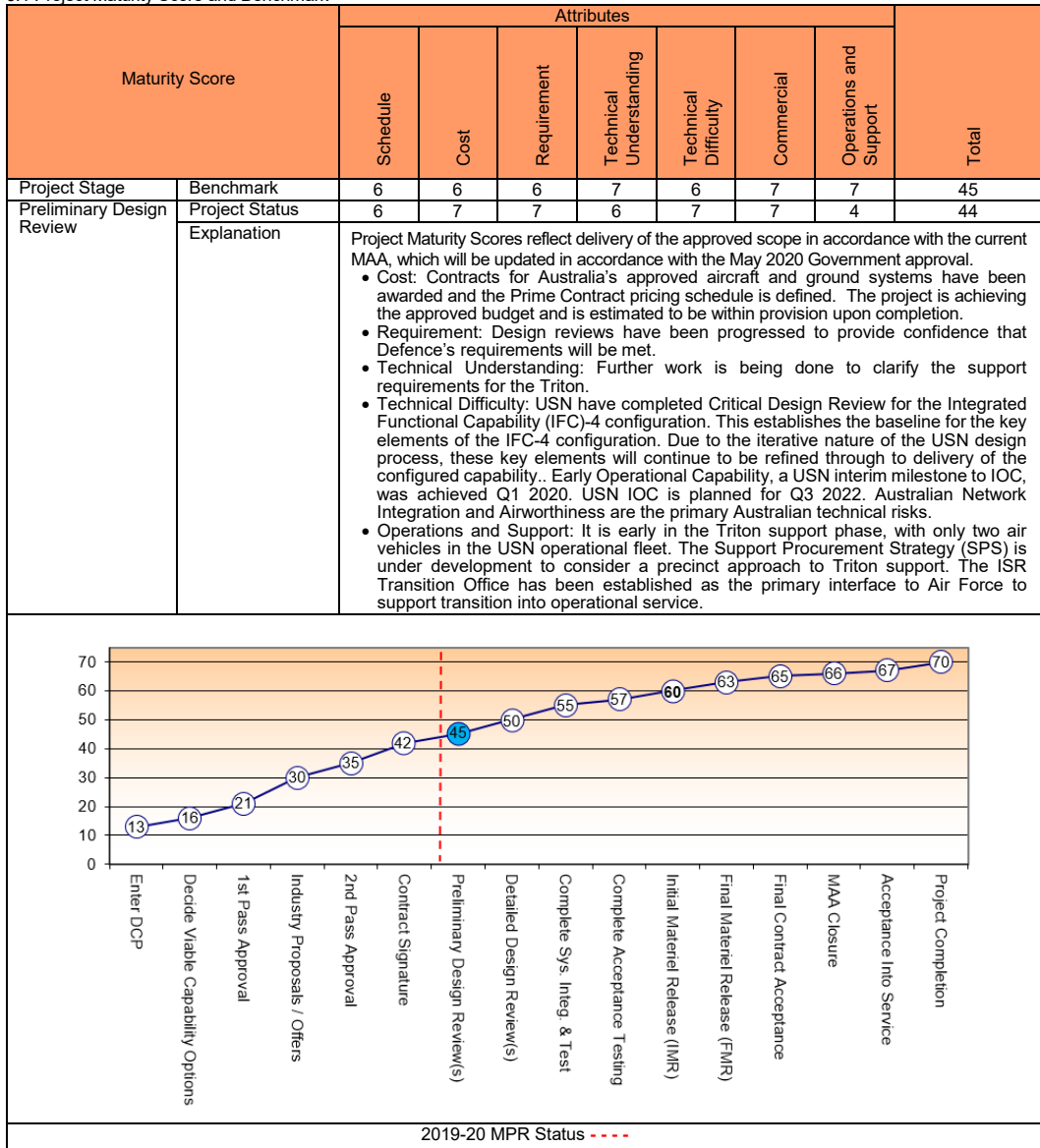
Identified Risks (risk identified by standard project risk management processes)	
Description	Remedial Action
<b>Single Information Environment (SIE) Integration</b> There is a chance that the current network infrastructure, combined with the level of development required to integrate the Triton system into the Defence SIE, will require design and certification effort that may not be achievable by the capability milestone dates.	Chief Information Officer Group - Military Platform Integration (CIOG-MPI) has developed a phased approach to SIE integration in line with capability milestones. This includes reliance on, and support of, dependent projects such as AIR555 Phase 1.  The project and CIOG-MPI continue to leverage the Cooperative Program to source required technical data, subject matter expert advice and lessons learned from the USN network integration experience.
<b>Triton Operating Permit process</b> There is a chance that the complexity and novelty of a large Remotely Piloted Aircraft System may lead to delays in the issue of an Operating Permit and achievement of dependent capability milestones.	The project established a Triton Airworthiness Working Group to facilitate engagement with the Defence Aviation Safety Authority and other stakeholders to ensure:  An integrated approach to technical and operational considerations, and An Operating Permit process that is aligned with Defence Aviation Safety Regulations.
<b>Immature data to adequately quantify Sustainment Costs</b> There is a chance that the planned sustainment budget may be affected by insufficient data maturity leading to an impact on achieving Air Force support requirements and overall program affordability.	The project continues to work closely with the USN, Northrop Grumman Corporation and the Surveillance and Response System Program Office to identify sustainment cost drivers, investigate opportunities for sustainment efficiencies, validate logistics modelling assumptions, and implement lessons learned from other USN sourced systems. Sustainment data will continue to mature as the USN Triton operational tempo increases.
<b>Initial system qualification</b> Australian Triton aircraft will initially be delivered with some systems requiring further qualification to allow operation in all airspace and environmental conditions. There is a chance that the qualification and retrofitting of these systems may result in a delay to FOC.	The project is working with the USN to plan for an 'Alternate Means of Compliance' program to support initial operations in some airspace and environmental conditions.  The Commonwealth has entered into Project Arrangement 1 (PA-1) for the development of a Sense and Avoid capability. The Cooperative Program includes activities to address flight in icing conditions.
<b>Satellite Communications (SATCOM) Support</b> There is a chance that Triton's SATCOM requirements cannot be met under existing ADF agreements leading to a delay to critical capability milestones.	Funding has been allocated in the project budget for commercial SATCOM to supplement existing ADF SATCOM support arrangements.  The Project Office continues to leverage the Cooperative Program to ensure the design of the system can meet Defence's technical and operational requirements in the Australian operating context.
<b>Facilities Design and Construction Costs</b> There is a chance that facilities design and construction management costs will affect the affordability of Triton facilities.	The project is working on early identification of Air Force facilities requirements to minimize design rework and potential scope creep.  Estate and Infrastructure Group is engaging design and construction contractors to facilitate Public Works Committee expediency. Construction is to be commenced as soon as possible to reduce the risk of in-year cost escalation through materials and labour cost increases.
Emergent Risks (risk not previously identified but has emerged during 2019–20)	
Description	Remedial Action
<b>Operational Test &amp; Evaluation (OT&amp;E), and Network Integration complexity</b> There is a chance that SIE Integration testing, and OT&E, may increase in complexity if OT&E is conducted away from the Main Operating Base at RAAF Edinburgh, leading to a possible delay of MAA milestone dates for ISD and IOC.	Planning is being conducted to manage the complexity of initial operations with a focus on the SIE Integration and OT&E Detailed Test Planning phases.

### 5.2 Major Project Issues

Description	Remedial Action
<b>Facilities are incomplete to achieve In Service Date</b> In Service Date (ISD) for commencement of Triton flights in Australia is delayed by approximately 12 months due to delays in gaining Public Works Committee approval for Triton facilities.	Triton and MC-55 Peregrine common facilities elements have been transferred to the Peregrine project to remove inter-project dependencies and ensure the common facilities elements remain on schedule.  A Triton facilities redesign is underway to support Public Works Committee in 2021.
Note	
Major risks and issues in Section 5 are excluded from the scope of the Auditor-General's Independent Assurance Report.	

## Section 6 – Project Maturity

### 6.1 Project Maturity Score and Benchmark



## Section 7 – Lessons Learned

### 7.1 Key Lessons Learned

Description	Categories of Systemic Lessons
N/A	N/A

## Section 8 – Project Line Management

### 8.1 Project Line Management as at 30 June 2020

Position	Name
Division Head	AVM Gregory Hoffman
Branch Head	AIRCDRE David Scheul
Project Director	GPCAPT Martin Nussio
Project Manager	Ms Christina Langwill

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## Project Data Summary Sheet<sup>164</sup>

Project Number	SEA 1654 Phase 3
Project Name	Maritime Operational Support Capability (Replacement Replenishment Ships)
First Year Reported in the MPR	2017-18
Capability Type	Replacement
Acquisition Type	Australianised MOTS
Capability Manager	Chief of Navy
Government 1st Pass Approval	Apr 14
Government 2nd Pass Approval (or key Government pre-Second Pass Approval)	Apr 16
Budget at 2 <sup>nd</sup> Pass Approval (or key Government pre-Second Pass Approval)	\$1,004.6m
Total Approved Budget (Current)	<b>\$1,084.7m</b>
2019-20 Budget	<b>\$195.3m</b>
Project Stage	Detailed Design Review
Complexity	ACAT II



### Section 1 – Project Summary

#### 1.1 Project Description

The SEA 1654 Phase 3 Maritime Operational Support Capability (MOSC) Project will replace both HMA Ships *Success* and *Sirius* with a single class of two Auxiliary Oiler Replenishment (AOR) Ships to sustain deployed maritime forces.

The primary role of the AOR Ships is the provision of afloat-support capability to fleet units. Afloat support is the underway replenishment of liquid and solid cargo, including high-flashpoint marine diesel fuel and aviation fuel, potable water, explosive ordnance, fresh and frozen provisions and general stores, utilising ship fitted systems or helicopters. The secondary role of the AOR Ships is to provide limited resupply in support of operations ashore.

#### 1.2 Current Status

##### Cost Performance

##### In-year

As at end of June 2020, the project underspent by \$88.2m. This variance is primarily due to delays to construction of both ships as a result of closure of the shipyard in response to the COVID-19 pandemic. In addition there were delays against the prime contract with Navantia associated with Contract Change Proposals (CCP's) for training delivery, equipment and aids. The delivery of the Close in Weapon System (CIWS) for Ship 1 from Raytheon was also delayed. Due to delays in the prime contract of approximately six months, the end of financial year forecast is an expected underspend of \$88.2m with affected milestones reprogrammed to the next financial year.

##### Project Financial Assurance Statement

As at 30 June 2020, the SEA 1654 Phase 3 Project 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.

164 Notice to reader

Forecast dates and Sections: 1.2 (Material Capability Delivery Performance), 1.3 (Major Risks and Issues), 4.1 (Measures of Material 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.

<p><b>Schedule Performance</b></p> <p>Production of the AOR Ships continued in Spain until the shipyard was shut down for 12 weeks from 14 March 2020 to 08 June 2020 in response to the COVID-19 pandemic and the nationwide lockdown. On return to work, productivity was reduced by the need to meet strict post-COVID work procedures limiting workforce numbers, additional cleaning and social distancing. The overall forecast delay to various Ship 1 milestones is 6 months, including Ship 1 transit, arrival in Australia and Ship 1 Acceptance. Consequently, Initial Materiel Release (IMR) has been similarly delayed, however Initial Operational Capability (IOC) has been delayed only 4 months. Final Materiel Release (FMR) and Operational Capacity (OC) for Ship 2 have also been delayed by approximately 6 months as a result of the shutdown and production delays.</p> <p>Major SEA 1654 Phase 3 Project milestones achieved in 2019-20 include:</p> <ul style="list-style-type: none"> <li>• Launch of <i>Stalwart</i> in August 2019;</li> <li>• Training Readiness Review (TNGRR) held in December 2019.</li> </ul> <p>The achievement of Final Operational Capability (FOC) remains forecast in December 2022. This is within the original schedule approved by Government at Second Pass.</p> <p><b>Materiel Capability Delivery Performance</b></p> <p>The SEA 1654 Phase 3 Project has not delivered any materiel capability to date. Supply was launched in November 2018, and <i>Stalwart</i> was launched in August 2019. The project will have a delay to IMR, now forecast to occur in December 2020. FMR is now forecast in June 2021.</p> <p><b>Note</b></p> <p>Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.</p>
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### 1.3 Project Context

<p><b>Background</b></p> <p>The Royal Australian Navy (RAN) currently has two afloat-support ships to conduct Replenishment at Sea (RAS) operations. HMAS <i>Success</i> was commissioned in 1986 and is based on the French designed Durance class AOR. HMAS <i>Sirius</i> was commissioned in 2006 and is a Korean built commercial product tanker acquired and converted to an Auxiliary Oiler (AO).</p> <p>The Defence White Paper 2013 (DWP 2013) identified the requirement for the RAN to resupply its deployed ships as an essential capability given the size of the area over which its Naval forces operate and the extended periods they may be required to remain at sea. It advised the Government's intention to replace the capability currently provided by <i>Success</i> and <i>Sirius</i> at the first possible opportunity; which would include the examination of options for local, hybrid and overseas build, or the leasing of an existing vessel.</p> <p>In light of the urgent need to forestall a capability gap in this crucial area, and supported by value for money considerations, the Government provided First Pass approval in April 2014 for Defence to conduct a limited competitive tender process between Navantia S.A. (Navantia) of Spain and Daewoo Shipbuilding and Marine Engineering (DSME) of South Korea for two replacement replenishment ships based on existing Military-Off-the-Shelf (MOTS) designs.</p> <p>The SEA 1654 Phase 3 Project entered into contracts with DSME and Navantia on 7 and 10 October 2014 respectively, for the Risk Reduction and Design Studies (RRDS). The primary RRDS deliverable was the Mission System Specification (MSS) for the AOR Ship design solution, as well as an indicative support strategy.</p> <p>The Government provided Second Pass approval in April 2016 to acquire two AOR ships and associated support systems from Navantia, including an initial period of five years in-service support. On 5 May 2016, the \$640 million acquisition contract was signed with Navantia to build the two AOR Ships in Spain, with delivery contracted to occur in 2019 and 2020 respectively.</p> <p>Although the new AOR Ships will be built overseas, Australian Industry participation is estimated to be in excess of \$120 million. In addition, the initial \$250 million five-year sustainment contract also signed with Navantia, will be undertaken in Australia (note this contract is not included within Section 2.1 of this PDSS given it refers to the funding of sustainment).</p> <p>On 17 November 2017, the Minister for Defence announced the AOR Ships would be named HMAS <i>Supply</i> and HMAS <i>Stalwart</i>.</p> <p><b>Uniqueness</b></p> <p>The acquisition and support contracts were both signed on the same date and with the same Contractor, Navantia, with linkages between the acquisition and initial transitional five year in-service support Conditions of Contract.</p> <p>While the AOR Ships are based on the existing MOTS design, based on the Spanish <i>Cantabria</i> class design, the minimal changes incorporated into the MSS have been limited to those required to meet the RAN's essential requirements, environmental obligations and statutory requirements.</p> <p>The AOR Ships will be built and delivered in Spain, before transit to Australia for completion of an Australian fit out period prior to the introduction into service of each AOR Ship.</p> <p><b>Major Risks and Issues</b></p> <p>The COVID-19 pandemic caused major delays to the SEA 1654 Phase 3 Project in 2020. The Project is currently managing the issue of a 6 month delay to the achievement of Initial Operational Release (IOR), now forecast in February 2021.</p> <p>The project is still managing an issue relating to delays to delivery and Approval of ILS deliverables and delivery and installation of training equipment leading up to Acceptance of the AOR Ship Support System. The Operative Date (OD) of the Support Contract is forecast to be delayed to December 2020 as a result of the delays to ship delivery.</p> <p>The risk associated with completion of supply and installation of long lead Part Task Training aids appeared resolved, with the deliveries being made in time, however interstate travel restrictions have further delayed set to work. Training has been rescheduled again, and the equipment will be available just in time.</p> <p>The potential risk regarding limitations to the magazine design is being quantified, and is now being managed by the project as a legacy issue associated with the Military Off The Shelf design of the ship.</p> <p><b>Other Current Related Projects/Phases</b></p> <p><b>Project N2262 - Facilities to Support SEA1654 Phase 3 MOSC:</b> The SEA 1654 Phase 3 Project Second Pass Approval also included the approval of scope for, and a significant percentage of the capital acquisition cost allocated to, the delivery of the facility</p>
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requirements for the MOSC under the Estate and Infrastructure Group (E&IG) Project N2262. The supporting facilities and infrastructure works being delivered at Stirling, Garden Island Defence Precinct and Randwick Barracks under N2262 will be critical to the successful introduction and sustainment of the MOSC. Note the total approved budget and expenditure history included within this PDSS only includes Capability Acquisition and Sustainment Group (CASG) allocated funding and therefore Project N2262 budget and expenditure is excluded from the scope of this report.

#### 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
<b>Project Budget</b>			
Apr 14	Original Approved ( <b>Government First Pass Approval</b> )	13.2	1
Apr 16	Government Second Pass Approval	991.4	2
	<b>Total at Second Pass Approval</b> (or key Government pre-Second Pass Approval)	1,004.6	
Jun 16	Real Variation – Transfer	69.1	3
Apr 19	Real Variation – Transfer	0.3	5
Jan 20	<b>Real Variation – Transfer</b>	12.0	6
Jun 20	Exchange Variation	(1.3)	
	<b>Total Budget</b>	1,084.7	
<b>Project Expenditure</b>			
Prior to Jul 19	Contract Expenditure – Navantia S.A	(507.9)	4
	Contract Expenditure – Raytheon Australia	(25.1)	
	Other Contract Payments/Internal Expenses	(17.2)	
		(550.2)	
FY to Jun 20	Contract Expenditure – Navantia S.A	(91.8)	7
	Contract Expenditure – Raytheon Australia	(4.1)	4
	Other Contract Payments/Internal Expenses	(11.2)	
		(107.1)	7
Jun 20	<b>Total Expenditure</b>	(657.3)	
Jun 20	<b>Remaining Budget</b>	427.4	
<b>Notes</b>			
1	This project's original budget amount is that prior to achieving Second Pass Government approval.		
2	The Government Second Pass Approval transfer amount only includes funding transferred to CASG, including contingency. It does not include approved capital funding transferred to Navy and other Defence Groups.		
3	Transfer of funding for Training under the acquisition contract Not To Exceed (NTE) price for Training delivery and development CCPs from Navy.		
4	Other expenditure comprises operating expenditure, minor contract expenditure and other capital expenditure not attributable to the listed contracts.		
5	Transfer of funding is for Materiel Data Exchange Specification (MDES) CCP under the acquisition contract from Navy.		
6	<b>Transfer of funding from Estate and Infrastructure Group (E&amp;IG) project N2262 – Facilities to Support SEA1654 Phase 3 MOSC. Funding will cover additional costs expected in Australian fit out activities, engineering and ILS costs associated with CCPs and additional project support costs to cover the period of delay.</b>		
7	<b>This amount includes \$0.6m paid from Navy (outside CASG) which relates to the project. This was for work completed regarding the Materiel Data Exchange Specification.</b>		

### 2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
191.8	196.0	195.3	PBS-PAES: The forecast variation is primarily due to the increase in Contract Change Proposals for the Prime Contract relating to Training Development and spares. PAES-Final Plan: <b>Foreign exchange movements</b>
Variance \$m	4.2	(0.7)	Total Variance (\$m): 3.5
Variance %	2.2	(0.4)	Total Variance (%): 1.8

### 2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
			Australian Industry	In-year variance of \$88.2m to date is primarily due to the prime contract (Navantia), associated
		(88.2)	Foreign Industry	
			Early Processes	
			Defence Processes	

			Foreign Government Negotiations/Payments	with the closure of the shipyard in Spain and the nationwide shutdown as a result of the COVID-19 pandemic, Contract Change Proposals and delays in delivery of the Close In Weapon System.
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
195.3	107.1	(88.2)	Total Variance	
		(45.2)	% Variance	

### 2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes		
		Signature \$m	30 Jun 2020 \$m					
Navantia S.A.	May 16	646.8	772.6	Fixed with indices escalation	ASDEFCON	1, 2, 3		
Raytheon Australia	Nov 16	45.8	45.0	Fixed	ASDEFCON	3, 4		
Notes								
1	This relates to the acquisition contract with Navantia only. The responsibility for the scope and funding of support contract is under the AOR Systems Program Office (AORSPO).							
2	The increase in the acquisition contract price with Navantia predominantly relates to CCPs that have been implemented since the end of June 2019 for the provisioning of spares, training delivery and other deliverables.							
3	Contract value as at 30 June 2020 is based on actual expenditure to 30 June 2020 and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable).							
4	The decrease in the contract price with Raytheon Australia is due to minor fluctuations in foreign exchange and a reduction in escalation.							
Contractor	Contracted Quantities as at		Scope			Notes		
	Signature	30 Jun 20						
Navantia S.A.	2	2	AOR Ships Mission and Support Systems.					
Raytheon Australia	2	2	Phalanx Block 1B Baseline 2 Close-In Weapon System (CIWS) and ancillary equipment.			1		
Major equipment accepted and quantities to 30 Jun 20								
Nil.								
Notes								
1	The CIWS will be delivered with one Remote Control Station (RCS) and one Local Control Station (LCS) per AOR Ship.							

## Section 3 – Schedule Performance

### 3.1 Design Review Progress

Review	Major System / Platform Variant	Original Planned	Current Contracted	Achieved / Forecast	Variance (Months)	Notes
System Requirement	Mission System	May 16	N/A	May 16	0	1
	Support System	Jul 16	N/A	Jul 16	0	
Preliminary Design	Mission System and Support System	Dec 16	N/A	Dec 16	0	
Critical Design	Mission System and Support System	Jun 17	N/A	Jun 17	0	2
<b>Notes</b>						
1	The key objectives of the System Requirements Review (SRR) and System Definition Review (SDR) for the Mission System, primarily establishing and validating the functional baseline contained in the contracted MSS, were achieved prior to the acquisition contract Effective Date (ED) as part of the First Pass RRDS contract and subsequent Request for Tender (RFT) Offer Definition and Improvement Activity (ODIA).					
2	Production on the AOR Ships commenced following Critical Design Review (CDR) with cutting steel occurring on 19 June 2017.					

### 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	AOR Ship 1	Aug 19	N/A	Aug 20	12	1,2,5
	AOR Ship 2	May 20	N/A	Feb 21	9	1,2,5
Acceptance	AOR Ship 1	Sep 19	Jun 20	Dec 20	15	3,4,5
	AOR Ship 2	Jun 20	Dec 20	Jun 21	12	3,4,5
<b>Notes</b>						
1	System integration planned and forecast dates, including the installation, set-to-work, and testing of all systems on-board the AOR Ships by Navantia, are based on the completion of the Sea Acceptance Trials (SATs) for each AOR Ship.					
2	The integration of some systems such as the torpedo-self-defence (NIXIE), CIWS, Integrated Broadcast System (IBS), and remaining Information Communications Technology (ICT) Networks are required to take place in Australia after delivery of each AOR Ship from Spain.					
3	The current contracted dates for Acceptance are based on the current contract with Navantia.					
4	The Support System Acceptance is a prerequisite for the Acceptance of both AOR Ships Mission Systems. This includes the successful completion of the Provisioning Preparedness Review (PPR), Long Lead Times Item (LLTI) Review, and Facilities					

## Project Data Summary Sheets

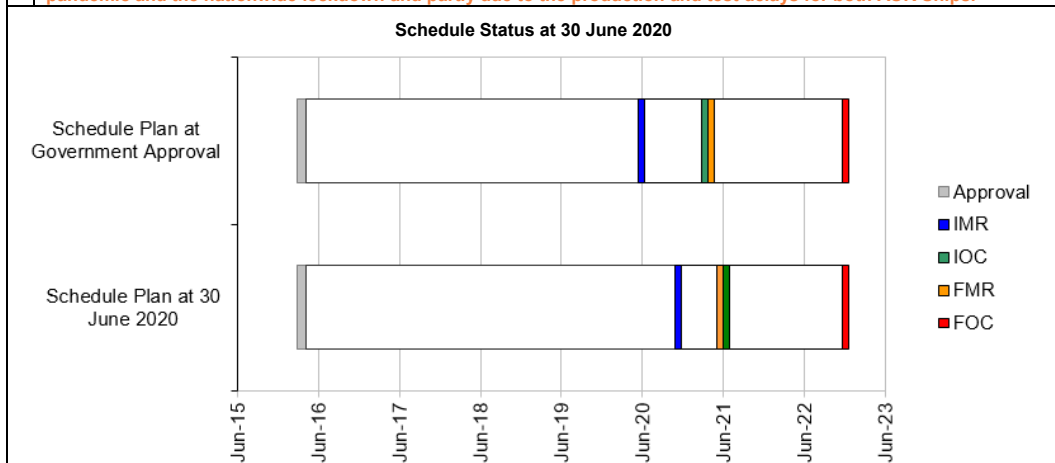
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	Readiness Review (FACRR), Training Readiness Review (TNGRR), Functional Configuration Audit (FCA), Physical Configuration Audit (PCA), crew Training and the Support System Effectiveness Demonstration.
5	The forecast dates for System Integration and Acceptance of the AOR Ships are based on the latest agreed forecast dates, which will be included in the next Contract Master Schedule (CMS), Revision W, and forecast to be delivered by Navantia in July 2020. The Project Integrated Master Schedule reflects this forecast. Delays to System Integration and Acceptance for AOR Ship #1 and #2 against all milestones result from Navantia's shutdown of Shipyard during the Alarm State Covid-19 pandemic crisis.

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

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Q2 2020	Dec 20	6	2
Initial Operational Capability (IOC)	Q1 2021	Jul 21	4	2
Final Materiel Release (FMR)	Q1 2021	Jun 21	6	2
Final Operational Capability (FOC)	2022	Dec 22	0	1

Notes	
1	Current forecast achievement of FOC aligns with the latest SEA 1654 Phase 3 Integrated Project Management Planning documentation. This integrated planning has matured the project's understanding of FOC activities since the 2017/18 MPR, which previously forecast an early achievement of FOC.
2	The variance is mostly due to the Contractor's shipyard shut down in March 2020 in response to the COVID-19 pandemic and the nationwide lockdown and partly due to the production and test delays for both AOR Ships.



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	
	<b>Green:</b> The project expects to meet the Materiel Capability Requirements as expressed in the Materiel Acquisition Agreement (MAA).
	<b>Amber:</b> N/A
	<b>Red:</b> 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)	AOR Ship 1 delivered ready for training, work-up and Operational Test and Evaluation (OT&E). Those CASG Fundamental Inputs to Capability (FIC) elements including transition into sustainment as defined by the AOR Support System sufficient to support OT&E. IMR is currently <b>forecast</b> to be achieved in <b>December 2020</b> .	Not yet achieved.
Initial Operational Capability (IOC)	IOC is defined as the ability for an AOR Ship to conduct replenishment at sea for existing Navy Major Fleet Units by demonstrating the capacity to operate two replenishment stations concurrently with helicopter replenishment. IOC is currently scheduled to be achieved in <b>July 2021</b> .	Not yet achieved.
Final Materiel Release (FMR)	AOR Ship 1 and AOR Ship 2 complete in accordance with the Government Approved scope. FMR is currently scheduled to be achieved in <b>June 2021</b> .	Not yet achieved.
Final Operational Capability (FOC)	FOC is defined as: a. both new AOR Ships being able to deploy with a Navy Task Group to an operational area, major exercise or activity and conduct fully-integrated Task Group replenishment operations including multi-ship replenishment of liquids, solids and explosive ordnance, including by embarked helicopter; and b. achievement of the full scope of the project including delivery and acceptance into operational service of the Mission System, Support System and training systems and required facilities. FOC is currently scheduled to be achieved in <b>December 2022</b> .	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 chance that the SEA 1654 Phase 3 Project may not meet Navy's forecast date for introduction into service for the first AOR Ship, <i>Supply</i> , as a result of the current delays and deficiencies associated with the LSA program and related ILS deliverables.	The SEA 1654 Phase 3 Project has agreed corrective actions with Navantia for current omissions and defects of ILS deliverables to ensure fitness for purpose in time for IOR of Ship 1, <i>Supply</i> . Navy direction for the commercial crew delivery of the AOR Ships from Spain to Australia has reduced the risk to schedule for introduction into service due to the resultant shift in scheduled training and in service support activities. <b>Note this risk has been downgraded to medium due to progress of the corrective action plan and submission of ILS deliverables and reduced likelihood of delays and quality issues.</b>
<b>Production progress Ship 1 Supply</b> There is a chance that the SEA1654 Phase 3 Project may not meet Navy's forecast date for introduction into service for the first AOR Ship, <i>Supply</i> , as a result of delays associated with the production and test program in Ferrol Spain prior to the ship transit to Australia.	Implementation of risk response strategies by Navantia including engagement of additional workforce and prioritisation of engineering publishing activities, as well as active management by the SEA 1654 Phase 3 Project. <b>These strategies have only been partially effective. The delivery of the ship will be delayed somewhat, however this delay is not expected to affect introduction of the ship into service.</b>
Emergent Risks (risk not previously identified but has emerged during 2019-20)	
Description	Remedial Action
<b>Shortage of CoA Resources at Ferrol;</b> There is a chance that Ship Acceptance - Ship 1 will be affected by the Commonwealth not having enough suitable resources to witness the remainder of HATs and SATs for Ship 1, the Australian Fit Out period for Ship 1 at FBW, initially due to delays in Navantia's construction program causing a conflict/overlap between ship 01 Australian Fitout, and subsequently further impacted by Covid-19 restrictions.	1. Continue to make best use of TEEKAY Production surveillance activities and utilise these resources to provide assurance over the BDTs, BSTs, selected HATs and selected SATs. 2. Lloyds Register is contracted to appraise the design, conduct surveillance over the Production activities, and some aspects of assurance, and certification. 3. Detailed mapping of the Functional Baseline requirements to HATs and SATs test procedures that are reviewed and approved by the CoA are used by onsite representatives (TEEKAY) to confirm proper conduct of the tests and recording of results

#### Project Data Summary Sheets

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<p><b>State Mandated Travel Restrictions;</b></p> <p>There is a chance that Ship Acceptance (SA1) will be affected by state mandated travel restrictions leading to an impact on the project's cost and schedule.</p>	<p>1. Impact of State Mandated Travel Restrictions have been mitigated by providing letters of support cleared by FAS SHIPS for domestic and international contracted prime and subcontractor staff and AS-SASS for CoA and local contracted support.</p>
<p><b>Procurement, Delivery and Installation of Long Lead Time Part Task Trainers;</b></p> <p>There is a risk that PTTs may not be available for training due to lack of on site Navantia resources caused by travel restrictions.</p>	<p>1. Schedule training to meet availability of PPTs, and on a case by case basis seek alternate subcontract providers to undertake works when original providers unavailable due to travel restrictions.</p>
<p><b>EO and Armament Certification;</b></p> <p>There is a chance that certification of the AOR Explosive Ordinance (EO) facilities will not be awarded by the MARB leading to an inability to achieve Initial Operational Release (IOR).</p>	<p>1 - The Project has engaged an SME to coordinate all EO certification activities in the lead-up to the MARB.</p> <p>2 - Preliminary MARB working groups have commenced, which involves close, collaborative working arrangements with RAN stakeholders. The have been progressing well to date.</p> <p>3 - The Project has sought input from Navantia to link design evidence of compliance against ARM-TC requirements, to speed progression of magazine certification (BI458032).</p>

## 5.2 Major Project Issues

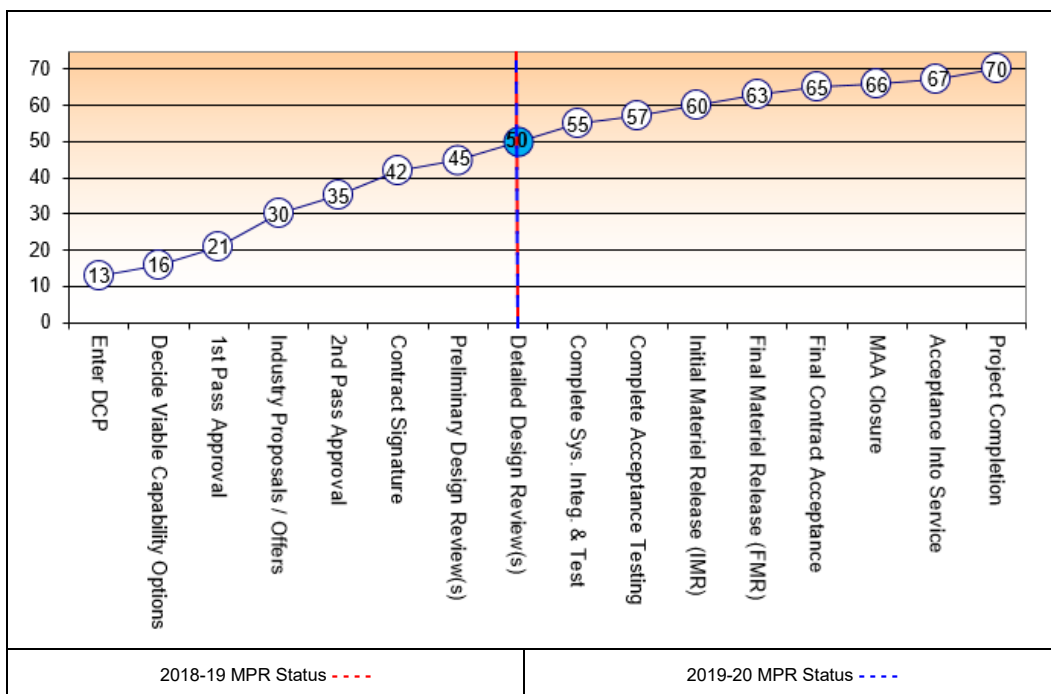
Description	Remedial Action
<p><b>Delays and deficiencies with ILS deliverables</b></p> <p>Delays and deficiencies associated with a range of Integrated Logistic Support (ILS) Supplies. Incorporating the necessary Technical Data (TD) furnished from subcontracted vendors, as well as the long lead times for the development and delivery of Training (including Training Facilities, Equipment and Aids), are impacting the delivery of the acquisition Support System, contractor Transition/Phase-In activities, and achievement of the OD of the Support Contract.</p>	<p>The SEA 1654 Phase 3 Project has agreed corrective actions with Navantia prior to submission of future ILS deliverables for Commonwealth review. This mitigation is ongoing and has seen a significant increase in the quality of ILS deliverables due to the implementation of a number of steps including improved quality processes and engagement of experienced local Australian industry by Navantia.</p> <p>Regular meetings, communication and proactive engagement on Training development and delivery between Navantia, the N2262 Project, COMTRAIN and CASG senior management.</p> <p>This issue currently has no realised impact on the forecast schedule for the Materiel Release and Operational Capability Milestones of the AOR Ships.</p>
<p><b>COVID-19 induced delays to Ship deliveries.</b></p> <p>There is a chance that the Commonwealth will not have enough suitable resources to witness the remainder of HATs and SATs for ship 1, the Australian Fit Out period for Ship 1 at FBW and HATS and SATs for Ship 2 in Ferrol Spain, initially due to delays in Navantia's construction program causing a conflict/overlap between ship 01 Australian Fitout and Ship 02 testing in Ferrol, and subsequently further impacted by Covid-19 restrictions. As a result, the V&amp;V program may be compromised.</p>	<p>Augment TEEKAY resources to provide adequate test witnessing during the BDTs&lt;HATs, BSTs, and SATs, with management oversight by a CoA appointed site representative on site</p>
<p><b>Note</b></p> <p>Major risks and issues in Section 5 are excluded from the scope of the Auditor-General's Independent Assurance Report.</p>	

## Section 6 – Project Maturity

### 6.1 Project Maturity Score and Benchmark

Maturity Score		Attributes							Total
		Schedule	Cost	Requirement	Technical Understanding	Technical Difficulty	Commercial	Operations and Support	
Project Stage	Benchmark	7	7	7	8	7	7	7	50
Detailed Design Review	Project Status	7	7	7	7	8	7	7	50
	Explanation	<ul style="list-style-type: none"> <li><b>Technical Understanding</b> – The project is currently assessed as behind the benchmark maturity score for this attribute due to the <b>ongoing management of the issue relating to ILS Supplies</b>, identified in Section 5.2 of this PDSS.</li> <li><b>Technical Difficulty</b> – The project is currently assessed as ahead of this benchmark maturity score following the successful completion of the Critical Design Review (CDR) in June 2017, and all subsequent internal Navantia Quality Gate reviews were completed in March 2018, to enable full production to be undertaken on the AOR Ships.</li> </ul>							





## Section 7 – Lessons Learned

### 7.1 Key Lessons Learned

Project Lesson	Categories of Systemic Lessons
There is a requirement to recognise that projects on an accelerated schedule will have areas of ill-defined scope. Consequently, there needs to be some level of contingency added for these known unknowns (over and above those for standard projects) which can be readily accessed within compressed timeframes and thus avoiding negative impacts on schedule.	Schedule Management
Limitations exist with MOTS purchases when a significant amount of time has passed since the last unit was produced. The MOTS Strategy is most effective when procurement of a system can occur so that it is the next unit on a production run and there is little to no time lapsed in between units being produced. This would minimise the need for subsequent re-design as a result of changes to legislative requirements and or obsolescence issues that occurred during the time interval between production runs. Alternatively, planning needs to consider timeframes for re-design processes.	Off-the-shelf Equipment

## Section 8 – Project Line Management

### 8.1 Project Line Management as at 30 June 20

Position	Name
Division Head	Ms Sheryl Lutz
Branch Head	Mr Peter Croser
Project Director/Manager	Mr Chris Horner

## Project Data Summary Sheets

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

Project Number	<b>AIR 5431 Phase 3</b>
Project Name	<b>Civil Military Air Traffic Management System (CMATS)</b>
First Year Reported in the MPR	2016-17
Capability Type	Replacement
Acquisition Type	Developmental
Capability Manager	Chief of Air Force
Government 1st Pass Approval	Nov 11
Government 2nd Pass Approval (or key Government pre-Second Pass Approval)	Dec 14
Budget at 2 <sup>nd</sup> Pass Approval (or key Government pre-Second Pass Approval)	\$731.4m
Total Approved Budget (Current)	<b>\$975.6m</b>
2019-20 Budget	<b>\$86.4m</b>
Project Stage	Contract Signature
Complexity	ACAT I



### Section 1 – Project Summary

#### 1.1 Project Description

AIR 5431 Phase 3 seeks to replace the current Fixed Base Defence Air Traffic Management and Control Systems at 12 Australian Defence Force (ADF) fixed base locations with a new harmonised system, referred to as the Civil Military Air Traffic Management System (CMATS). The CMATS component of AIR 5431 Phase 3 is being conducted as a joint acquisition program with Airservices Australia (Airservices). New and refurbished control towers and approach centres, and upgraded network infrastructure, are being delivered under separately funded works through the Estate and Infrastructure Group, the Chief Information Officer Group and Air Force.

#### 1.2 Current Status

##### Project Status

AIR 5431 Phase 3 was removed from the Project of Concern list on May 2018 but remains a Project of Interest.

##### Cost Performance

###### In-year

In-year expenditure to 30 June 2020 is \$87.5m against a budget of \$86.4m. The variation is due to payment of an additional On-Supply-Agreement invoice to Airservices (+\$12.4m). This is partly offset by a partial delivery (approximately \$0.2m of \$9.3m milestone) of Air-Ground-Air Transition Materials (-\$9.1m) and slippage in Air-Ground-Air contract milestones (-\$2.2m).

###### Project Financial Assurance Statement

As at 30 June 2020, project AIR 5431 Phase 3 has reviewed the project's approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial contractual obligations of Defence for this project, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget remaining, including contingency, for the project to complete against the agreed scope, noting currently unrealised risks carry some cost risk.

###### Contingency Statement

The project has not applied contingency in the financial year.

##### Schedule Performance

Thales exited CMATS Preliminary Design Review (PDR) in December 2019. PDR was achieved through the application of a maturity-based approach to the deliverables under this milestone. The ongoing technical debt is expected to be complete by the end of July 2020. The delays in finalising the outcomes of PDR has resulted in a delay to the next engineering milestone, which is Critical Design Review entry, which is now planned for August 2020.

A revised Materiel Acquisition Agreement (MAA) was signed in April 2020, incorporating updated milestone dates for AIR5431 Phase 3 Initial Operational Capability (IOC) planned in June 2023 and Final Operational Capability (FOC) planned April 2026.

#### 165 Notice to reader

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

<p>As foreshadowed at the time of contract signature, the CMATS contract required a number of Contract Change Proposals (CCPs) to <b>incorporate</b> the agreed Defence scope changes and address engineering changes, including Airservices options, known at the time of contract signature. Airservices have executed <b>eight</b> CCPs since contract signature. Execution of the CCPs is critical to stabilisation of the functional and schedule baselines.</p> <p>The ability for Thales to progress the CCPs as well as performing the activities under the contract have been strained due to lower than desired staffing rates.</p> <p>CCP4 was a Defence initiated CCP to correct the quantities of some items, and <b>introduce a digital interface</b> for the <b>contemporary</b> radios <b>under procurement</b>. CCP4 <b>was</b> signed by Airservices and Thales in July 2019 <b>which resulted in a delay to IOC</b>.</p> <p>CCP5 incorporated the remaining Defence collaboration initiatives, the major one being the relocation of Townsville and Darwin Approaches into Brisbane centre. <b>CCP5 was signed by Airservices and Thales in October 2019. Thales and its subcontractors are currently in the process of finalising amendments to the subcontractor agreements to flow down the changes arising from CCP5. As a result, there have been multiple baseline challenges to manage.</b></p> <p>The CCPs 6, 7 and 8, which were signed November 19, February 20 and June 20, respectively, CCP 6 and 7 are minor scope changes and did not affect major milestone dates and CCP 008 was an administration change.</p> <p>Defence's Independent Assurance Review, conducted Quarter 1 2020, recommended the project <b>remain a project of interest, and noted the schedule challenges presented by the number of CCPs and replanning of activities.</b> The <b>Integrated Baseline Review (IBR)</b>, conducted December 2019 to February 2020, also noted schedule challenges and additional work required to approve the Performance Measure Baseline (PMB). Thales has yet to complete all outstanding actions from the IBR review.</p> <p><b>The delays to IOC and FOC forecast in the previous PDSS of approximately six months have now been realised. Air Force advised Government of the delays via cabinet submission in December 2019. Based on Government's acknowledgement of those dates, an updated MAA to reflect the new dates has been signed.</b></p> <p><b>Material Capability Delivery Performance</b></p> <p><b>This program</b> has not delivered any material capability to date. As a result of affordability constraints, Defence has accommodated a number of CMATS scope changes to deliver an equivalent capability more cost effectively. The most significant changes are:</p> <ul style="list-style-type: none"> <li>Airservices supplying alternative, non-CMATS Tower Air Traffic Management systems at four locations – Edinburgh, Richmond, Gingin and Oakey <b>via separate contractor</b>;</li> <li>Relocating Darwin and Townsville Approach from Darwin and Townsville to the Airservices Approach Centre in Brisbane; and</li> <li>Relocating Oakey approach from Oakey to Amberley.</li> </ul> <p><b>The majority of changes to the CMATS contract with Thales to affect the above changes have now been signed by the contractor. Thales is still finalising flow down of these changes to all of its subcontractors.</b></p> <p><b>Related</b> Material Capability is also being <b>managed by Defence</b> and delivered by BAE Systems Australia for the Air Ground Air (AGA) transition solution, Raytheon for the ADATS life-of-type extension and Defence site preparation and support. Delivery of material capability associated with these procurements are delivered outside the On-Supply Agreement.</p> <p><b>Note</b></p> <p>Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.</p>
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### 1.3 Project Context

<p><b>Background</b></p> <p>AIR5431 Phase 3 will acquire a fixed Air Traffic Management (ATM) system to replace the existing Australian Defence Air Traffic System (ADATS) capability (Tower and Approach Centres) at 12 ADF fixed base locations, and a simulator system for the School of Air Traffic Control (SATC). Defence is procuring for its replacement ATM capability under AIR 5431 Phase 3, a common Civil Military Air Traffic management and control System (CMATS) through a joint acquisition and support program with Airservices, also referred to as OneSKY Australia (OneSKY).</p> <p>Beyond the joint CMATS procurement, Defence is also acquiring elements necessary for successful integration of the CMATS into the broader Defence ATM system.</p> <p>The strategic objectives of Airservices and Defence for the CMATS program include:</p> <ul style="list-style-type: none"> <li>To harmonise Australia's civil and military air traffic management systems so as to deliver improvements in safety, efficiency, flexibility, economy and business continuity and accords with the Australian Government's policy to maximise the efficiency of Australian airspace through increased cooperation and collaboration between Airservices and Defence; and</li> <li>To successfully acquire, transition, support and operate the CMATS across Australia's national airspace and every major civil and military aerodrome in Australia within agreed schedule, cost and performance constraints.</li> </ul> <p>Consistent with the Government's 2013 Policy for Aviation, Defence will work jointly with Airservices as the lead agency for the CMATS, to establish a harmonised national air traffic system.</p> <p>AIR 5431 Phase 3 achieved First Pass approval in November 2011 as part of a combined project with AIR 5431 Phase 2, which included combined Defence Capability Plan (DCP) capital and Net Personnel and Operating Costs (NPOC) provisions. The Project Initial Review Board (PIRB) held in November 2013, subsequently directed AIR 5431 Phase 2 and Phase 3 be presented to government as separate projects, which was noted by the Minister for Defence in March 2014. The revised DCP 2014 included AIR 5431 Phase 2 and Phase 3 as separate projects. A PIRB held April 2014 agreed to seek Second Pass for AIR 5431 Phase 3 in December 2014, vice March 2015, to better align with Airservices' project approval timeline and to mitigate the identified Defence risks with the delivery of associated facilities and communications projects.</p>
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AIR 5431 Phase 3 achieved Second Pass approval in December 2014 on the basis of tender agnostic capability, schedule and cost data provisioned by Airservices in the form of a Not-to-Exceed (NTE) price for the Defence share of the common and Defence unique elements of the CMATS. After a period of complex negotiations, AIR5431 Phase 3 formally returned to Government in February 2018 and was granted a RCI of \$243.0m (including contingency) to cover additional CMATS costs, a transition radio solution (AMACCS), Australian Defence Air Traffic System (ADATS) life-of-type extension and facilities preparation costs related to CMATS installation. Approval of the RCI for AIR 5431 Phase 3 included a requirement that Defence provide 6 monthly updates to Government.

The CMATS offer and negotiation process was protracted, primarily due to the difficulties experienced by Thales in producing an acceptable offer that represented value for money for Defence and Airservices, an underestimation of the time required to settle the requirements, total cost and cost attribution of a harmonised capability and alignment of customer approval processes through two separate governance structures. Notwithstanding, Airservices signed both acquisition and support contracts with Thales in February 2018.

The joint civil-military acquisition originally intended to procure a principally commercial off-the-shelf (or military off-the-shelf) system; however, the only compliant and viable solutions tendered all required significant development and integration effort to deliver the specified capability. Furthermore, there were no similar civil-military Air Traffic Management systems fielded elsewhere in the world. Due to this, Thales priced a large portion of risk into the fixed price offer to cover uncertainty in software development and site implementation. To better manage this risk, Airservices and Thales agreed to move from a Fixed Price to a Target Price Incentive contract, in order to incentivise Thales to deliver the capability at the lowest price possible. Defence is not subject to the risks or benefits associated with the Target Price Incentive arrangement. The Target Price Incentive model, along with improved relational governance arrangements, provide Defence and Airservices stakeholders confidence that challenges presented during contract execution can be overcome collaboratively through transparency of technical, schedule and cost risk between the parties.

Airservices' management of the contracts with Thales and on-supply to Defence will be governed by an On-Supply Agreement (OSA) executed in February 2018. In addition to defining the on-supply to Defence of the Defence supplies and services delivered to Airservices by Thales, the OSA is underpinned by a principles-based governance framework, aligned to that established between Airservices and Thales for the CMATS acquisition and support contracts.

The CMATS program organisation is structured to ensure Defence provides an equitable contribution towards the delivery of the CMATS. This is achieved through the implementation of a Joint Program Team consisting of both Airservices and Defence subject matter experts, a CMATS Review Group (CRG), consisting of Defence and Airservices senior representatives, and higher level forums above the CRG consisting of the Program Sponsors including CEO Airservices, Chief of Air Force and Deputy Secretary CASG. Whilst the parties have opted for a lead agency construct, the organisation is underpinned by embedded staff and decision-makers to assure that both parties' interests and requirements are addressed in terms of management of the project. However, the dual sponsorship, and the governance and stakeholder management that arises, does lead to challenges where there is a variation between the timelines of approval or organisational direction.

On 18 August 2017 the Ministers for Defence and Defence Industry announced this project as a Project of Concern. AIR 5431 Phase 3 was subsequently removed from the Project of Concern list on 8 May 2018 with the criteria for removal met at contract award. In recognition that AIR 5431 Phase 3 will remain complex and require significant governance to ensure capability, cost and schedule risks are adequately managed; AIR 5431 Phase 3 will continue to be managed as a Project of Interest.

#### Uniqueness

CMATS represents the first time that a Defence project is contributing to a major national infrastructure project. The December 2009 National Aviation White Paper identified the need to implement a harmonised national civil and military air traffic management system. The activities identified in the White Paper for the implementation of a comprehensive, collaborative approach to nation-wide air traffic management included the procurement of a single solution air traffic management (ATM) platform between civil and military agencies.

At the time of decision to enter into a joint project arrangement there was no history of a similar governance structure in operation that aligned with the scope of this project. As a consequence, Airservices and Defence have established and continued to refine the CMATS joint delivery structure without the benefit of adapting from proven existing models.

#### Major Risks and Issues

While both organisations have risk policy and practices in place, Airservices and Defence manage risk separately in accordance with their respective risk management frameworks. The CMATS joint program risk register is maintained and managed by Airservices on behalf of the CMATS program and considers risk that may collectively impact both Defence and Airservices. **The joint project risks and issues (those that affect the risks and obligations Airservices and Defence jointly share under the On Supply Agreement) are managed using the Airservices risk matrix.** AIR 5431 Phase 3 operates a separate risk register for Defence specific/unique risks and issues, **such as resourcing and delivery of items to the joint project.** All major risks that have an impact on AIR 5431 Phase 3 **delivery of the scope of the MAA** have been disclosed, regardless of where they are managed.

During the reporting period, the risks identified for AIR 5431 Phase 3 and the CMATS joint program have shifted as a result of progress through the system design milestones and a maturing of the agreed Defence scope changes. While five risks have been retired or downgraded in severity, a number of existing risks remain, with new sources of risk emerging **or being managed**, identified in the following summary:

- Consolidation of approach services into Amberley approach centre and removal of four Defence towers from CMATS scope in absence of detailed definition and planning.
- Delays to the procurement of the Air Ground Air **Transition (AGAT)** solution may result in insufficient **radio** assets to enable CMATS and Four Alternate Tower Solution (FATS) transition within the agreed contract schedule.
- Accreditation of CMATS to operate as Protected may be impacted as a result of existing Defence and Airservices infrastructure and systems not meeting the security requirements or further due to CMATS design and boundary issues.
- Poor **scope** definition, planning and a lack of dedicated and suitably skilled supplier resources for the FATS.
- The functional availability of external Defence delivered systems on CMATS implementation within the Defence ATM environment.
- Thales' Mission System design process does not recognise Defence Facilities Constraints articulated in the JASOW.
- Inadequate levels of appropriately trained Verification and Validation (V&V) personnel to support V&V activities.

<ul style="list-style-type: none"> <li>• Availability of the Joint Software Support Facility in time for Rz system of systems readiness demonstration for Rz transition.</li> <li>• Delayed delivery of the Support System Specification (SSS).</li> <li>• Insufficient Defence and Airservices project resources to oversight system design work for PDR and Critical Design Review (CDR).</li> <li>• CMATS system maturity and residual <b>PDR</b> technical debt.</li> <li>• Alignment of the maturity-based engineering approach with the software design model and design assurance activities.</li> <li>• Composition and flexibility of Thales' resource profile.</li> <li>• Onerous, long-term and ongoing travel obligations associated with site acceptance integration and verification activities.</li> <li>• Impact of delays to the delivery of the Fixed Base Radar system under Project AIR5431 Phase 2.</li> <li>• If consistency between different system specification documents and between Defence, Airservices and Thales is not maintained, the system solutions could be incompatible and not fit for purpose.</li> <li>• <b>Cost of transition of the Project's support services arrangement to Major Service Provider contract construct.</b></li> <li>• <b>Poor provision of Customer Furnished Materials, Supplies and Services including non-compliance of, deficiencies in, or unavailability of CIOG and E&amp;IG infrastructure and networks, will result in the customer impacting the contracted schedule.</b></li> <li>• <b>A failure of the Prime System Integrator (PSI) to align parallel system engineering activities, such as identification and management of interfaces, dependencies and system of systems deliverables may result in omissions or rework in the development and delivery a system of systems solution.</b></li> </ul> <p>The key issues impacting Airservices and Defence have remained relatively stable and continue to be actively managed, these include:</p> <ul style="list-style-type: none"> <li>• Insufficient dependent AGAT system assets during CMATS introduction into service will impact current operations. A procurement related risk associated with this issue that has the potential to impact transition activities for CMATS and FATS.</li> <li>• <b>Delays to the delivery of the Fixed Base Radar system under Project AIR5431 Phase 2 may impact development and transition into service of CMATS.</b></li> <li>• The joint program has yet to finalise remediation of the online SharePoint portal utilised for configuration/data management and processes to effectively implement the Program's Configuration and Data Management activities. <b>However the first stage of this process, moving it to an online portal, brings with it the opportunity to use new tools to automate some configuration processes.</b></li> </ul> <p><b>Other Current Related Projects/Phases</b></p> <p>AIR5431 Phase 1 – Deployable Air Traffic Control (ATC) Capability will introduce Deployable Air Traffic Management (ATM) command and control systems into the ADF inventory. <b>This phase has no impact on the ability of AIR5431PH3 to deliver its outcomes.</b></p> <p>AIR5431 Phase 2 – Fixed Base ATC Replacement Capability will replace the existing fixed base defence ATC surveillance radars. <b>AIR5431PH3 is highly reliant on AIR5431PH2 to deliver ATC surveillance capabilities at some sites</b></p> <p><b>Note</b></p> <p>Major risks and issues are excluded from the scope of the Auditor-General's Independent Assurance Report.</p>
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## Section 2 – Financial Performance

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

Date	Description	\$m	Notes
Dec 14	<b>Project Budget</b>		
	Original Approved (Second Pass Approval)	731.4	1
Dec 17	Real Variation – Budgetary Adjustment	(6.8)	2
Feb 18	Real Variation – Real Cost Increase	247.5	3
	Exchange Variation	3.5	
Jun 20	<b>Total Budget</b>	975.6	4
	<b>Project Expenditure</b>		
Prior to Jul 19	Contract Expenditure - Airservices Australia	(223.8)	
	Contract Expenditure - Jacobs Australia - Integrated Support Contract	(27.1)	
	<b>Contract Expenditure - Jacobs Australia - Integrated Work Package</b>	(2.7)	
	Other Contract Payments/Internal Expenses	(10.8)	5
		(264.4)	
FY to Jun 20	Contract Expenditure - Airservices Australia	(48.1)	
	Contract Expenditure - Jacobs Australia - Integrated Work Package	(10.3)	
	<b>Contract Expenditure - BAE</b>	(6.2)	
	Other Contract Payments/Internal Expenses	(22.9)	5,6
		(87.5)	
Jun 20	<b>Total Expenditure</b>	(351.9)	
Jun 20	<b>Remaining Budget</b>	623.7	
<b>Notes</b>			
1	In addition to these direct project costs, Defence received approximately \$175m for Major Capital Facility costs and enabling ICT costs.		

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2	This variation is due to administrative decisions to temporarily harvest funds from the project. These funds were returned to the project as part of the RCI approved in February 2018. These funds were part of the original Second Pass approval budget.
3	A RCI of \$249.7m was approved by Government in February 2018 to cover additional costs related to the acquisition. This includes \$2.2m for Air Force to relocate the current Tindal Australian Military Airspace Control Communications System (AMACCS) air traffic control radio equipment site, leaving \$247.5m for CASG related costs (additional CMATS costs, AGAT radio solution, Australian Defence Air Traffic System (ADATS) life-of-type extension and facilities preparation costs related to CMATS installation). This figure includes the \$6.8m returned to the project to correct the Budgetary Adjustment which occurred in December 2017. Given this, the total approved RCI above Second Pass approval is \$242.9m including the \$2.2m for Air Force.
4	The total budget included planned expenditure for the Air Ground Air Transition Solution, ADATS life-of-type extension and Defence site preparation and support. These procurements <b>have been</b> incorporated into Section 2.3 as each agreement <b>was</b> reached.
5	Other contract payments/internal expenses: Operating expenditure, contractors, minor contract expenditure and other capital expenditure not attributable to the listed contracts.
6	<b>Other Contract Payments in FY 19/20 include \$14.6m expenditure on Autotrac II Procurement with the remaining \$8.3m being other contract payments/internal expenses.</b>

## 2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Defence's Explanation of Material Movements
92.7	86.5	86.4	PBS - PAES: The variation is primarily due to re-negotiation of the payment schedule for the On-Supply Agreement with Air Services Australia, from 2019-20 into 2020-21 and 2021-22. PAES- Final Plan: <b>Nil Variation</b>
Variance \$m	(6.2)	(0.1)	Total Variance (\$m): (6.3)
Variance %	(6.7)	(0.1)	Total Variance (%): (6.8)

## 2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(11.3)	Australian Industry	The variation is due to payment of an additional On-Supply-Agreement invoice to Airservices (+\$12.4m). This is partly offset by a partial delivery (approximately \$0.2m of \$9.3m milestone) of Air-Ground-Air Transition Materials (-\$9.1m) and slippage in Air-Ground-Air contract milestones (-\$2.2m).
			Foreign Industry	
			Early Processes	
		12.4	Defence Processes	
			Foreign Government	
			Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
86.4	87.5	1.1	<b>Total Variance</b>	
		1.3	<b>% Variance</b>	

## 2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 20 \$m			
Jacobs Australia – Integrated Support Contract	Dec 14	107.7	27.0	Variable	Modified ASDEFCON	1,2
Airservices Australia	Feb 18	521.0	538.1	Fixed	On Supply Agreement	1,3
Jacobs Australia – Integrated Work Package	Dec 18	47.0	47.0	Variable	Integrated Work Package	1,4
<b>BAE – Air-Ground-Air Communications Solution</b>	<b>Nov 19</b>	<b>67.4</b>	<b>67.1</b>	<b>Fixed</b>	<b>Support Contract Survey and Quote</b>	<b>1</b>
<b>Notes</b>						
1	Contract value as at <b>30 June 2020</b> is based on actual expenditure to <b>30 June 2020</b> and remaining commitment at current budgeted exchange rates, and includes adjustments for indexation (where applicable).					
2	This contract is closed following the transition to a Branch wide Integrated Work Package (IWP) contract.					
3	CMATS will be procured via the Contracts (Acquisition) and (Support) between Airservices and Thales. Airservices manages both Contracts with Thales on behalf of Defence through the OSA. The agreed acquisition price of AUD \$521m was based on the agreed Airservices and Thales EUR exchange rate of 0.6722. <b>CCP4 was at Defence cost and increased the fixed price to \$538M. Note that for reporting purposes, the project continues to use the fixed price for consistency over reporting periods. However,</b> this is not consistent with the Department of Finance exchange rate <b>variances</b> . Due to exchange rate variance, the addition of Defence approved scope and the inclusion of Contract (Support), the price of the OSA will increase over time.					
4	Contract value is the estimated Project share of the Branch IWP contract and is based on the estimate of project expenditure for 8 x 6 monthly work packages to the end of December 2022.					

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 20		
Jacobs Australia	N/A	N/A	Service based integrated support.	1
Airservices Australia	N/A	N/A	Through the OSA, delivery of CMATS control tower and approach centres at Amberley (including Oakey approach), East Sale, Williamtown, Tindal and Nowra, consolidated Darwin and Townsville approach services at Airservices Brisbane approach centre, CMATS control towers at Darwin, Townsville and Pearce and a simulator system at SATC.	
Jacobs Australia	N/A	N/A	Serviced based integrated work package.	
BAE Systems	N/A	N/A	Procurement, design, integration and installation of a new Air Ground Air Communications system across the twelve Defence Sites. This includes the procurement and integration of radio communications equipment that will replace the existing AMAAC System (currently sustained by BAE).	
Major equipment accepted and quantities to 30 Jun 20				
Nil.				
Notes				
1	This was a result of revised schedule Control tower systems for Oakey, Gingin, Richmond and Edinburgh (also referred to as the Four Alternate Tower Solution (FATS)) will be delivered within the agreed fixed-price cap of \$521.0m. The obligation for Airservices to provide FATS was established through the OSA signed 22 February 2018. The FATS Statement of Work and Functional Performance Specification are the subject of negotiations between Defence and Airservices.			

### Section 3 – Schedule Performance

#### 3.1 Design Review Progress

Review	Major System/Platform Variant	Original Planned	Current Planned	Achieved/Forecast	Variance (Months)	Notes
System Requirements	CMATS System Requirements Analysis	Aug 17	N/A	Jan 18	5	1
Preliminary Design Rz	CMATS	Oct 19	N/A	Dec 19	2	2,3,4,5
Critical Design Rz	CMATS	Apr 20	Sep 20	Sep 20	5	2,3,4
System requirements	Alternate Towers Via Airservices	Not yet in contract				
Notes						
1	Airservices entered into contact with Thales for the acquisition of the CMATS in February 2018; System Requirements Analysis was achieved later than expected due to an underestimation of the effort required to develop the Functional Baseline.					
2	Dates for Preliminary Design and Critical Design are derived from the contract Delivery Schedule. The forecast dates are subject to revalidation during the Integrated Baseline Review to reflect implementation of the CMATS scope changes.					
3	Rz is the initial Defence system build for the first five Defences sites and represents the minimum software functionality for safe air traffic services at Defence sites. R1 is a software release that represents the minimum functionality required for Airservices to operate Brisbane and Melbourne Air Traffic Centres. R2 is a software release that represents the full CMATS functionality.					
4	Thales intends to conduct separate Preliminary Design Review and Critical Design Review activities for each software release for Rz, R1 and R2. The table at 3.1 will continue to be updated to reflect the design stages as the project progresses through each software release.					
5	Although the design review was exited in December 19. The plan to address the technical debt not completed at exit is due to be completed by August 2020.					

#### 3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System/Platform Variant	Original Planned	Current Planned	Achieved / Forecast	Variance (Months)	Notes
Rz System verification	CMATS	N/A	Mar 22	Mar 22	0	1
System Acceptance	SATC - CMATS	Jan 22	Oct 22	Oct 22	8	3
	RAAF Base East Sale - CMATS	May 22	Jan 23	Jan 23	7	
	RAAF Base Amberley - CMATS	Jun 22	Feb 23	Feb 23	7	
	RAAF Base Edinburgh - FATS	Jun 22	TBA	TBA	0	1
	RAAF Base Pearce - CMATS	Oct 22	Jul 23	Jul 23	8	3
	RAAF Base Gingin - FATS	Oct 22	TBA	TBA	0	1
	RAAF Base Tindal - CMATS	Nov 22	Jul 23	Jul 23	7	
	Army Aviation Centre Oakey - FATS	Nov 22	TBA	TBA	0	1
	RAAF Base Townsville - CMATS	Nov 23	Sep 24	Sep 24	10	3
	Naval Air Station Nowra - CMATS	Mar 24	Nov 24	Nov 24	8	3

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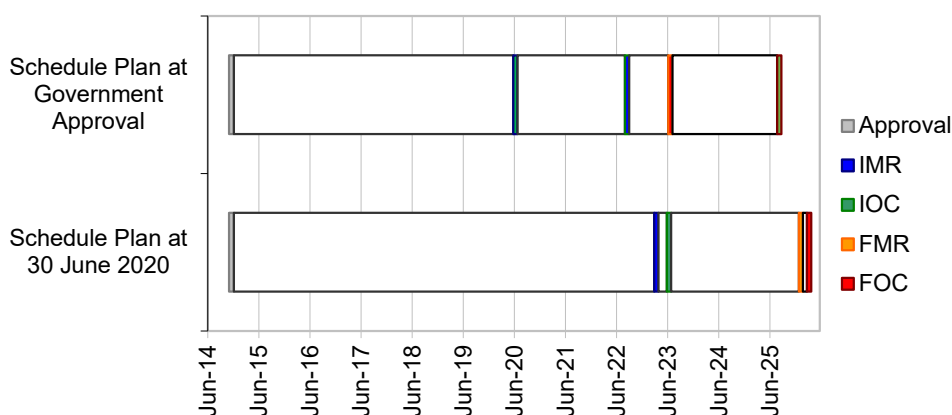


	RAAF Base Williamtown - CMATS	Apr 24	Oct 24	Oct 24	6	3
	RAAF Base Darwin - CMATS	Apr 24	Sep 24	Sep 24	5	3
	RAAF Base Richmond - FATS	May 24	TBA	TBA	0	1
Rz System Acceptance	CMATS	Aug 22	Mar 23	Mar 23	7	2
R1 System Acceptance	CMATS	Jul 24	Dec 24	Dec 24	6	
R2 System Acceptance	CMATS	Feb 25	Jul 25	Jul 25	6	
Final Acceptance	CMATS	Aug 25	Feb 26	Feb 26	6	
<b>Notes</b>						
1	The planned date was based on the original contract before these sites were descope from the Thales contract. Forecast dates are expected to be updated once the FATS agreement is in place with Aircservices.					
2	Rz System Acceptance includes East Sale Tower and Approach (including the School of Air Traffic Control (SATC)), Amberley Tower and Approach including consolidated Oakey Approach and Edinburgh FATS Tower. The selected sites constitute the AIR 5431 Phase 3 IOC, as the combination of these sites demonstrates all possible system variants for Defence's portion of the CMATS system.					
3	The delay is due to the execution of Contract Change Proposal 2 in December 2018 which changed to schedule logic for the software builds post Release 1.					

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

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Aug 22	Mar 23	7	1
Initial Operational Capability (IOC)	Jun 20	Jun 23	36	2,3
Final Materiel Release (FMR)	Aug 25	Feb 26	6	1
Final Operational Capability (FOC)	Jun 23	Apr 26	33	2
<b>Notes</b>				
1	The IMR and FMR milestones reflect the advice provided to Government in Dec 19 and are included in MAAv3. The timing between IMR to IOC and FMR to FOC are constant. The apparent differences in variance between IMR/IOC and FMR/FOC is the result of using a difference basis for the original date. The original date for IOC/FOC is the tender documentation whereas the original date used for IMR/FMR is the Feb 2018 Thales contract date for those milestones. The IMR/FMR dates are only for the Thales contract.			
2	The initial delay to IOC and FOC is due to a protracted period of complex negotiations between the customer and Thales. Previously reported delay to IOC and FOC against the original planned dates were 29 and 28 months respectively. The additional delay during the reporting period was 7.2 months to IOC and 6 months to FOC. The IOC slippage was due to delays in executing, and additional design work resulting from, CCPs 4 and 5. The slippage of FOC was due to the incorporation of additional system automation requirements arising from CCP2.			
3	IOC also includes Edinburgh FATS. No contract currently exists but the IOC date assumes that the delivery date will be no later than the other IOC sites.			

#### Schedule Status at 30 June 2020

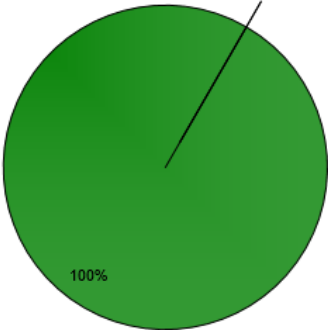


#### Notes

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	
	<b>Green:</b> The project expects to meet the capability requirements as expressed in the Joint Project Directive, Materiel Acquisition Agreement and relevant Technical Regulatory Authority. While a number of Defence related scope changes have been agreed (i.e. Airservices supplying an alternate non-CMATs Tower solution at four Defence sites – Edinburgh, Richmond, Gingin and Oakey; relocating Darwin and Townsville approach from Darwin and Townsville to the Airservices Approach Centre in Brisbane; and relocating Oakey Approach from Oakey to Amberley) these will not impact on the safe delivery of Defence air traffic services.
	<b>Amber:</b> N/A
	<b>Red:</b> 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)	Amberley, East Sale (including SATC) and Edinburgh transitioned from ADATS. Forecast achievement date <b>March 2023</b> .	Not yet achieved
Initial Operational Capability (IOC)	Amberley, East Sale, SATC and Edinburgh have been accepted into Operational service. Forecast achievement date <b>June 2023</b> .	Not yet achieved
Final Materiel Release (FMR)	Delivery of all CMATS material system elements configured to the final system build. Forecast achievement date <b>February 2026</b> .	Not yet achieved
Final Operational Capability (FOC)	All Defence Sites have been accepted into operational service. Forecast achievement date <b>April 2026</b> .	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
Poor provision of Customer Furnished Materials, Supplies and Services including non-compliance of, deficiencies in, or unavailability of CIOG and E&IG infrastructure and networks, will result in the customer impacting the contracted schedule.	<b>Although this risk was downgraded to medium in last year’s submission. The underlying risks have increased and are now being managed as a high risk. The project continues to conduct effective and regular engagement with service providers and suppliers, building confidence through working groups and configuration change boards. However, recent COVID-19 international and domestic restrictions are likely to affect this risk, particularly in relation to foreign sourced long lead time equipment and cross border travel for personnel for site based services.</b>
Delays to the Air Ground Air (AMACCS) transition solution, <b>which includes any modifications to existing gantries</b> , may result in the AGA <b>capability not available</b> to enable CMATS and FATS transition within the agreed contract schedule.	<b>Contract with BAE signed in Nov 19. Strategies such as progressive delivery and concurrent build, installation and testing are being considered to meet site schedule constraints. However, now site work has started, this has exposed some additional issues that affect this risk area.</b>
<b>There is a risk that the new digital radio interface may not be compatible with the current remote radios provided by Airservices.</b>	<b>The project is working with the System Program Office (SPO) to transition the remote radios to an IP based solution.</b>



Accreditation of CMATS to operate as Protected may be impacted as a result of existing Defence and Airservices infrastructure and systems not meeting the security requirements or further due to CMATS design and boundary issues.	Implement recommendations articulated in the plan developed by the INFOSEC Registered Assessors Program (IRAP) assessor, outcomes from this activity will be input into the joint security working group to develop the CMATS accreditation plan. <b>This risk has now been downgraded to medium based on a greater understanding of the system design.</b>
Agreement to consolidate Darwin and Townsville approach services into the Airservices Brisbane approach centre, Oakley approach services into Amberley and removal of four Defence towers (Richmond, Edinburgh, Gingin and Oakley) from CMATS scope in absence of detailed definition and planning creates dependency complexity.	<b>This risk has been downgraded to Medium, through the mitigations below.</b> <b>Ensure that no extant rights and protections are watered down through subsequent variations to the OSA. And ensure the Defence team understand how the OSA applies to their role and the work they do</b> <b>Ensure that CMATS ECPs, subsequent FATS agreement and other requirements/scope (outside of CMATS) are clearly articulated and agreed to obligate Thales/AsA to deliver</b> <b>CCP5 signed and initial engineering work commenced on the changes to the extant design.</b> <b>Project resources have been identified / delegated to closely manage the requirements and AsA's delivery performance.</b>
Poor scope definition, planning and a lack of dedicated and suitably skilled supplier resources, may impact the delivery of the Four Alternate Tower Solution (FATS) at Richmond, Edinburgh, Gingin and Oakley.	Defence <b>is working closely with Air Services in the requirements and contracts</b> , has engaged additional resources to provide close <b>engagement</b> of the FATS agreement development.
A failure of the Prime System Integrator (PSI) to align parallel system engineering activities, such as identification and management of interfaces, dependencies and system of systems deliverables, may result in omissions or rework in the development and delivery a system of systems solution.	<b>Although this risk was retired due to its specificity against the SDR milestone, the broader risk of underperformance remains at high</b>
Implementation of CMATS within the Defence ATM environment may be impacted by the functional availability of external Defence delivered systems, potentially limiting the ability of the Defence portion of the ATM solution to meet regulatory and licencing requirements.	Air Force are engaged through the Stakeholder Working Group (SWG) to analyse each function end-to-end to establish those systems that don't meet the availability requirements and identify possible mitigation options for shortfalls.
Thales' Mission System design process does not recognise Defence Facilities Constraints articulated in the JASOW, this may lead to schedule delay and cost transfer from Thales to the customer.	Defence are closely monitoring the CMATS design process to raise areas of concern early, as well as ensure the Systems Engineering Management Plan includes customer constraints.
An inadequate level of appropriately trained personnel to support Voice Communication Services and Airfield Management Services V&V activities in 2019, may lead to system acceptance of test results non-compliant with JFPS requirements, resulting in delays and rework.	Action is being taken to source additional resources through the Major Service Provider (Jacobs) and suitable courses identified to ensure personnel are trained in the conduct of V&V activities.
The Joint Software Support Facility may not be available or operationally effective in time for demonstrating Rz system of systems readiness for Rz transition, this may cause delays to commissioning at Rz sites.	This risk is being addressed via a provisional acceptance process through each functional baseline validation and regression testing. Identification of alternate acceptance strategies for Defence sites may be required.
<b>Delivery of the Support System Specification (SSS) has been delayed; this is a key product for the determining the Allocated Baseline (ABL) for CDR and may result in schedule delays to the SSCDR deliverables that influence the support system design.</b>	<b>This risk has been downgraded to Medium, through the mitigations below.</b> <b>Technical Review Meeting (TRM) to verify and drive alignment</b> <b>Thales SoS Maturity Plan to ensure no gaps between FBL &amp; ABL and is confirmed by Internal System Reviews (ISR)</b> <b>Pursue alignment through PRM / TRM / IBR.</b>
<b>A lack of Defence and Airservices project resources may impact oversight of system design work as it relates to PDR technical debt and the Critical Design Review (CDR) milestone, and impact on system design.</b>	<b>Improvement in the Joint project organisational structure, and resource allocation to work packages, to enhance flexibility within the CMATS program, which have been tailored to focus on strategic elements against maturity goals.</b>
CMATS system maturity and residual technical debt may impact the progression of the ABL through the PDR, CDR and Test Readiness Review (TRR) milestones, resulting in schedule impacts to Rz sites, with the potential for flow on effects to R1 and R2 implementation.	<b>Post PDR planning identified a need for the customer to focus on oversight and assurance of the system maturity profiles, areas of technical debt and reinforce Thales' role as the Prime System Integrator.</b>
The maturity-based engineering approach adopted for CMATS requirements analysis may not align with the software design model and design assurance activities prescribed by the relevant industry standard.	<b>A plan to satisfy the software design assurance objectives has been jointly developed between the Customer and Thales. This has resulted in a slippage to R1 of software requiring Assurance level 3.</b>

Thales' resource profile lacks flexibility and the necessary composition of skills to concurrently deliver the requirements for the CDR milestone, cater for ECPs and CCPs and any emergent scope should it arise. This risk is compounded by staff turnover, leading to productivity inefficiencies and potential schedule delay.	Ongoing monitoring of Thales' progress to address resourcing composition is occurring through the Program Review Board. Independently, Thales are implementing the Thales Global Engineering Maturity Plan to consolidate transverse engineering activity and enhance consistency of artefacts.
Site acceptance and the quality of site integration and verification activities, may be impacted by a requirement to support onerous, long-term and ongoing travel obligations.	Strategies that focus on the recruitment of suitably skilled resources within proximity of each sites is being undertaken.
Delays to the delivery of the Fixed Base Radar system under Project AIR5431 Phase 2 may impact development and transition into service of CMATS.	<b>This risk has now been realised and is reported as an issue of section 5.2 in this PDSS.</b>
If consistency between different system specification documents and between Defence, Aircservices and Thales is not maintained, the system solutions could be incompatible and not fit for purpose.	Defence teams will undertake conformance checks between key documents, and specifically assess the service delivered over interfaces as part of the test and evaluation program prior to final delivery.
The increased cost of the Major Service Provider contract, compared to the original Integrated Support Contract, may exceed the available budget, resulting in less support being provided or an increase in costs, leading to project delays or a requirement to seek additional funds.	The Project is monitoring the cost of resources within affordability constraints. Strategies to treat funding shortfalls might include a reduction in the joint support Defence provide to the Joint Project Team above the OSA requirement, a reduction in the oversight of supplier deliverables to free up resource availability and an increase to APS and ADF placements.
<b>Emergent Risks (risk not previously identified but has emerged during 2019-20)</b>	
<b>Description</b>	<b>Remedial Action</b>
N/A	

## 5.2 Major Project Issues

Description	Remedial Action
AIR 5431 Phase 3 is unable to introduce CMATS into service without impacting current operations due to insufficient dependent AMACCS system assets.	While the Air Ground Air (AGA) transition solution <b>is now in contract</b> there is <b>still</b> uncertainty on the availability of new generation <b>radio</b> assets and viable fall-back options for ongoing delays in execution of the AGA transition contract with BAE.
<b>Delays to the delivery of the Fixed Base Radar system under Project AIR5431 Phase 2 has impacted development and transition into service of CMATS.</b>	<b>Alternate sources of radar data required to enable CMATS design, test and evaluation and verification and validation activities are being investigated. Options for live data sources to support operations are also being considered. Close coordination with AIR5431PH2 is occurring to determine the best strategic way to manage this risk.</b>
The joint program has yet finalise remediation of the online SharePoint portal utilised for configuration/data management and processes to effectively implement the Program's Configuration and Data Management activities.	Additional configuration and data management resources have been brought on to support design and process reform. <b>The sharepoint site has now been uploaded to the cloud but the benefits of new configuration and workflow tools available has yet to be realised.</b>
<b>Note</b>	
Major risks and issues in Section 5 are excluded from the scope of the Auditor-General's Independent Assurance Report.	

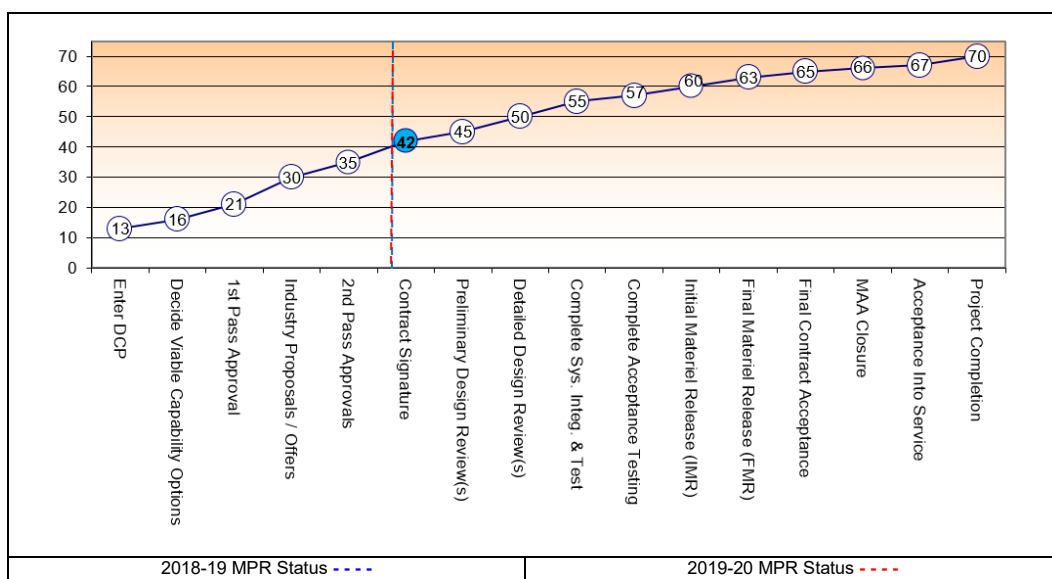
## Section 6 – Project Maturity

### 6.1 Project Maturity Score and Benchmark

Maturity Score		Attributes							Total
		Schedule	Cost	Requirement	Technical Understanding	Technical Difficulty	Commercial	Operations and Support	
Project Stage	Benchmark	6	6	6	6	6	6	6	42
Contract Signature	Project Status	5	6	6	6	6	6	6	41
	Explanation	<p><b>The project stage is currently contract signature as Defence is still in negotiations with Aircservices on the requirements and support for the 4 Towers being delivered under separate contract.</b></p> <ul style="list-style-type: none"> <li>Schedule – Schedule confidence <b>of the CMATS components of the project</b> should increase after <b>all</b> Integrated Baseline Review <b>actions are complete. There is no current schedule for the 4 Towers being delivered by Aircservices.</b></li> </ul>							

## Project Data Summary Sheets

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## Section 7 – Lessons Learned

### 7.1 Key Lessons Learned

Description	Categories of Systemic Lessons
Set up the Governance structure earlier in the process – the decision regarding lead agency and harmonisation was determined at a strategic level without detailed analysis of the nuances between the two organisations. Although there is now a robust governance structure in place, there are still areas of disunity that are now difficult to change.	Governance
Better communication with Stakeholders - although the establishment of joint project was at the direction of a harmonisation initiative of the Government, the joint project has been slow to re-engage with stakeholders, up to and including Government, to seek refined direction based on prevailing and emerging risks and issues.	Contract management/Governance
A lack of resources at the initiation stage of the project, and during the preparation of the Request For Tender, can create a significant technical and stakeholder management debt that will affect the ability to agree on requirements, forecast a realistic schedule and determine future workforce requirements.	Resourcing
Whilst waiting to initiate dependant projects (i.e. facilities) 'just in time' increases the risk of delays to the delivery of prime mission system, starting dependant projects too early can result in them being delivered so far in advance of the prime mission system, that the outputs of the dependant project no longer satisfy the 'evolved' mission system intent.	Schedule Management
As a result of long-running schedule maturity issues, it is recommended that long-term planning beyond the nearest major milestone is essential to reducing program risk and sub-optimal short-term planning, and furthermore schedule logic applied to the Contract Master Schedule (CMS) must reflect the logic identified in the contract to ensure activities are sequenced according to precedence and priority.	Schedule Management
Aggressive timeframes to meet schedule milestones often results in compressed timeframes to engage stakeholders (operational, engineering/technical and strategic), leading to compromises to proper requirements management. Consequently, a schedule needs to be developed to include opportunities for specified periods of stakeholder consultation and alignment during the capability delivery life-cycle.	Schedule Management/Governance

## Section 8 – Project Line Management

### 8.1 Project Line Management as at 30 Jun 2020

Position	Name
Division Head	Mr <b>Shane Fairweather</b>
Branch Head	AIRCDRE Phil Tammen
Project Director	GPCAPT Darren Spee
Project Manager	WGCDR Terry Atkinson



Project Data Summary Sheet<sup>166</sup>

Project Number	LAND 200 Tranche 2
Project Name	BATTLEFIELD COMMAND SYSTEM
First Year Reported in the MPR	2019-20
Capability Type	Upgrade
Acquisition Type	Developmental
Capability Manager	Chief of Army
Government 1st Pass Approval	Aug 13
Government 2nd Pass Approval (or key Government pre-Second Pass Approval)	Sep 17
Budget at 2 <sup>nd</sup> Pass Approval (or key Government pre-Second Pass Approval)	\$930.0m
Total Approved Budget (Current)	\$969.7m
2019-20 Budget	\$247.0m
Project Stage	Preliminary Design Review
Complexity	ACAT I



## Section 1 – Project Summary

## 1.1 Project Description

LAND 200 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.

LAND 200 Tranche 2 (LAND 200-2) is: expanding and evolving the LAND 200 Tranche 1 (LAND 200-1) 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 LAND 200-2 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 19/20 the project spent \$250.5m against a planned budget of \$247.0m, resulting in an overspend of \$3.5m. This overspend against phasing is due to a re-phasing of the TCN Milestones under the Prime Contract with minor spend being bought forward from Financial year 20/21.

Project Financial Assurance Statement

As at 30 June 2020, project LAND 200-2 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**

LAND 200-2 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 is scheduled to conduct its Detailed Design Review in Jul - Aug 20.

LAND 200-2 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.

166 Notice to reader

Forecast dates and Sections: 1.2 (Material Capability Delivery Performance), 1.3 (Major Risks and Issues), 4.1 (Measures of Material 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.

<p>A CCP has been finalised with L3Harris that will recognise a 10 month delay to the L3Harris contract, with costs shared between the Commonwealth and L3Harris.</p> <p>Several CCPs are also currently being evaluated by the Commonwealth for updates to the Elbit integration and installation schedule for the M1A1 and M88 and a CCP for the integration of the Mission Partner Environment (MPE) in lieu of the Defence Secret Network. These CCPs will provide clarity on schedule changes to the Elbit contract. The schedule impact to the Elbit contract is still being evaluated.</p> <p>As a result of the schedule delays, IOC and FOC will be delayed between 12 months and 24 months. The Commonwealth is continuing to work on the finalisation of the Integrated Master Schedule to confirm the delay.</p> <p><b>Material Capability Delivery Performance</b></p> <p>LAND 200-2 will deliver: 150 Medium Heavy Cargo trucks fitted with the Tranche 1 BCS node and Foundation Training Classroom requirements. LAND 200-2 will deliver a further 390 vehicle BCS node integrations and installations with the M1A1, M88, PMV-M and PMV-L platforms and will deliver the BMS-HQ software hosted on the MPE, training and BMS simulator systems and L3Harris AN/PRC-158 multi-channel multi-band radios.</p> <p>The remaining node design descriptions are being updated to accommodate architecture changes requested by the Army Program Sponsor.</p> <p>Limited availability of required Government Furnished Data in support of the Weapons Integrated BMS (WINBMS) for the M1A1 may limit the WINBMS capability to be provided on that platform.</p> <p><b>Note</b></p> <p>Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.</p>
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### 1.3 Project Context

<p><b>Background</b></p> <p>The LAND 200 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. LAND 200 systems provide warfighters with common battlefield awareness and information superiority through a highly capable, mobile and secure networked environment.</p> <p>In August 2013, LAND 200-2 was presented to Government as a federation of two projects; JP 2072 Phase 3 and LAND 75 Phase 4. At this time, LAND 200-2 received Government Combined Pass Approval for the continuation of LAND 75 Phase 3.4, LAND 125 Phase 3A and JP 2072 Phase 1 (approved as LAND 200-1) and First Pass Project Approval for new work to be delivered under LAND 200-2.</p> <p>L200-1 and LAND 75 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 JP 2072 Phases 1 and 2. LAND 200-1 and LAND 75 Phase 4 Work Package A:</p> <p>Installed the BGC3 into dismounted commanders, Bushmaster PMV, Unimog, G-Wagon and Armoured Personnel Carrier M113AS4.</p> <p>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.</p> <p>LAND 75 Phase 3.4 and LAND 125 Phase 3A achieved Initial Operating Capability (IOC) in April 2012 and Final Operating Capability (FOC) in March 2015.</p> <p>FMR for LAND 75 Phase 4 Work Package A (the final deliverable for the project) was achieved in December 2017.</p> <p>LAND 200-2 put forward a procurement decision for the further development of the BMS, which commenced under LAND 75. No MOTS BMS product was available that provided all of the Army requirements.</p> <p>In September 2017, Second Pass Government Approval was provided for LAND 200-2. This Government Approval draws together both projects to formulate under the name LAND 200 Tranche 2 (Phase 2) Battlefield Command Systems. Under this approval, LAND 200-2 will deliver:</p> <p>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 LAND 200 platforms programs.</p> <p>Institutionalised BMS-C2 and TCN training and simulation across land forces.</p> <p>Expanded functionality of the BMS-C2 to incorporate additional decision and planning tools for use at the Joint Task Force and Brigade Headquarters level.</p> <p>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.</p> <p><b>Uniqueness</b></p> <p>LAND 200 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.</p> <p><b>Major Risks and Issues</b></p> <p>The project is currently managing the following major risks:</p> <ul style="list-style-type: none"> <li>• Availability of BMS software for the conduct of Army testing.</li> <li>• Incorporation of PMV-L modifications with the LAND 121-4 deliveries.</li> <li>• Establishment of the systems integration function.</li> <li>• Contract impacts resulting from delayed Land Data Model development.</li> <li>• Funding for the combined implementation of LAND 200-2 modifications with PMICA.</li> </ul> <p>The project is also managing the following project issues:</p> <ul style="list-style-type: none"> <li>• PMV-M installation delay.</li> </ul>
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<ul style="list-style-type: none"> <li>Reduced functionality of the M1A1 implementation of the WINBMS.</li> <li>Delayed implementation of the M1A1 and M88 modifications.</li> <li>Node design architecture changes.</li> </ul>
<b>Other Current Related Projects/Phases</b> LAND 200-2 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).
<b>Note</b> 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

JP 2072 Budget (Authorized) and Expenditure History			
Date	Description	\$m	Notes
Project Budget			
Sep 17	Original Approved (Second Pass Approval)	930.0	1
	<b>Total at Second Pass Approval</b> (or key Government pre-Second Pass Approval)	930.0	
Jun 20	Exchange Variation	39.7	
	<b>Total Budget</b>	969.7	
Project Expenditure			
Prior to Jul 19	Contract Expenditure – L3Harris Communications	171.2	2
	Contract Expenditure – Elbit Systems	143.8	
	Other Contract Payments / Internal Expenses	7.0	
		322.0	
FY 19/20	Contract Expenditure – Elbit Systems	132.5	3
	Contract Expenditure – L3Harris Communications	99.5	
	Other Contract Payments / Internal Expenses	18.5	
		250.5	
Jun 20	<b>Total Expenditure</b>	572.5	
Jun 20	<b>Remaining Budget</b>	397.2	
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 JP 2072 Phase 3 and LAND 75 Phase 4 projects).		
2	Other expenses for prior years includes \$3.8 for Technical Services, \$1.2m for travel, \$0.9 for SME, \$0.7 for software licenses and \$0.4m for miscellaneous.		
3	Other expenses for FY 19/20 include \$11.8m for Technical Services, \$2.4m for SME, \$2.3m for OP&E, \$0.8m for travel, \$0.8m for software and \$0.4m for miscellaneous.		

### 2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
263.0	247.9	247.0	PBS to PAES: Variation is due to the delays in Vehicle Integration and Tactical Communication Network (TCN) replanning. PAES to Final Plan: A stronger Australian dollar has resulted in a minor variance to the \$AUD equivalent planned Budget for 19/20.
Variance \$m	(15.1)	(0.9)	Total Variance (\$m): (16.0)
Variance %	(5.7)	(0.4)	Total Variance (%): (6.1)

### 2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		3.5	Australian Industry	Is due to a re-phasing of the TCN Milestones under the Prime Contract with minor spend being bought forward from Financial year 20/21.
			Foreign Industry	
			Early Processes	
			Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
247.0	250.5	3.5	<b>Total Variance</b>	
		1.4	<b>% Variance</b>	



## 2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 20 \$m			
Elbit Systems Limited	Sep 17	365.2	418.5	Fixed	ASDEFCON	1
L3Harris Communications Australia	Sep 17	330.0	370.7	Fixed	ASDEFCON	1,2
<b>Notes</b>						
1	Contract value as at 30 June 2020 is based on actual expenditure to 30 June 2020 and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable).					
2	Contract value at 30 June 2020 includes the cost of CCPs to address changes in system requirements.					
Contractor	Contracted Quantities as at		Scope			Notes
	Signature	30 Jun 20				
Elbit Systems Limited	N/A	N/A	Development of BMS software and integration and installation systems into the M1A1, M88 and PMV-M.			1
L3Harris Communications Australia	N/A	N/A	Development TCN software and provision of AN/PRC-158 radios.			2
<b>Major equipment accepted and quantities to 30 Jun 20</b>						
150 x MHC vehicles have been modified with BMS and accepted.						
<b>Notes</b>						
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 x 7, MNV Node PMV-L x 126, GSV Node MHC x 150, C2V Node PMV-M x 57, C2V Node PMV-L x 33, 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 x 7, MNV Node PMV-L x 126, GSV Node MHC x 150, C2V Node PMV-M x 57, C2V Node PMV-L x 33.					

## 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 Review M1A1/M88	Jan 20	N/A	Jun 21	17	5
	Preliminary Design Review PMV-L	TBC	N/A	TBC	N/A	4
	Preliminary Design Review PMV-M	Sep 19	N/A	Jul 21	22	6
Detailed Design	TCN Detailed Design Review	Sep 19	Aug 20	Aug 20	11	3
	BMS R1 Detailed Design Review	Nov 19	N/A	Mar 20	4	9
	BMS R2 Detailed Design Review	Nov 20	N/A	Apr 22	17	7
	Detailed Design Review M1A1/M88	Jul 20	N/A	Feb 22	19	5
	Detailed Design Review PMV-L	TBC	N/A	TBC	N/A	4
	Detailed Design Review PMV-M	Feb 21	N/A	Mar 22	13	6
<b>Notes</b>						
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	TCN Detailed Design Review is subject to delay that has stemmed from the delay to Preliminary Design Review completion and delays in the provision of GFM. The TCN Detailed Design Review contract date was updated with the approval of TCN CCP021.					
4	PMV-L is not yet in contract due to critical dependence on LAND 121-4 managing priorities, which require full rate production to commence.					
5	Progression of the design activity for the M1A1/M88 has been on hold pending availability of vehicle data from the USA and the vehicle OEM. A CCP to address the issues and allow for the recommencement of work is currently being reviewed by Commonwealth staff.					
6	PMV-M work is currently on hold pending a review of work associated with the Protected Mobility Integration Assurance Program (PMICA), which is also modifying the PMV-M vehicle. The LAND 200-2 work is likely to be integrated with the PMICA work.					
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.					
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.					

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## 3.2 Contractor Test and Evaluation Progress

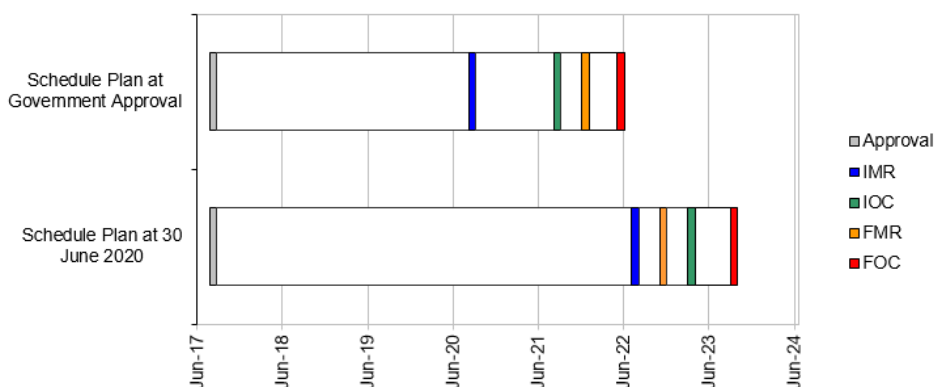
Test and Evaluation	Major System / Platform Variant	Original Planned	Current Contracted	Achieved / Forecast	Variance (Months)	Notes
System Integration	TCN Acceptance Test &Evaluation	May 21	N/A	Apr 22	11	1
	BMS R1 Acceptance Test &Evaluation	Jun 19	N/A	Mar20	9	7
	BMS R2 Acceptance Test &Evaluation	Dec 20	N/A	Apr 22	16	6
	M1A1/M88 Platform Integration Acceptance Test & Evaluation )	Apr 21	N/A	Jan 23	21	5
	PMV-L Acceptance Test &Evaluation	TBC	N/A	TBC	N/A	3
Acceptance	PMV-M Acceptance Test &Evaluation	Feb 20	N/A	Nov 21	21	4
	TCN System Acceptance	Jun 20	Aug 21	Aug 21	14	2
	BMS Acceptance R1	Jan 20	N/A	Mar 20	2	8
	BMS Acceptance R2	Mar 21	N/A	Aug 22	17	6
	M1A1 Tank	Feb 22	N/A	Jul 23	17	5
	M88	May 22	N/A	May 23	12	5
	PMV-L	TBC	N/A	TBC	N/A	3
	PMV-M	Apr 21	N/A	Nov 22	19	4
<b>Notes</b>						
1	TCN System Integration delay is directly driven from delays to progress Detailed Design Review.					
2	TCN System Acceptance has been affected by delays in the availability of some GFM. The TCN System Acceptance milestone was updated with CCP021.					
3	PMV-L is not yet in contract and remains unqualified due to critical dependence on LAND 121-4.					
4	PMV-M work was delayed as a result of delayed provision of Government Furnished Material. The progression is currently pending a review of work associated with the Protected Mobility Integration Assurance Program (PMICA), which is also modifying the PMV-M vehicle. The LAND 200-2 work is likely to be integrated with the PMICA work.					
5	Progression of work for the M1A1/M88 has been on hold pending availability of vehicle data from the USA and the vehicle OEM. A CCP to address the issues and allow for the recommencement of work is currently being reviewed by Commonwealth staff.					
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.					
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).					

## 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
Initial Operational Capability (IOC)	Sep 21	Apr 23	19	1
Final Materiel Release (FMR)	Jan 22	Jan 23	12	1
Final Operational Capability (FOC)	Jun 22	Oct 23	16	1

**Notes**

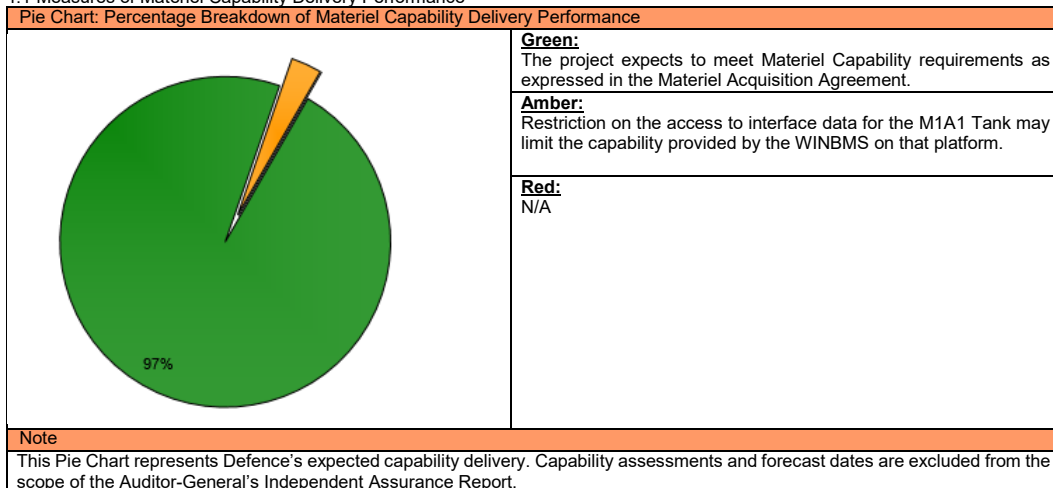
- 1 IOC and FOC delays are being driven by time taken to establish new contracts for platform integration; availability of GFM; materiel and data from interdependent projects that are in separate, but parallel delays and contractor performance.

**Schedule Status at 30 June 2020****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



### 4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	<p>IMR comprises the delivery of :</p> <ul style="list-style-type: none"> <li>• Foundation Training Classroom requirements</li> <li>• Training Integration Syndicate Rooms</li> <li>• BMS HQ hosted on MPE</li> <li>• BGC3 Training Assemblage</li> <li>• BMS Simulator</li> <li>• MNV Nodes fitted to 16 x M1A1 Tanks</li> <li>• MNV Nodes fitted to 2 x M88 Hercules</li> <li>• C2V nodes fitted to 11 x PMV-L Hawkei</li> <li>• MNV Nodes fitted to 42 PMV-L Hawkei</li> <li>• GSV Nodes fitted to 36 PMV-L Hawkei</li> <li>• GW Nodes fitted to 19 PMV-M Bushmaster</li> <li>• GSV Node fitted to 50 MHC Trucks.</li> </ul> <p>IMR is forecast to be achieved in Aug 22.</p>	Not yet achieved
Initial Operational Capability (IOC)	<ul style="list-style-type: none"> <li>• IOC incorporates the components of FIC sufficient to constitute an operational capability.</li> <li>• Commander and staff in a Brigade Headquarters are able to use the BMS to support the planning and conduct of operations.</li> <li>• The data network includes sufficient material to support a BG sized force to plan and conduct operations using the BMS and weapons integrated BMS.</li> <li>• The TCN is established using Tranche 1 and Tranche 2 solutions to support a BG deployment.</li> <li>• The BMS is able to interface with JCATS and VBS systems to establish an initial simulation system.</li> </ul> <p>Capability Manager sign-off of IOC.</p> <p>IOC is forecast to be achieved in Apr 23</p>	Not yet achieved
Final Materiel Release (FMR)	<p>FMR comprises the delivery of:</p> <ul style="list-style-type: none"> <li>• Foundation Training Classroom requirements</li> <li>• Training Integration Syndicate Rooms</li> <li>• BMS HQ hosted on MPE</li> <li>• BGC3 Training Assemblage</li> <li>• BMS Simulator MNV Nodes fitted to 59 M1A1 Tanks</li> <li>• MNV Nodes fitted to 7 M88 Hercules</li> <li>• C2V nodes fitted to 33 PMV-L Hawkei</li> <li>• MNV Nodes fitted to 126 PMV-L Hawkei</li> <li>• GSV Nodes fitted to 108 PMV-L Hawkei</li> <li>• GW Nodes fitted to 57 PMV-M Bushmaster</li> <li>• GSV Node fitted to 150 MHC Trucks.</li> </ul> <p>FMR is forecast to be achieved in Jan 23.</p>	Not yet achieved

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Final Operational Capability (FOC)	<ul style="list-style-type: none"> <li>FOC incorporates the components of FIC sufficient to constitute full operational capability</li> <li>Each of Army's three Combat Brigades has one digitised BG and a small number of combat support vehicles.</li> <li>Defence will be able to deploy a digitised BG and Brigade HQ.</li> <li>Defence could also configure and group all three BG under the digitised BHQ, all at the same readiness notice.</li> <li>Capability Manager sign-off of FOC.</li> </ul> <p>FOC is forecast to be achieved in Oct 23.</p>	Not yet achieved
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## Section 5 – Major Risks and Issues

### 5.1 Major Project Risks

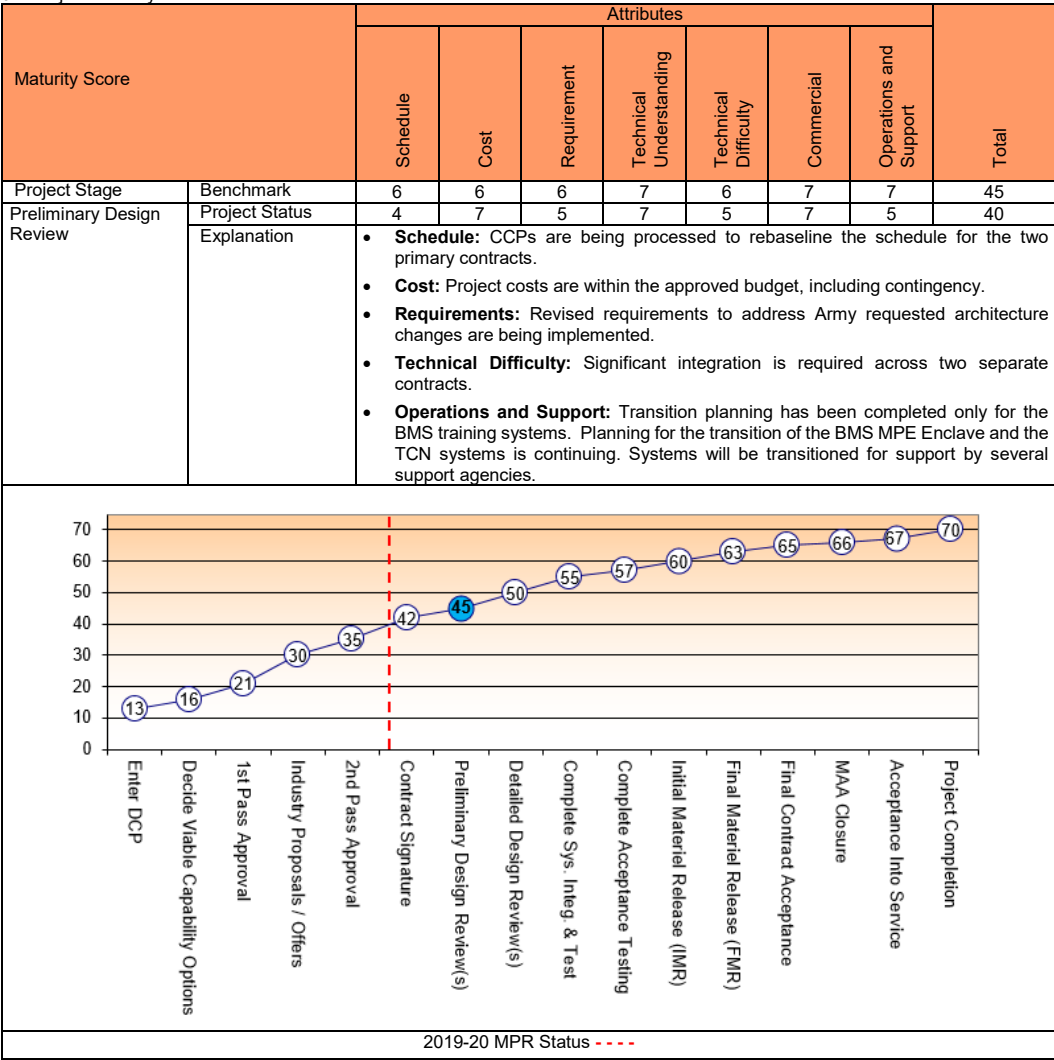
Identified Risks (risk identified by standard project risk management processes)	
Description	Remedial Action
There is a risk that the BMS software version V9.1 may not be available in time for Army to conduct its planned confidence testing at the LNIC in September 2020 causing a delay to the release of the software and to the achievement of IMR and IOC.	A Contract Change Proposal is being developed to integrate the revised scope into the Elbit contract. A further Contract Change Proposal is being developed with the supplier of the BMS-C2 Enclave to provide support to additional CoA confidence testing activities. CASG is also working with Army to confirm the impact of delayed testing until October 2020.
There is a risk that the delivery of the PMV-L C2V node modifications will be delayed due to the need to integrate scope and schedule activities with those of LAND 121 Phase 4.	LAND 200-2 requirements will be advised to LAND 121 Phase 4 to allow for a quotation to be developed by Thales for the joint implementation of the requirements for the combined projects.
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.	A Project Manager and a Senior Engineering Manager have been assigned to the PSI team, with a further three engineers being sourced through the Critical Systems Branch Major Service Provider. The Governance framework is to be completed by end of June 2020.
Emergent Risks (risk not previously identified but has emerged during 2019–20)	
Description	Remedial Action
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 LAND 200-2 Project Office and the two major contractors.  Future updates to the Australian Land Data Model will involve negotiation between the LAND 200-2 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 LAND 200-2 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.

### 5.2 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 proposed in the G-Wagon Command Post Mobile vehicles. At a proposed cost of approximately \$3m, this could 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. This proposal is currently under evaluation by the Commonwealth TCN team and L3Harris.
The Weapons Integrated Battle Management System (WINBMS) software is not able to be fully implemented in the M1A1 tank due to the non-availability Government Furnished interface data.	A proposal is being presented to Army to reduce the WINBMS scope for the M1A1 tank and transfer the integration of the full WINBMS to another Army platform.
The progression of the M1A1 Tank and M88 platform integration and installation under the Elbit contract has been delayed.	CCP002 addresses changes in the scope of work and removes the unavailable GFM associated with the WINBMS. The updated schedule impact of the delay is being evaluated as part of the CCP evaluation.
The Army Program Sponsor has requested architecture changes to the implementation of the node designs, requiring contract changes for some platform integration activities.	A CCP to the Elbit contract is in progress to address the changes to the M1A1 and M88. An updated Node Design Description is being provided to LAND 121 Phase 3 as the basis of the Request for Quotation to Thales for the PMV-L. No hardware changes are required for the PMV-M.  A Survey and Quote task is being prepared with L3Harris for a detailed review of the architecture changes and any impact on the requirements for the L3Harris software.  Cost and schedule impacts are being developed.
Note	
Major risks and issues in Section 5 are excluded from the scope of the Auditor-General's Independent Assurance Report.	

## Section 6 – Project Maturity

### 6.1 Project Maturity Score and Benchmark



## Section 7 – Lessons Learned

### 7.1 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

## Section 8 – Project Line Management

### 8.1 Project Line Management as at 30 June 2020

Position	Name
Division Head	Mr Ivan Zlabur
Branch Head	Ms Rosemary Gauci
Project Director	Mr Peter Edwards
Project Managers	LTCOL Geoff Donkin (TCN) and LTCOL Constantinos Eracleous (BMS)

## Project Data Summary Sheets

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## Project Data Summary Sheet<sup>167</sup>

Project Number	LAND 2072 Phase 2B <sup>168</sup>
Project Name	BATTLESPACE COMMUNICATIONS SYSTEMS
First Year Reported in the MPR	2017-18
Capability Type	Replacement
Acquisition Type	Developmental
Capability Manager	Chief of Army
Government 1st Pass Approval	May 2011
Government 2nd Pass Approval	Apr 2015
Budget at 2nd Pass Approval	\$915.7m
Total Approved Budget (Current)	<b>\$947.1</b>
2019-20 Budget	<b>\$188.9m</b>
Project Stage	Initial Materiel Release
Complexity	ACAT I



### Section 1 – Project Summary

#### 1.1 Project Description

LAND (formerly known as JP) 2072 Phase 2B will provide the Battlespace Communications System Land (BCS-L) deployed wide-band backbone by replacing and enhancing the existing Battlefield Telecommunications Network (BTN) capability within Army and Air Force. LAND 2072 Phase 2B shall deliver the Integrated Battlefield Telecommunications Network (I-BTN) in three capability Releases. Release 1 shall provide transit case nodes, and Release 2 and Release 3 shall provide vehicle mounted nodes and additional capabilities. The end state will be an I-BTN that provides greater capacity, more effective switching, wireless and wired network infrastructure supporting secure voice, data and video services.

LAND 2072 Phase 2B is required to provide end to end connectivity from the **Mission Partner Environment**, through and within the I-BTN, and to the Defence Terrestrial Communications Network (provided by JP2047 Phase 3).

Under separate funding arrangements Joint Command, Control, Communications, Computers & Intelligence Systems Program Office (JC4ISPO) is responsible for design, verification, procurement and delivery of the DLAN. LAND 2072 Phase 2B has provided supplementary funding to JC4ISPO for the procurement of 259 DLAN systems for integration with I-BTN.

LAND 2072 Phase 2B will also acquire a Terrestrial Range Extension System (TRES) to extend the range of tactical radios procured under earlier phases of Joint Project 2072.

#### 1.2 Current Status

##### Cost Performance

###### In-year

The Project has spent **\$187.4m this financial year** against a budget of **\$188.9m** with the **underspend of \$1.5m** due to **minor variations in price variation and travel costs**.

###### Project Financial Assurance Statement

As at **30 June 2020**, LAND 2072 Phase 2B has reviewed the approved scope and budget for those elements required to be delivered by the Project. Having reviewed the current financial and contractual obligations of the Project, current known risks and estimated future expenditure, Defence considers, as at the reporting date, that there is sufficient budget including contingency remaining for the Project to complete against the agreed scope.

###### Contingency Statement

The Project applied contingency in **in FY 18/19** for the treatment of the programmatic risk related to eDLAN integration that caused project delays. **No application of contingency has occurred in FY 19/20**.

#### 167 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.

<sup>168</sup> LAND 2072 Phase 2B was originally approved as a JOINT PROJECT (JP) within the broader JP 2072 program, but since second pass it has been managed and reported as a LAND project. The remainder of this report will refer to LAND 2072 Phase 2B.

**Schedule Performance**

Boeing Defence Australia (Boeing) is required to integrate a number of capabilities being delivered by other projects into its technical solution. Two of these projects experienced delays in the delivery of their capabilities and this resulted in delaying Boeing. Initial Materiel Release 1A was delayed by 6 months due to delays in interfacing projects. The implementation of an alternate solution resolved this issue and IMR 1A was achieved in February 18.

Due to continual delays with the eDLAN program, LAND 2072 Phase 2B has removed eDLAN interfacing requirements and replaced them with an alternate LAN as part of CCP015. Whilst this alternate LAN provides a more limited capability, the change has been endorsed by the Capability Manager. This has reduced the risk of further delays in the delivery of GFM to Boeing, however it has resulted in a slip of FMR by 16 months, to March 2022. CCP015 also introduced a new capability Release 3 that allows for those capabilities that were not impacted by the eDLAN delay to be delivered in capability Release 2, and those that were impacted by the delay to be delivered in capability Release 3. The eDLAN hardware procured with LAND 2072 Phase 2B funds will be repurposed (with different software) as an alternate LAN which may be integrated with the I-BTN at a later date.

**Detailed Design Review and Support System Design Review for R3 were achieved in November 2019 and December 2019 respectively, R2 Equipment Training commenced in February 2020 and will continue to December 2020. Equipment deliveries for R2 commenced in April 2020, with R3 equipment testing occurring throughout the year.**

**BDA has advised LAND 2072 Ph2B that they have been delayed 4 months due to the Tactical Interface Site connection issues with interfacing projects. Negotiations are underway at the time of MPR reporting, 30 June 2020.**

**Materiel Capability Delivery Performance**

IMR, as defined in the contract, was achieved by Boeing in December 2017, allowing the Capability Manager to declare IMR, as defined in the MAA **V2.2**, February 2018. Initial Operating Capability was declared as being achieved in March 2018. Boeing is on schedule to deliver future releases of the contracted capability in accordance with CCP15, which includes the slip of Final Materiel Release (FMR) by 16 months, to March 2022

JC4ISPO has procured 259 eDLAN hardware systems, but note that they cannot be integrated in their current form. Army has sought additional funding from Government to remediate this integration problem using software from a different DLAN system. LAND 2072 Phase 2B has agreed with the Capability Manager to remove the requirement to integrate the eDLAN hardware with the I-BTN. Army **has endorsed the completion of the DLAN Hardware** Release milestone, as no further work will be undertaken due to the I-BTN system no longer being required to integrate with the eDLAN system.

**Note**

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

**1.3 Project Context****Background**

JP 2072 is a multi-phased program to define the Battlespace Communication Systems (Land) (BCS (L)) Communications Architecture, govern the design, incremental implementation and verification of system elements across a number of projects as well as acquire systems and equipment.

LAND 2072 Phase 2B will enhance and modernise land force communications by replacing existing ADF deployable communication information systems. It will replace and enhance the existing Battlespace Telecommunications Network (BTN) with an Integrated Battlespace Telecommunications Network (I-BTN). The I-BTN will provide secure communications within deployed ADF Headquarters, in order to effectively network commanders and their subordinate staff, allowing them to exchange voice, data and video. This capability will be further enhanced through the provision of a Headquarters On The Move (HQOTM) capability. LAND 2072 Phase 2B will also deliver a TRES, with the project currently preparing the Request for Tender documentation.

Second Pass approval also included a new purpose built System Support Facility (SSF). This facility replaces the previous support facility that has been operating out of demountable buildings. The design and construction of the SSF was delivered by E&IG, with the new facility commissioned in September 2017.

The I-BTN capability being delivered is classified as developmental, as no Off-The-Shelf systems were available to meet the requirements for the I-BTN. The I-BTN is being developed to integrate a range of both developmental components as well as a range of Off-The-Shelf components, to meet the requirements.

The I-BTN capability is being delivered in three releases:

Release 1 is a Transit Case based capability with an initial level of functionality of the Network Planning and Management System (NPMS). Commencement of delivery of Release 1 capability is aligned to achievement of IMR 1A.

Release 2 is additional bearers and includes the Medium Mounted Satellite Communications capability, Tropposcatter, External Network Access Point and an additional Currawong Network Edge Strategic to Tactical (CNEST).

Release 3 will include Vehicle Mounted nodes and will also deliver the Headquarters On The Move (HQOTM) node as well as secure voice and video services. Completion of delivery of Release 3 capability is aligned to achievement of Final Materiel Release (FMR).

A Performance Based Support Contract was signed at the same time as the Acquisition contract in September 2015 with the Contractor. The Support Contract initially had a three year term with a rolling wave of one year extensions to a maximum of 12 years. The operative date of the Support Contract was 29 January 2018. As a consequence of CCP015, the introduction into service of equipment has been delayed resulting in an extension in Support Contract term of 3 to 5 years at a reduced yearly expenditure. The total saving over the 5 year period is approximately \$6 million. The Support Contract was transitioned to Battlespace Communications Operations Group (BCOG) in June 2018.

**Uniqueness**

The project is highly complex and technically challenging as a result of having to design an I-BTN which integrates capabilities being delivered by other projects within CASG and Chief Information Officer Group (CIOG), as well as to deliver an I-BTN technical solution which is required to interoperate with a multitude of external interfaces.

Boeing is required to design and verify that the I-BTN provides end-to-end connectivity of specified Battlespace Communications System (Land) Services from the tactical environment into the strategic network. Boeing is executing the project in three capability releases across seven years.

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Boeing is developing both hardware and the network planning and management system software, as well as buying and integrating Off-The-Shelf equipment. Boeing is also required to integrate its system with existing satellite bearer systems and IT systems that have been delivered by other projects within CASG and CIOG.

#### Major Risks and Issues

The high risk **relates to schedule availability for I-BTN introduction into service training. Major issues relate to the delay of the integration with the Tactical Interface Sites (TIS) and the R2 ILS Equipment delivery schedule due to COVID-19 travel restrictions.**

#### Other Current Related Projects/Phases

JP 2072 Phase 1, BCS(L): The initial phase of the JP 2072 program, this project has delivered communications bearers to the BMS, and enhancing communications for Australian Defence Force Land elements through the development of an holistic battlespace communications architecture for the Land environment.

JP 2072 Phase 2A, BCS(L): Phase 2A is continuing the rollout of products selected during Phase 1 to primarily provide voice services to dismounted users. Phase 2A will also establish a mature support system for ongoing sustainment of the Phases 1 and 2A materiel systems and contribute to ongoing Prime System Integration activities to evolve the BCS(L) design. Investigation and/or market survey activities will be conducted to specify and identify products for potential procurement in future phases.

LAND 2072 Phase 3, BCS(L): This project will introduce into service a digital communication backbone for land based elements of the Australian Defence Force (ADF) and their enabling elements. The capability is aligned with LAND 75 Phase 4 as part of a second tranche of LAND 200 with the capability being a vital function of the BMS. This phase will enhance the digital communications backbone delivered under previous phases, expand the provisioning to additional land forces and ADF elements, and provide a new capability to support the distribution and data management of the land Battlespace.

The I-BTN is required to interface with multiple ADF platforms, including combat and non-combat vehicles, deployable satellite communication systems, and strategic communication systems. Any delays or issues within these platforms and systems can affect the testing, design, delivery or useability of the I-BTN.

#### Note

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

## Section 2 – Financial Performance

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

Date	Description	\$m	Notes
	<b>Project Budget</b>		
Oct 11	Original Approved	3.9	1
May 15	Government Second Pass Approval	911.8	4
	<b>Total at Second Pass Approval</b>	915.7	
Jun 20	Exchange Variation	31.4	
Jun 20	<b>Total Budget</b>	947.1	
	<b>Project Expenditure</b>		
Prior to Jul 19	Contract Expenditure – Boeing Defence Australia	(353.5)	2
	Contract Expenditure – Kellogg Brown and Root	(9.2)	
	Other Contract Payments/Internal Expenses	(127.4)	
		(490.1)	
FY to Jun 20	Contract Expenditure – Boeing Defence Australia	(173.6)	3
	Contract Expenditure – Kellogg Brown and Root	(4.2)	
	Other Contract Payments/Internal Expenses	(9.6)	
		(187.4)	
Jun 20	<b>Total Expenditure</b>	(677.5)	
Jun 20	<b>Remaining Budget</b>	(269.6)	
<b>Notes</b>			
1	The project's original budget amount prior to Second Pass Approval.		
2	Other expenditure includes: enhanced Deployable Local Area Networks work package 754 (Order managed by Joint Command, Control, Communications, Computers and Intelligence Systems (JC4ISPO)) (\$85.6m), software (\$21.0m), ICT hardware & other equipment (\$11.9m), technical and engineering services (\$4.3m), Travel (\$1.8m), legal fees (\$1.0m) and other (\$0.8m) and, Travel (\$0.5m), Headquarters on the Move (\$0.5m)		
3	Other expenditure for FY2020 relates to HQOTM (\$8.2m), ICT hardware & Other equipment (\$0.5m), Travel (\$0.5m) and Other (\$0.4m).		
4	The total budget amount includes supplementary funding to JC4ISPO for the procurement of additional eDLAN systems (\$126m).		



2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
207.5	189.8	188.9	<b>PBS – PAES: Variation relates to earlier payment for early achievement of delivery milestones achieved in 2018-19 associated with IBTN, and further delays for integration aspects of interfacing projects.</b> <b>PAES – Final Plan: Variation relates to small foreign exchange movements.</b>
Variance \$m	(17.7)	(0.9)	Total Variance (\$m): (18.6)
Variance %	(8.5)	(0.5)	Total Variance (%): (9.0)

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(1.5)	Australian Industry	Underspend is due to minor variations in escalation and travel costs.
			Foreign Industry	
			Early Processes	
			Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
188.9	187.4	(1.5)	<b>Total Variance</b>	
		(0.8)	<b>% Variance</b>	

2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes		
		Signature \$m	30 Jun 20 \$m					
Kellogg Brown and Root (Integrated Support Contract)	Jul 15	9.6	19.7	Fixed	ASDEFCON (Services)	1		
Boeing Defence Australia (I-BTN)	Sep 15	487.2	680.1	Fixed	ASDEFCON (Strategic Materiel)	2		
Notes								
1	Increase in contract price due to additional security certification and accreditation services and annual updates to labour rates. Further the increase in contract price is due to the extension of ISC services as part of CCP08 which increased the level of resources required to assist in MR2 and MR3.							
2	Increase in Contract Price due to changes required for the Headquarters on the Move vehicle, Medium Satellite Terminal trailer, Support and Test Equipment and Spares, and eDLAN delays.							
Contractor	Quantities as at		Scope			Notes		
	Signature	30 Jun 20						
Kellogg Brown and Root (Integrated Support Contract)	N/A	N/A	Range of Integrated Support Contractor (ISC) Services in support of the LAND 2072 Phase 2B Project.					
Boeing Defence Australian (I-BTN)	See scope	See scope	1 Force Node Vehicle Mounted 8 Formation Nodes Vehicle Mounted 18 Formation Nodes Transit case 16 Unit Nodes Vehicle Mounted 21 Unit Nodes Transit Case 23 Relay Nodes Transit Case 3 Tactical Interface Stations 18 Headquarters on the Move Nodes			1		
Major equipment accepted and quantities to 30 Jun 20								
18 Formation Nodes Transit Case 21 Unit Nodes Transit Case 23 Relay Nodes Transit Case 2 Tactical Interface Station								
Notes								
1	The scope of the contract was varied under CCP015, in agreement with the Capability Manager, amending the number of required Tactical Interface Stations from 4 to 3.							

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### Section 3 – Schedule Performance

#### 3.1 Design Review Progress

Review	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
System Requirement	System Requirements Review (SRR) Release 1 and 2	May 16	N/A	Mar 16	(2)	1
	System Definition Review (SDR) Release 1 and 2	Jul 16	N/A	Mar 16	(4)	1
Preliminary Design	Release 1	Oct 16	N/A	Sept 16	(1)	
	Release 2	Oct 17	Oct 18	Jul 18	9	2,5
Detailed Design	Release 1	Dec 16	N/A	Nov 16	(1)	
	Release 2	Jan 18	Feb 19	Dec 18	11	2
	Release 3	Mar 20	N/A	Nov 19	(4)	4
	Support System – Release 1	Nov 16	Feb 17	Dec 16	1	3
	Support System – Release 2	Jan 18	Mar 19	Feb 19	13	2
	Support Systems – Release 3	May 20	N/A	Dec 19	(5)	4
<b>Notes</b>						
1	SRR/SDR covered both Release 1 and Release 2.					
2	Release 2 was impacted by delays affecting interfacing projects and note this against all Note 2 delays.					
3	The Contract was changed with CCP 9 to correct the sequencing of the Support System Detailed Design so it was logically scheduled to occur after the Mission System Detailed Design. Support System Detailed Design for Release 1 was achieved ahead of the current Contract Date.					
4	Release 3 was introduced as part of CCP015 that replaced the need for eDLAN integration with an alternate LAN. This reduced reliance on delayed interfacing projects. <b>Detailed Design Review for R3 was achieved earlier than planned as BDA work towards target dates. All their artefacts were ready prior to contract date so Detailed Design Review for R3 was entered and into and achieved early.</b>					
5	Preliminary Design for Release 2, which was completed in July 2018, included the capabilities that are now being delivered in both Release 2 and Release 3.					

#### 3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
System Integration	Release 1 Mission System Integration & Interoperability Verification	Jul 17	Dec 17	Dec 17	5	1
	Release 2 Mission System Integration & Interoperability Verification	Apr 19	May 20	Mar 20	11	1
	Release 3 Mission System Integration & Interoperability Verification	Mar 21	N/A	Mar 21	0	2
Acceptance	System Acceptance – R1	Aug 17	Feb 18	Dec 17	4	1
	System Acceptance – R2	Jun 19	Jul 20	Apr 20	10	1
	System Acceptance – R3	May 21	N/A	May 21	0	2
	Final Acceptance (FA) - Acquisition Contract	Feb 21	May 22	May 22	15	2,3
<b>Notes</b>						
1	Release 2 expands the capability of Release 1, and has been impacted by delays affecting interfacing projects					
2	Release 3 was introduced as part of CCP015 that replaced the need for eDLAN integration with an alternate LAN. This reduced reliance on delayed interfacing projects.					
3	<b>Negotiations are ongoing with BDA for a 4 month delay to FA. This delay has been caused by interfacing projects and is discussed in Section 1.2.</b>					

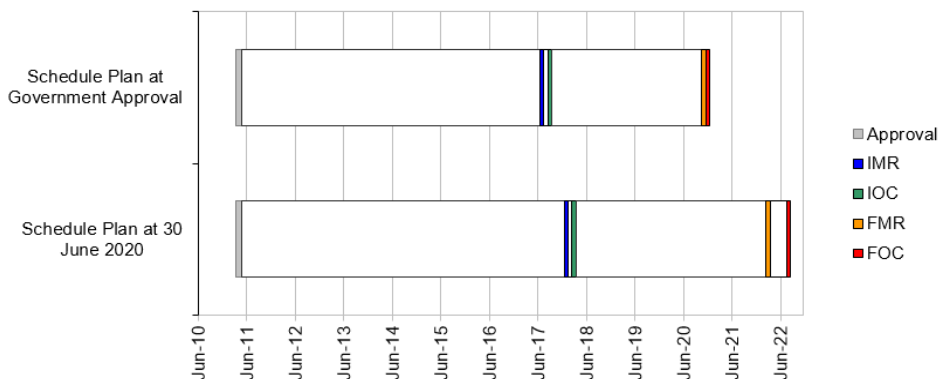
#### 3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
<b>I-BTN</b>				
Initial Materiel Release (IMR) 1A	Aug 17	Feb 18	6	1
I-BTN Initial Operational Capability (IOC)	Sep 17	Mar 18	6	1
(Release 1) Materiel Release 1	Oct 17	May 18	7	2
(Release 1) Materiel Release 2	May 18	Dec 18	7	2
(Release 1) Materiel Release 3	Oct 18	Apr 19	6	2
(Release 2) Materiel Release 5	Dec 19	Nov 20	11	1,2

(Release 2) Materiel Release 6	Oct 20	Mar 21	5	1,2
(Release 3) Materiel Release 7	Nov 21	Nov 21	0	1,2
(Release 3) Materiel Release 8	Mar 22	Mar 22	0	1,2
I-BTN Final Materiel Release (FMR)	Nov 20	Mar 22	16	2
<b>DLAN Hardware</b> Release	Jul 18	Jun 19	12	3
I-BTN Final Operational Capability (FOC)	Sep 20	Sep 22	24	4

Notes				
1	Due to delays incurred to date with interfacing projects, alternative interim interface requirements for Release 1 were implemented and resulted in a six month slip to IMR 1A and IOC I-BTN. This also deferred the Release 2 Materiel Releases (Materiel Releases 5 and 6) by making Materiel Release 4 no longer used and introducing Materiel Release 6. CCP15 introduced Release 3 (Materiel Releases 7 and 8) to remove the requirement to integrate I-BTN with eDLAN. There was a resultant slip to FMR of 16 months to forecast date.			
2	Materiel Release (Release 1, Release 2, Release 3) milestones will be achieved when the units receiving the capability sign the unit acceptance certificate. This variance is dependent on unit availability to conduct the unit test activity.			
3	Integration between eDLAN and the I-BTN is no longer required. Army <b>has endorsed the</b> declaration of the <b>DLAN Hardware</b> Release milestone, as no further work will be undertaken due to the I-BTN system no longer being required to integrate with the eDLAN system.			
4	The planned FOC date will occur 6 months after FMR. This is a combination of the delay related to CCP015 and to allow time for Army to conduct testing and evaluation during Army exercises			

**Schedule Status at 30 June 2020**



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	
	<b>Green:</b> The Project is currently meeting the majority of capability requirements as expressed in the Materiel Acquisition Agreement and supporting suite of Capability Definition Documentation.
	<b>Amber:</b> N/A
	<b>Red:</b> 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.	

## Project Data Summary Sheets

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## 4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR) 1A	<ul style="list-style-type: none"> <li>Verification &amp; validation, testing and certification completed</li> <li>Initial Learning Management Packages Approved</li> <li>Initial Support Contract is in place</li> <li>Commonwealth acceptance of supplies for those units identified for Materiel Release 1</li> <li>Completion of AT for initial release</li> </ul> <p>IMR 1A was achieved in February 2018</p>	Achieved
Initial Operational Capability (IOC)	<ul style="list-style-type: none"> <li>For Army - Delivery of four man portable formation nodes, four unit nodes, and three HCLOS with trained soldiers to enable planning, configuration and operation of Force and Formation level networks.</li> <li>For Air Force - Delivery of four man portable formation nodes, two man portable unit nodes and one HCLOS with trained crew to enable planning, configuration and operation of a Formation level network.</li> </ul> <p>IOC was achieved in March 2018</p>	Achieved
Final Materiel Release (FMR)	<ul style="list-style-type: none"> <li>Verification &amp; validation, testing and Certification completed</li> <li>All elements of the Mission System are delivered to units</li> <li>All introduction into service training is completed and approved Learning Management Plans for sustainment training delivered to Army</li> <li>Mature Support Contract in place including delivery of Data Transfer Equipment (DTE);</li> <li>Delivery of Hand Held Satellite Terminal (HHST)</li> </ul> <p>FMR is currently forecast for achievement in March 2022</p>	Not yet achieved
Final Operational Capability (FOC)	<p>The provision, support and training of the IBTN to all Army and Air Force in accordance with the Basis of Issue (BOI).</p> <p>Scope includes:</p> <ul style="list-style-type: none"> <li>1 Force Node Vehicle Mounted</li> <li>8 Formation Nodes Vehicle Mounted</li> <li>18 Formation Nodes Transit case</li> <li>16 Unit Nodes Vehicle Mounted</li> <li>21 Unit Nodes Transit Case</li> <li>23 Relay Nodes Transit Case</li> <li>3 Tactical Interface Stations</li> <li>18 Headquarters on the Move Nodes</li> </ul> <p>FOC is currently forecast for achievement in September 2022.</p>	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
WGS certification for HQOTM and Medium SATCOM Terminal (MST) systems may take longer than anticipated.	Remediation through conduct of stakeholder working groups, and early and close engagement with WGS certification authorities. HQOTM certification has been downgraded to medium risk as delays introduced by CCP015 allow additional schedule to complete certification. MST certification <b>has been downgraded to Medium as it will not impact delivery schedule.</b>
Delayed availability of an approved capability baseline for the HQOTM vehicle platform may cause I-BTN re-work (with associated costs and schedule impacts) and delays in establishment of the HQOTM support system.	Close engagement with the vehicle platform Systems Program Office, and Army Capability Manager to provide advance warning of potential baseline changes and to identify support system limitations that require remediation. The sustainment organisation has taken responsibility for support of the vehicle. However, technical certification and consistency of the vehicle platform baseline remain high risk. <b>Due to changes in ownership of the HQOTM vehicle platform, this risk has been retired as JP2072 PH2B will deliver a HQOTM mission fit. The platform risks are owed by Army. This risk will be addressed by Army and CASG.</b>

## Project Data Summary Sheets

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Emergent Risks (risk not previously identified but has emerged during 2019-20)	
Description	Remedial Action
There is a chance that not all service personnel who need to be trained to operate, support, deliver training on and manage the I-BTN will be able to receive introduction into service training during the time allocated within the project schedule for R3.	<p>Services are being engaged to ensure that they understand the present training delivery constraints being faced for release 3 training. The</p> <p>Training Implementation Plan will aim to train the maximum number of personnel possible within the time and resource constraints.</p> <p>Training delivery is constrained by the materiel delivery schedule, if required, BDA to look for opportunities to use BDA owned pre-production equipment to commence delivering training from February 21.</p>

## 5.2 Major Project Issues

Description	Remedial Action
Delays in development and delivery of interfacing projects, have led to delays in the I-BTN Release 2 schedule.	Remediation through realignment of project schedule dependencies and close engagement with interfacing projects.
There is a chance that the R2 IIS Equipment Delivery Schedule will not be met because BDA may be unable to meet or maintain their equipment production schedule, Unit/Flight unavailability and CoA and BDA delays in processing Contract delivery requirements due to COVID-19.	Project Office early engagement with AHQ, AFHQ, FORCOMD and 1 Div to schedule IIS of R2 equipment delivery. Equipment production schedule to be rigorously monitored. To meet unit/flight availability, where applicable, create two IIS commissioning teams to work in parallel in order to achieve IIS delivery Schedule.
Note	
Major risks and issues in Section 5 are excluded from the scope of the Auditor-General's Independent Assurance Report.	

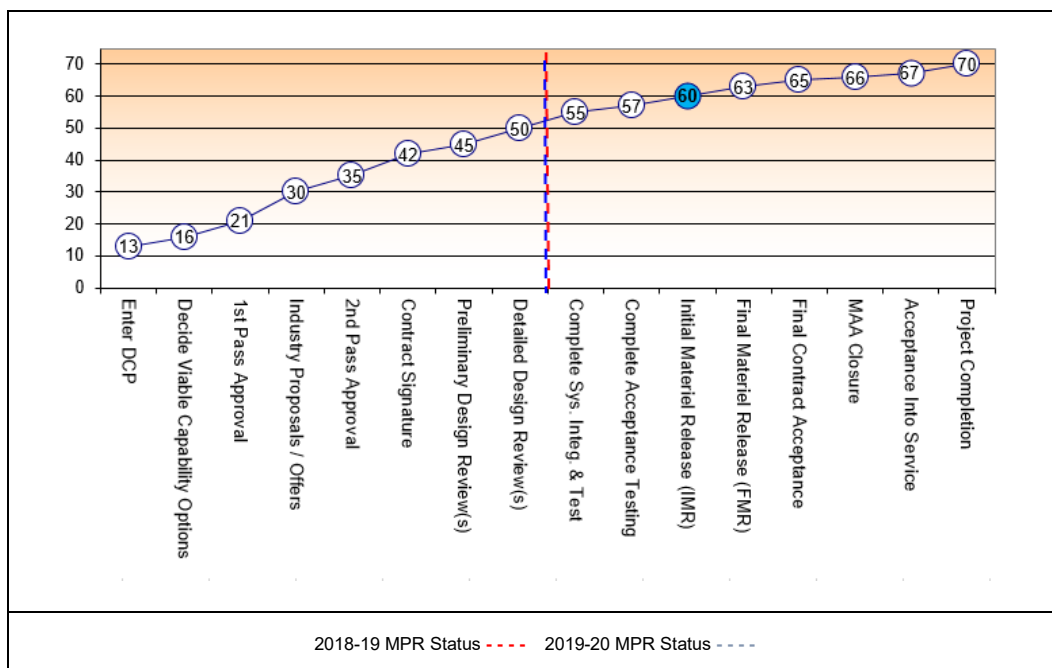
## Section 6 – Project Maturity

### 6.1 Project Maturity Score and Benchmark

Maturity Score		Attributes							Total
		Schedule	Cost	Requirement	Technical Understanding	Technical Difficulty	Commercial	Operations and Support	
Project Stage	Benchmark	10	8	8	8	9	8	9	60
Initial Materiel Release	Project Status	7	7	7	8	7	8	9	53
	Explanation	<p>LAND 2072 Phase 2B has achieved IMR 1A. There are three capabilities releases. Release 1 was required for achievement of IMR 1A, Release 2 <b>has completed</b> formal testing and Release 3 design is <b>complete</b>. LAND 2072 Phase 2B has assessed this score to cover the whole project (Release 1, 2 and 3).</p> <p>Schedule. Whilst IMR 1A has been achieved, there remain schedule risks to the development of the Release 3 capability. The Capability Manager has endorsed a revised schedule that introduces Release 3 and delays FMR/FOC.</p> <p>Cost. The project has applied contingency to treat risks and issues in <b>FY 18/19</b>. The budget estimate at completion remains within the approved budget and contingent allocation.</p> <p>Requirement. Whilst IMR 1A has been achieved and Release 2 has completed design, Release 3 is yet to complete testing requirements.</p> <p>Technical Difficulty. Whilst IMR 1A has been achieved, Release 3 is yet to complete testing requirements.</p>							

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## Section 7 – Lessons Learned

### 7.1 Key Lessons Learned

Description	Categories of Systemic Lessons
Collaborative engagement by the Contractor, CASG and the Capability Manager has resulted in better outcomes for the delivered capability.	Requirements Management
Contracting for a performance based support contract at the same time as the acquisition contract results in better design decisions during the acquisition contract.	Contract Management
User engagement during the Mission System Integration Test Events (MSITE) has resulted in an improved capability by early user engagement during the design phase. This also leads to improving the management of user expectations.	Requirements Management

## Section 8 – Project Line Management

### 8.1 Project Line Management as at 30 June 2020

Position	Name
Division Head	Mr Ivan Zlabur
Branch Head	Ms Myra Sefton
SPO Director	Mr Scott Huxtable
Project Director	Mr Michael Peel
Project Manager	Mrs Kylie Power
Project Manager	CAPT(Army) Sean Cahir



## Project Data Summary Sheet<sup>169</sup>

Project Number	SEA 1439 Phase 5B2
Project Name	COLLINS CLASS COMMUNICATIONS AND ELECTRONIC WARFARE IMPROVEMENT PROGRAM
First Year Reported in the MPR	2018-19
Capability Type	Upgrade
Acquisition Type	MOTS
Capability Manager	Chief of Navy
Government 1st Pass Approval	Oct 06
Government 2nd Pass Approval (or key Government pre-Second Pass Approval)	Stage 1 - June 15 Stage 2 - March 17
Budget at 2nd Pass Approval (or key Government pre-Second Pass Approval)	\$599.1m
Total Approved Budget (Current)	\$610.7m
2019-20 Budget	\$93.3m
Project Stage	Integration and Test
Complexity	ACAT II



### Section 1 – Project Summary

#### 1.1 Project Description

SEA 1439 Phase 5B2 is a multiple Second Pass that seeks to deliver a modernised submarine communications system and upgrade Electronic Support measures on the Collins Class submarines. These enhancements will be broadly delivered in two stages.

Modernised Submarine Communications System (MSMCS) Stage 1 replaces obsolete Communications Centre (COMCEN) equipment on-board six Collins Class Submarines. MSMCS Stage 1 upgrade will provide the submarines with improved performance, reliability and interoperability with other components of the Australian Defence Force and allied nations.

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

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

#### 1.2 Current Status

##### Cost Performance

###### In-year

As at 30 June 2020, financial year 2019-20 expenditure is \$69.7m against the forecast budget of \$93.3m. The variation is mainly due lower than forecast FMS case payments.

###### Project Financial Assurance Statement

As at 30 June 2020, Project SEA 1439 Phase 5B2 has reviewed the project's approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial contractual obligations of Defence for this project, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget remaining for the project to complete against the agreed scope.

###### Contingency Statement

The project has not applied contingency in the financial year.

##### Schedule Performance

SEA 1439 Phase 5B2 achieved Stage 1 Initial Materiel Release (IMR) on one platform on 26 Nov 19. SEA 1439 Phase 5B2 Stage 2 is currently on track for Material Release in accordance with the 2017 Government 2nd pass approval. However, due to external factors, material deficiencies will exist at initial implementation regarding elements of Wide Band Satellite, and potentially the Submarine Local Area Network. Both risks are well known and are being actively managed. SEA 1439 Phase 5B2 Microwave Electronic Support (MWES) system – significant schedule slippage has occurred from

169 Notice to reader

Forecast dates and Sections: 1.2 (Material 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 Assurance Report by the Auditor-General in Part 3 of this report.

Government 2 <sup>nd</sup> pass approval due to difficulties engaging with subcontractors in the early phases of the project. Contractors have now been engaged and progressing to project implementation on platforms in accordance with the schedule re-baselined at Government 2 <sup>nd</sup> pass approval for <b>MSMCS</b> Stage 2.
<b>Material Capability Delivery Performance</b> <b>The project has completed implementation of:</b> <ul style="list-style-type: none"> <li>• Stage 1 on <b>three</b> platforms which are now in service.</li> <li>• Stage 1 <b>and 2</b> training system <b>at the Integrated Test and Training Site (ITTS) and are in use for training.</b></li> <li>• Stage 1 <b>and 2</b> on <b>one</b> platform, <b>which is in test and evaluation phase. Certain activities effected by COVID-19 restrictions. These activities include: Stakeholder unable to complete Set to Work (STW) Fleet Information Environment; Category (CAT) 4 Testing and training delivery impacted.</b></li> </ul>
<b>Note</b>
Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.

### 1.3 Project Context

<b>Background</b> <p>In December 2004, Defence initiated investigations into potential capability enhancements on Collins Class Submarines. During these investigations, potential obsolescence issues were also raised regarding equipment with the Collins Class Communication Centre. Capability managers along with other relevant parties within Defence developed a number of proposals to address the long term capability requirements of the Collins Class. These issues would be addressed through SEA 1439 Phase 5B, with the scope, phases and preferred approach changing several times prior to Government second pass approval.</p> <p>In November 2013 Defence confirmed the project scope and agreed a two stage approach to Government.</p> <ol style="list-style-type: none"> <li>1. Modernised Submarine Communications System (MSMCS) Stage 1 involves the update of obsolete Communications Centre equipment on-board the Collins Class with a military off-the-shelf solution. Stage 1 achieved Second Pass Approval in June 2015 and is currently being implemented across all six platforms and at the Integrated Test and Training Site (ITTS).</li> <li>2. MSMCS Stage 2 involves the delivery of capability enhancements including the introduction of satellite communications enabling vastly improved data transmission/receive rates in a tactical environment, enhanced networks, and associated ICT infrastructure. Stage 2 received Gate Two approval by Government in March 2017. Stage 2 includes the following capability enhancements across all six platforms and at the ITTS: <ol style="list-style-type: none"> <li>a. Wideband Satellite Communications system;</li> <li>b. Classified Local Area Networks to distribute information outside the Communication Centre, referred to as the Submarine Local Area Network Environment;</li> <li>c. Network infrastructure to allow multiple classified Local Area Networks (LANs) to access the same IP-enabled Radio Frequency bearer system; and</li> <li>d. Tools and Applications to effectively and efficiently manage the information flows between the shore communication centres and the submarines, referred to as Submarine Communication Information Exchange Management.</li> </ol> </li> </ol> <p>The MWES system will detect, identify, and localise intercepted signals. The MWES capability enhancement will maximise commonality between the Collins class submarines and the wider RAN fleet. Funded under Stage 1, but as a standalone capability, MWES will be installed independently and in parallel with Stage 1 and 2, in a flexible manner so as to achieve the best suited boat at the time of materiel availability.</p>
<b>Uniqueness</b> <p>SEA 1439 Phase 5B2 Stage 1 addresses the obsolescence issues of the legacy maritime communications capability of the Collins Class submarines, and enhances the electronic support based on modernised architectures and standardised systems. The new and upgraded capability will enable new levels of operability and interoperability never before seen on Collins Class submarines.</p> <p>For implementation of Stage 2, the majority of supplies being Government Furnished Material. The project has engaged Raytheon Australia as Prime System Integrator to implement MSMCS Stage 2. The Submarine Local Area Network and the Submarine Communication Information Exchange Management elements of Stage 2 are being supplied by the Defence Chief Information Officer Group with the funding for the development and delivery of these systems handed directly to Defence upon Government Second Pass Approval for Stage 2.</p> <p>The other major component of Stage 2 is the Wideband Satellite Communications component which is supplied under a U.S. Government Foreign Military Sale case.</p>
<b>Major Risks and Issues</b> <p>The project is currently managing a number of risks and issues including:</p> <p>There is a chance of Submarine Local Area Network slippage impacting on SEA 1439 Phase 5B2 MAA milestones due to stakeholder engagement and the complexity of the required capability. <b>There is a chance of disruptions and delay in supply chain, in particular for Foreign Military Sales items, because of COVID-19 pandemic.</b></p> <p>There will be late delivery of the SEA 1442 Phase 6 Wideband Satellite ground station First of Type installation creating an issue of sovereign capability due to satellite access. <b>The Wideband Satellite onboard capability has been installed in the first of type submarine; however, the supporting key materiel and satellite access requires completion of SEA 1442 Phase 6 activities.</b></p>
<b>Other Current Related Projects / Phases</b> <p>Navy Minor Project 1941 will deliver an Information Screening and Delivery System (ISDS), and a Military Message system across a number of CCSMs. The ISDS has now been integrated into the SEA 1439 Phase 5B2 project and has been implemented on <b>two platforms</b> and <b>shore system</b>.</p> <p>SEA 1442 Phase 6 provides <b>Wideband Satellite Communications</b> Ground and Space segment, as well as planning and land based infrastructure required to operate the system. The submarine <b>fitted segment of this capability</b> is provided by SEA 1439 Phase 5B2 Stage 2.</p> <p>SEA 1439 Phase 5B2 is also related but not dependent on other projects within the SEA 1439 program, a full list of these can be found in the SEA 1439 Phase 3 - Collins Reliability &amp; Sustainability project.</p>

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<b>Note</b>
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
<b>Project Budget</b>			
<b>Oct 06</b>	Original Approved ( <b>First Pass</b> )	4.1	1
Apr 10	Real Variation - Scope	1.4	1
Sep 12	Real Variation - Scope	1.6	1
Feb 15	Government 1st Pass Approval - Stage 1	36.7	2
Jun 15	Government 2nd Pass Approval - Stage 1	203.9	3
May 17	Government 2nd Pass Approval - Stage 2	351.4	4
	<b>Total at Second Pass Approval</b> (or key Government pre-Second Pass Approval)	599.1	
Jul 10	Price Indexation	0.4	5
Jun 20	Exchange Variation	11.2	
	<b>Total Budget</b>	610.7	
<b>Project Expenditure</b>			
Prior to Jul 19	Contract Expenditure - Raytheon Australia	(141.3)	6
	<b>Contract Expenditure - Foreign Military Sales (AT-P-LFQ)</b>	(33.3)	7
	Contract Expenditure - ASC Pty Ltd	(31.1)	6
	Contract Expenditure - Jenkins Engineering Defence (JEDS)	(23.9)	6
	Other Contract Payment/Internal Expenses	(21.0)	8
		(250.6)	
FY to Jun 20	<b>Contract Expenditure - Foreign Military Sales (AT-P-LFQ)</b>	(35.4)	7
	Contract Expenditure - Raytheon Australia	(17.1)	6
	Contract Expenditure - ASC Pty Ltd	(8.2)	6
	Contract Expenditure - Jenkins Engineering Defence (JEDS)	(6.1)	6
	Other Contract Payments/Internal Expenses	(2.9)	8
		(69.7)	
Jun 20	<b>Total Expenditure</b>	(320.3)	
Jun 20	<b>Remaining Budget</b>	290.4	
<b>Notes</b>			
1	Original approved funding was for development of the Functional Performance Specifications for the future implementation of SEA1439 Phase 5B2 to provide High Data Rate Communications fit for CCSMs.		
2	Government approved SEA1439 Phase 5B2 Stage 1 funding for risk reduction funding for the development of the design of 5B2.		
3	Government approved SEA1439 Phase 5B2 MSMCS Stage 1 to provide a solution to address COMCEN obsolescence issues.		
4	Government approved SEA1439 Phase 5B2-A MSMCS Stage 2 for WBS and SUBLANE implementation. There was no Government First Pass Approval for Stage 2 as this capability enhancement of stage 1.		
5	Up until July 10, indexation was applied to project budgets on a periodic basis. The cumulative impact of this approach was \$0.4m.		
6	The scope of this contract is explained further in Section 2.3 – Details of Project Major Contracts.		
7	US Govt. supply (FMS Case) for Wide Band Satellite.		
8	Other expenditure comprises: Operating expenditure, minor contract expenditure and other capital expenditure not attributable to the listed contracts.		

#### 2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Defence's Explanation of Material Movements
95.8	93.7	93.3	PBS - PAES: Due to changes in the FMS Case (AT-P-LFQ) delivery schedule. This was driven by immaturity of original FMS Case delivery schedule. PAES - Final Plan: Due to minor contractual commencement delays.
Variance \$m	(2.1)	(0.4)	Total Variance (\$m): (2.5)
Variance %	(2.2)	(0.4)	Total Variance (%): (2.6)

#### 2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(9.2)	Australian Industry	Variance is due to: a) Industry delays; and b) lower than forecasted FMS payments
		(14.4)	Foreign Industry	
			Early Processes	
			Defence Processes	

93.3	69.7	(23.6)	Foreign Government Negotiations/Payments	(25.3)
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
			<b>Total Variance</b>	
			<b>% Variance</b>	

### 2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 20 \$m			
ASC Pty Ltd	July 12	N/A	50.3	Variable (Cost Reimbursement)	ASDEFCON	1
Raytheon Australia	Feb 15	32.9	188.6	Fixed	ASDEFCON	2,3
Jenkin Engineering Defence (JEDS)	Jul 16	10.4	44.3	Fixed	ASDEFCON	4,5
US Government - Foreign Military Sales (AT-P-LFQ)	Jun 17	98.0	103.3	Reimbursement	FMS	

Notes						
1	ASC Pty Ltd engagement related to SEA 1439 Phase 5B2 is not a single contract. ASC is engaged under a number of separate Survey and Quotes (S&Q) tasks under the provisions of the In-Service Support Contract (ISSC) CSP/2012/1. At contract signature no S&Q tasks had been raised for SEA1439 Phase 5B2.					
2	Raytheon Australia received \$32.9m in interim funding by the CoA to achieve Detail Design Review (DDR) prior to full contract award in Mar 16 when the CoA issued a Notice to Proceed post Government Second Pass Approval for Stage 1.					
3	The Raytheon Australia PSI contract has been amended on multiple occasions. The major contract changes are Contract Change Proposal (CCP006) for early implementation of Stage 1 on one platform, and CCP008 for the introduction of Stage 2 workscope.					
4	A Contract Change Proposal (CCP001) was negotiated with a revised scope for the MSMCS MWES element of the project.					
5	A Contract Change Proposal (CCP002) was approved for remediation works at the Integrated Test and Training Site (ITTS) and option to procure two additional systems.					
6	Contract value as at 30 June 2020 is based on actual expenditure to 30 June 2020 and remaining commitment at current exchange rates.					

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 20		
Raytheon Australia	7	7	Deliveries consist of six Stage 1 & 2 platform fits, plus one Stage 1 & 2 Training System fitted at the Integrated Test and Training Site (ITTS).	
ASC Pty Ltd	6	6	Deliveries consist of platform integration on to 6 Collins Class Submarines of Stage 1 & 2 and MWES.	
Jenkins Engineering Defence (JEDS)	5	7	Deliveries consist of six MSMCS MWES platform fits, plus one MWES fitted at the ITTS.	
US Government – Foreign Military Sales (AT-P-LFQ)	7	7	Deliveries consist of six Wide Band Satellite (WBS) platform fits, plus one WBS Training System fitted at the ITTS.	

Major equipment accepted and quantities to 30 Jun 20						
Stage 1 system has been implemented on three platforms which are now in operational service. Stage 1 & 2 training system have been implemented at the ITTS and are in use for training. Stage 1 & 2 have been implemented on one platform.						

## Section 3 – Schedule Performance

### 3.1. Design Review Progress

Review	Major System / Platform Variant	Original Planned	Current Contracted	Achieved / Forecast	Variance (Months)	Notes
System Requirements	Stage 1	Jul 15	N/A	Jul 15	0	
	MWES	Nov 16	Sep 18	Oct 18	23	1
	Stage 2	Sep17	Oct 17	Oct 17	1	2
Preliminary Design	Stage 1	Nov 15	N/A	Nov 15	0	
	MWES	Jan 17	Jan 19	Feb 19	25	1
	Stage 2	Jan 18	Feb 18	Jul 18	6	2
Detail Design	Stage 1	Mar 16	Apr 16	Apr 16	1	2
	MWES	Apr 17	Mar 19	Sep 19	29	1
	Stage 2	May 18	Jun 18	May 18	0	
Notes						
1	Microwave Electronic Support (MWES) Function and Performance Specification had taken longer than expected to finalise. Detailed Design Review completed 8 May 2019. Detailed Design Review acceptance signed 19 September 2019.					
2	Variance is due to delays in processing and acceptance of documentation delivered by the contractor.					

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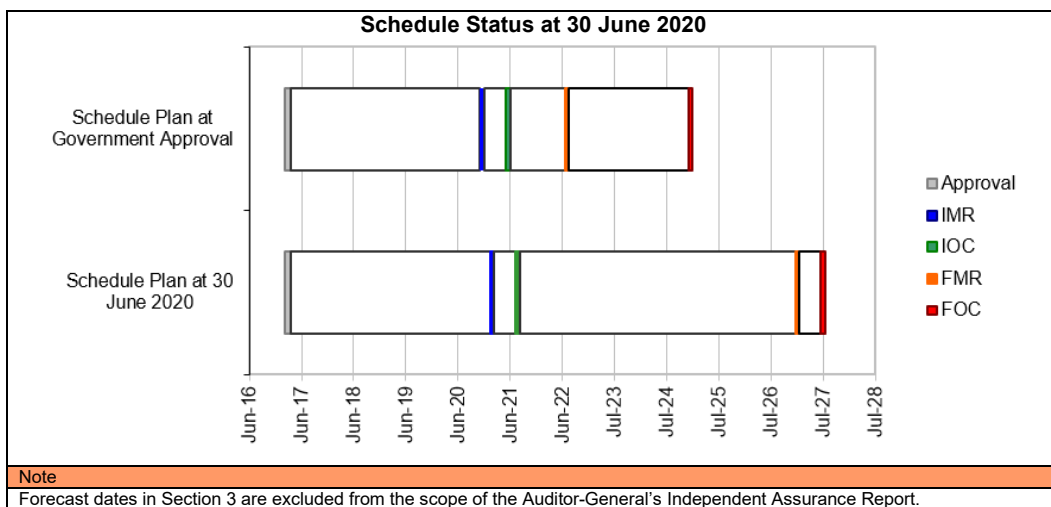
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## 3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System / Platform Variant	Original Planned	Current Contracted	Achieved / Forecast	Variance (Months)	Notes
System Integration	MSMCS Stage 1	May 17	Jun 17	Jul 17	2	1,4
	MSMCS MWES	May 18	Nov 19	Mar 20	22	2
Acceptance	MSMCS Stage 2	Jun 19	Jul 19	Jul 19	1	1,6,8
	MSMCS Stage 1	Jun 24	Apr 18	Jan 18	(77)	7
	MSMCS MWES	Jul 19	N/A	Dec 20	17	2,5
	MSMCS Stage 2	Jun 20	N/A	Jun 20	0	3,6,8
<b>Notes</b>						
1	MSMCS Stage 1 & Stage 2 System Integration is based on completion of CAT 3 Testing by the Prime System Integrator (PSI) in accordance with completion milestones within the PSI contract and the Test and Evaluation Master Plan (TEMP).					
2	MSMCS MWES System Integration is based on First of Type (FOT) Set-to-Work (STW). System acceptance is based on completion of successful FOT Harbour Acceptance Trial completion. Original system integration dated based on planned FOT installation that was subsequently transferred to a different platform in a later maintenance period.					
3	MSMCS Stage 1 & Stage 2 Acceptance is based on the Commonwealth's acceptance of the completion of CAT 4 testing in accordance with completion milestones within the PSI contract and the Test and Evaluation Master Plan (TEMP).					
4	Variance is due to delays in processing and acceptance of documentation delivered by the contractor.					
5	MSMCS MWES implementation delayed due to immature procurement strategy and Function and Performance Specification (FPS). This has now been resolved with implementation commenced in FOT platform. Commonwealth's acceptance is at completion of CAT 4 testing. Completion of CAT4 testing and Harbour Acceptance Trial on First of Type platform delayed due to COVID-19 related travel and working condition restrictions.					
6	Implementation schedule understanding has matured since the MAA was originally developed.					
7	System acceptance achieved 6 months early due to the acceleration of the MSMCS Stage 1 installation with platform 2 installation brought forward 77 months from a Full Cycle Docking to an earlier Mid Cycle Docking.					
8	Systems Operation and Verification Testing (SOVT) of Wideband Satellite Communications system under Stage 2 completion is acceptance of supplies from the US Government under the Foreign Military Sales case. SOVT transitions supplies from US Government to the CASG. CASG will transition the WBS to the Submarine sustainment organisation. SOVT of WBS system is not a precondition to Stage 2 acceptance.					

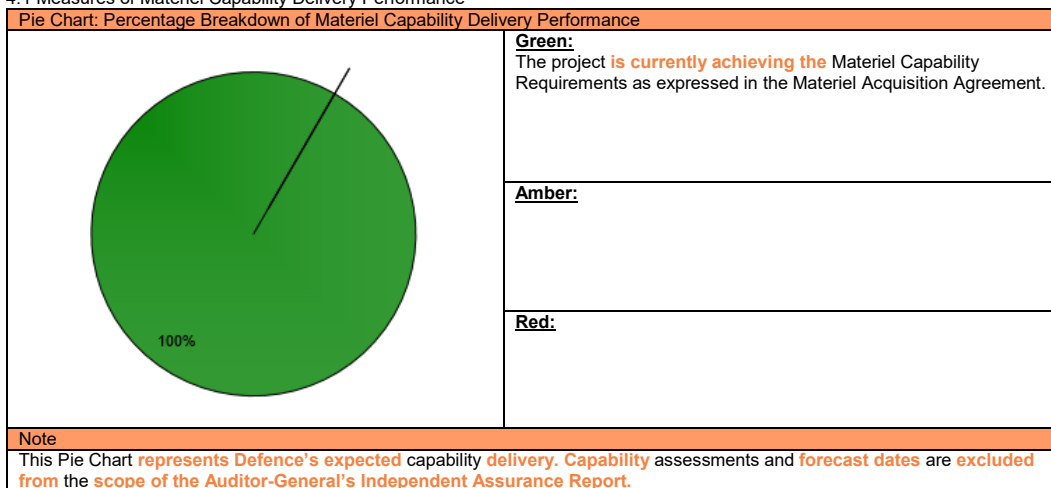
## 3.3 Progress Toward Materiel Release and Operational Capability Milestones

Table 1: Progress Toward Materiel Release and Operational Capability Milestones				
Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR) (Stage 1)	Jul 18	Nov 19	16	1,2
Initial Materiel Release (IMR) - (MWES)	Feb18	Feb 21	36	1,3
Initial Materiel Release (IMR) - (Stage 2)	Dec 20	Mar 21	3	1,4,5
Initial Operational Capability (IOC) (Stage 1, 2 & MWES)	Jun 21	Aug 21	2	1,4
Final Materiel Release (FMR) - (Stage 1)	Jul 22	Dec 22	5	1,4
Final Materiel Release (FMR) - (MWES)	Jun 19	Mar 23	45	1,3
Final Materiel Release (FMR) (Stage 2)	Jul 22	Dec 26	53	1,4
Final Operational Capability (FOC) (Stage 1, 2 & MWES)	Dec 24	Jun 27	30	1,4
Notes				
1	Original Planned dates for Stage 1 and Microwave Electronic Support (MWES) are in accordance with Revision 2 of the Materiel Acquisition Agreement (MAA). Original planned dates for Stage 2 are in accordance with Revision 4 of the MAA. Current Forecast dates are IAW Version 4.0 of the MAA.			
2	Stage 1 IMR claim agreed 26 November 19. IMR variance due to delay in obtaining all objective quality evidence to support IMR claim.			
3	MSMCS MWES implementation delayed due to immature procurement strategy and Function and Performance Specification (FPS). This has now been resolved with implementation commenced in FOT platform, but has had consequential impact to the MWES implementation plan, IMR and FMR.			
4	Original IOC, FMR and FOC was for MSMCS Stage 1 and MWES. MAA Version 4.0 updated IOC to also include MSMCS Stage 2.			
5	IMR Stage 2 variance is due to slippage of sea acceptance trial schedule as a result of COVID-19 related travel restrictions.			



## Section 4 – Materiel Capability Delivery Performance

### 4.1 Measures of Materiel Capability Delivery Performance



### 4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	Modification of one platform and the Integrated Test and Training Site with stage 1 including: <ul style="list-style-type: none"> <li>• Verification &amp; validation and certification completed in accordance with approved plans;</li> <li>• Training system delivered along with initial crew and trainer training; and</li> <li>• Spares and support arrangements in place. IMR report endorsed and released for approval by the regulatory authority.</li> </ul>	<b>IMR achieved 26 Nov 19</b>
Initial Operational Capability (IOC)	Operationally employ <b>MSMCS</b> Stage 1 and Stage 2 <b>and MWES</b> on one platform and associated Fundamental Inputs to Capability such as crew training and Integrated Logistics Support. IOC for Stage 1 and Stage 2 expected <b>August 21</b> .	Not yet achieved

## Project Data Summary Sheets

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Final Materiel Release (FMR)	<b>MSMCS</b> Stage 1, 2 and the <b>MWES</b> elements installed on six platforms and one Integrated Test and Training Site. Support arrangements including Materiel Transition Plans, spares, training and other Integrated Logistics Support requirements required to transition the materiel system into operational services and sustainment. FMR is expected to be achieved in <b>December 26</b> .	Not yet achieved
Final Operational Capability (FOC)	Operationally employ <b>MSMCS</b> Stage 1, 2 and <b>MWES</b> in six platforms, the ITTS and associated Fundamental Inputs to Capability such as crew training and Integrated Logistics Support. FOC is expected to be achieved in <b>June 27</b> .	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 chance of Submarine Local Area Network Environment slippage <b>affecting SEA 1439 Phase 5B2</b> MAA milestones due to stakeholder engagement and the complexity of the required capability.	1. Ongoing Integrated Project Team meetings gives stakeholders the ability to engage directly and improve visibility of risks and mitigate as they arise. 2. The Submarine Local Area Network Environment installed at Raytheon Test Facility to allow testing to mitigate risk. Project is monitoring test results and progress. Risk has been escalated to Defence's Submarine Group Project Delivery Board.
Software security accreditation cannot be achieved due to limited or nil resources with stakeholders to support project related software.	Short term mitigation is identification of industry support options to provide licence and patch support and deployment. Long term mitigation is identification of enterprise (Navy) support agent, ideally providing resources, including cleared personnel to relevant Defence Groups as the fleet ICT support organisation.  <b>The Project expects that this risk will be successfully mitigated having now achieved a full security accreditation of a Stage 1 platform.</b>
Emergent Risks (risk not previously identified but has emerged during 2019-20)	
Description	Remedial Action
<b>There is a chance of disruptions and delay in supply chain, in particular for Foreign Military Sales items, because of COVID-19 pandemic.</b>	<b>Project has now brought forward Foreign Military Sales case deliveries and using priority freight where possible, and expects this mitigation to be successful in significantly reducing this risk.</b>

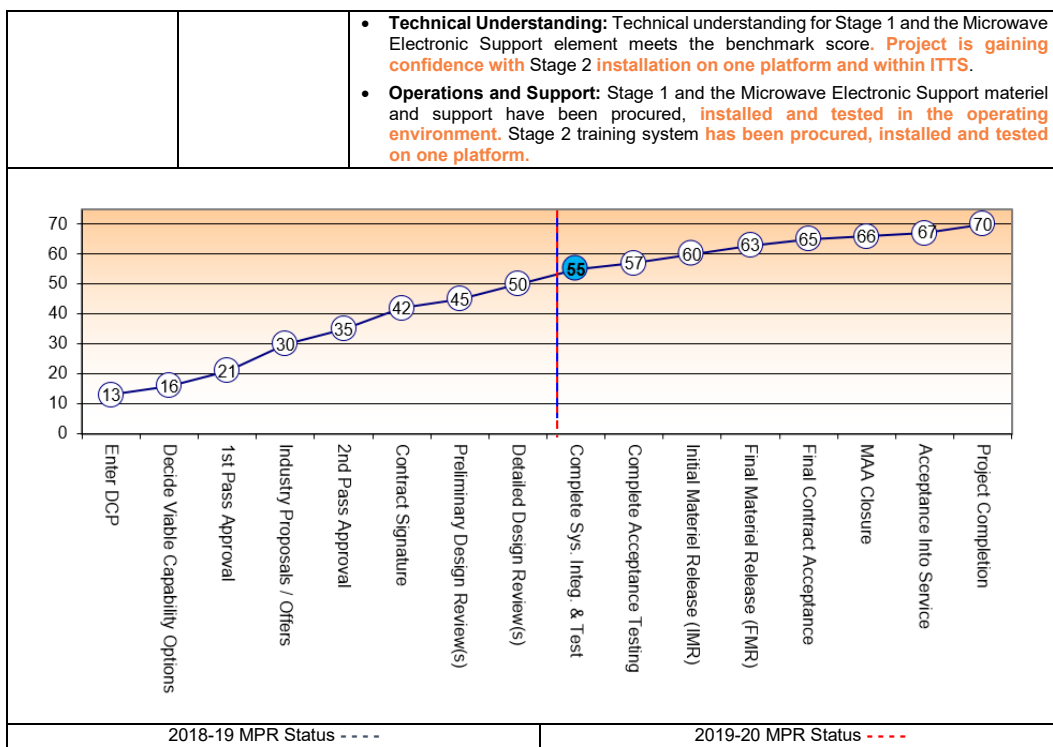
### 5.2 Major Project Issues

Description	Remedial Action
Late delivery of SEA 1442 Phase 6 Wideband Satellite ground station First of Type installation has created an issue of sovereign capability due to satellite access. Delivery is expected to take approximately <b>two (2)</b> years from May 19 when the supplier was contracted to resolve the supply issue.	<b>At completion of First of Type platform installation (Stage 2) SEA 1439 Phase 5B2 will issue an MR Report containing a deficiency against the FPS with remediation reliant on SEA1442 Phase 6 delivery to complete the Wideband Satellite capability. An update will be provided once SEA1442 Phase 6 is operational and System Operation and Verification Testing can take place.</b>
Note	
Major risks and issues in Section 5 are excluded from the scope of the Auditor-General's Independent Assurance Report.	

## Section 6 – Project Maturity

### 6.1 Project Maturity Score and Benchmark

Maturity Score		Attributes							Total
		Schedule	Cost	Requirement	Technical Understanding	Technical Difficulty	Commercial	Operations and Support	
Project Stage	Benchmark	8	7	8	8	8	8	8	55
Integration and Test	Project Status	8	8	8	7	8	8	7	54
	Explanation	<ul style="list-style-type: none"> <li><b>Cost:</b> The project is maturing and the majority of work in contract, design work nearing completion and all materials procured for Stage 1. <b>Stage 2 material procurement is progressing with installation on one platform and within the ITTS complete.</b> Due to this the cost estimate at completion can be forecast with confidence. The project budget is considered adequate to cover remaining work including known risks.</li> </ul>							



## Section 7 – Lessons Learned

### 7.1 Key Lessons Learned

Project Lesson	Categories of Systemic Lessons
Industry being made aware of schedule deadlines through tender document and Commonwealth consider including schedule float.	Contract Management
Early engagement with stakeholders to finalise Configuration Change Proposals /Concessions about scope is critical to ensure the deliverables will be sufficient.	First of Type Equipment
Tender documents and contracts must identify contractor's key personnel for specialist task, e.g. telecommunications engineers / technicians.	First of Type Equipment
Regular detailed and customised reporting addressed directly to stakeholders ensures that information is received in high visibility projects or fast tracked schedules where there is no float. This is crucial to ensure all stakeholders are engaged and supportive. Stakeholder engagement through regular detailed and customised reporting will ensure stakeholders are engaged and supportive.	Schedule Management
Ensure Project and relevant stakeholders including freight organisations have clear lines of communications regarding movements of classified items.	Governance
SEA1439PH5B2 Engineering staff have gained considerable knowledge of communication systems on CCSM and believe this is opportune time to share this knowledge with Future Submarine Program. SEA1439PH5B2 has recently shared design/installation knowledge with Future Submarine Program.	Requirements Management / First of Type Equipment

## Section 8 – Project Line Management

### 8.1 Project Line Management as at 30 June 20

Position	Name
Division Head	Mr Gregory Sammut
Branch Head	CDRE Richard Fitzgerald
Project Director	Mr Anthony Hodson
Project Manager	Mr Dewa Gounder

## Project Data Summary Sheets

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## Project Data Summary Sheet<sup>170</sup>

Project Number	SEA 3036 Phase 1
Project Name	Pacific Patrol Boat Replacement (PPB-R)
First Year Reported in the MPR	2017-18
Capability Type	Replacement
Acquisition Type	COTS
Capability Manager	Chief of Navy
Government 1st Pass Approval	Apr 16
Government 2nd Pass Approval (or key Government pre-Second Pass Approval)	Apr 16
Budget at 2nd Pass Approval (or key Government pre-Second Pass Approval)	\$504.5m
Total Approved Budget (Current)	\$504.3m
2019-20 Budget	\$78.1m
Project Stage	Initial Materiel Release
Complexity	ACAT II



### Section 1 – Project Summary

#### 1.1 Project Description

SEA 3036 Phase 1 – Pacific Patrol Boat Replacement is acquiring 21 vessels to replace the existing 22 Pacific Patrol Boats (PPBs) gifted to 12 Pacific Island Countries between 1987 and 1997 and two boats for Timor-Leste; as part of Australia's Pacific Maritime Security Program. The project also includes disposal of the current PPB fleet and minor upgrades to Pacific Island infrastructure to enable safe berthing of the new Guardian Class Patrol Boats (GCPBs).

#### 1.2 Current Status

##### Cost Performance

###### In-year

As at **30 June 2020**, the project has an underspend of **\$11.6m** against the year's budget. **This is primarily due to:**

- The reprogramming of spares and equipment procurement and Contract Change Proposals.
- Delays in Infrastructure and Vessel 7 Acceptance due to international travel restrictions brought on by the COVID-19 pandemic.

###### Project Financial Assurance Statement

As at **30 June 2020** the project has reviewed the approved scope and budget for those elements required to be delivered by the project. Having reviewed the current financial and contractual obligations of the project, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget remaining for the project to complete against the agreed scope.

###### Contingency Statement

The project has not applied contingency in the financial year.

##### Schedule Performance

The project is **currently** within the delivery phase. **To date**, the first **six GCPB** vessels **have been** delivered to their respective recipient nations **as follows**:

- Vessel 1 to Papua New Guinea in November 2018
- Vessel 2 to Tuvalu in April 2019
- Vessel 3 to Tonga in June 2019
- Vessel 4 to Samoa in August 2019
- Vessel 5 to Solomon Islands in November 2019
- Vessel 6 to Fiji in March 2020

**In addition, from 01 July 2019 the project has achieved the following Key Milestones on time:**

- Vessel 5 (Solomon Islands) Launch milestone achieved in August 2019
- Vessel 6 (Fiji) Launch milestone achieved in October 2019
- Vessel 7 (Palau) Launch milestone achieved in February 2020

#### 170 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 Assurance Report* by the Auditor-General in **Part 3** of this report.



<ul style="list-style-type: none"> <li>• Vessel 8 (Kiribati) Keel Laying milestone achieved in August 2019 and Launch milestone achieved in April 2020</li> <li>• Vessel 9 (Tonga) Keel Laying milestone achieved in November 2019</li> <li>• Vessel 10 (Papua New Guinea) Keel Laying achieved in February 2020</li> </ul> <p>Due to the Covid-19 global pandemic and resulting international travel restrictions, delivery of Vessel 7 to the nation of Palau (initially scheduled for May 2020) has been delayed and is currently being planned for September 2020. A delay to delivery of Vessel 8 to the nation of Kiribati (currently scheduled for August 2020) is also expected due to Covid-19.</p> <p>Subsequent vessels are to be delivered and gifted at a rate of one every three to four months through to the last vessel delivery scheduled for late 2023.</p> <p>To date the prime contractor key milestones have been met in alignment with the contract schedule, with the exceptions to this being:</p> <ul style="list-style-type: none"> <li>• Delivery of the first vessel which was approximately 5 weeks later than contracted as a result of delays in establishing a steel production facility, vessel production activities and the resolution of first of class issues. This delay incurred a corresponding delay to achievement of IMR/IOC which was achieved on 30 November 2018.</li> <li>• Delivery of Vessel 7 (and potentially Vessel 8) which will be approximately 4 months later than contracted as a result of international travel restrictions due Covid-19 referred to above.</li> </ul> <p>To date, the milestones within the Project Materiel Acquisition Agreement (MAA) have been achieved, with the exception to Materiel Release (MR) 7. MR7 was scheduled for May 2020 and will be achieved when Vessel 7 is delivered to Palau, currently planned for September 2020.</p> <p>Aspects of the project involving Pacific Island Country Infrastructure upgrades have been completed in PNG (October 2019), however Covid-19 global pandemic international travel restriction has delayed further upgrades in other Pacific Island Countries as Contractors cannot mobilise to site to conduct the work.</p> <p>Disposal of the existing Pacific Patrol Boats is progressing in alignment with project needs.</p> <p><b>Materiel Capability Delivery Performance</b></p> <p>The first six vessels have been delivered to their recipient nations. COVID-19 caused delay to delivery of the vessel to Palau and is expected to delay delivery of the vessel to Kiribati. However, these delays are able to be accommodated within the overall project delivery schedule and are not expected to impact the project's achievement of Final Materiel Release.</p> <p><b>Note</b></p> <p>Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.</p>
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### 1.3 Project Context

<p><b>Background</b></p> <p>SEA 3036 Phase 1, Pacific Patrol Boat Replacement Project was initiated in 2014 to replace the 22 Pacific Patrol Boats (PPB) that were gifted to 12 Pacific Island Countries (PIC) between 1987 and 1997 under the auspices of the Pacific Maritime Security Program (PMSF). The project was mandated to deliver a new single class of vessel, built to contemporary regulatory standards of steel hulled construction, able to operate year round and enable basic local maintenance and repair in each nation.</p> <p>The participating nations are Palau, Federated States of Micronesia (FSM), Republic of Marshall Islands (RMI), Papua New Guinea (PNG), Solomon Islands, Kiribati, Tuvalu, Vanuatu, Fiji, Tonga, Samoa and Cook Islands. The Project will build and deliver 21 PPB Replacement (PPB-R) vessels for 13 nations. The 13<sup>th</sup> nation is Timor-Leste that was not part of the original PPB Program but was offered two (2) PPB-R vessels by the Australian Government.</p> <p>The PMSF aims to enhance practical cooperation across the South Pacific and build on the success of the PPB Program by broadening and strengthening the regions' capability to respond to issues such as maritime security, fisheries protection and transnational crime. Along with the PPB-R the PMSF will enhance cooperation through support to regional coordination centres and the provision of integrated aerial surveillance.</p> <p>A Request for Tender was released in March 2015 for up to 21 PPB-R vessels no longer than 40 metres, built to a Commercial Standard with a steel hull. Similar to the current PPBs, the new vessels were to be easy to operate and maintain. The tender also included a support contract for an initial period of 7 years. The tender closed in June 2015, evaluations were completed in September 2015 with an Offer Definition and Improvement Activity concluded in January 2016. Austal Ships Pty Ltd was the preferred tenderer.</p> <p>Combined Pass Project Approval was achieved in April 2016. Both the Acquisition and Support Contracts were signed with Austal Ships Pty Ltd in May 2016. The initial Acquisition Contract was for 19 vessels with a costed option for an additional two (2) PPB-R vessels, as Timor-Leste had not accepted the offer of two (2) vessels at contract signature. In December 2017, Timor-Leste accepted the offer and the Project Office exercised the costed option, through the execution of a contract change in April 2018.</p> <p>Construction of the first vessel commenced in April 2017 with launch conducted ahead of schedule in May 2018 and Acceptance by the Commonwealth (combined Initial Materiel Release and Initial Operational Capability) in November 2018. Final Materiel Release/Final Operational Capability will be achieved when the last vessel is accepted by the Commonwealth currently planned for October 2023.</p> <p>Due to a delay in the acceptance and handover of the first boat of approximately five weeks, caused by the establishment of a dedicated steel production facility and resolution of first of Class issues, Liquidated Damages have been accrued. Agreement has also been reached on provision of goods and services in kind to the Commonwealth in alignment with the value of Liquidated Damages accrued.</p> <p>In addition, infrastructure upgrades necessary to enable safe and secure berthing of the new vessels are required for all nations receiving the PPB-R vessels. The project is scoped and funded to complete minor infrastructure upgrades to existing infrastructure and major upgrades (inclusive of Timor-Leste upgrades) are to be funded as part of Defence's international engagement through the Defence Cooperation Program.</p> <p>The first two infrastructure contracts jointly funded (joint scope) by the project and the DCP have been awarded and works are underway. The first contract for delivery of upgrades in PNG, established in September 2018, has now been completed and was opened by the Minister of Defence in October 2019. The second contract for delivery of upgrades in Tuvalu, Tonga, Samoa, Fiji, Kiribati, Cook Islands and Vanuatu was established in February 2019 and is currently underway.</p>
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## Project Data Summary Sheets

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The project is only funded and scoped to deliver minor infrastructure upgrades. To standardise infrastructure delivery across the Pacific, it was planned to transfer the responsibility for execution of the infrastructure upgrades from the project to Indo-Pacific Enhanced Engagement (IPACE) Branch within Defence's International Policy Division. This was agreed and officially endorsed in September 2019.

#### Uniqueness

The PPB-R is a vessel being built to commercial standards that will be gifted to 13 nations. The vessel is being built to International Maritime Orders (IMO) requirements, under the Australian Maritime Safety Authority (AMSA) flag. Lloyds Register is the classification society and the vessel will meet class requirements. However, ultimately the PPB-R will not be put into class. The Project's Capability Manager is Navy with International Policy as the Sponsor of the PPB-R Project and the Pacific Maritime Surveillance Program. Once gifted, each vessel will become a sovereign asset of the recipient nations.

#### Major Risks and Issues

The Project is currently managing an issue related to Pacific nation crews unable to travel to Australia for conversion training and receive the PPB-R vessel.

The Project has identified one High risk relating to the COVID-19 pandemic impact with public health and supplier capabilities on project deliverables, and has retained another High risk, relating to current PPB movement to Australia.

The Project has retired all risks and issues relating to Infrastructure with these being transferred to IPACE for future management. Issue raised regarding the return of the second Tongan PPB is retired as the vessel arrived in Australia on 12 May 2020 for disposal.

#### Other Current Related Projects/Phases

N/A

#### Note

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

## Section 2 – Financial Performance

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

Date	Description	\$m	Notes
<b>Project Budget</b>			
Aug 14	Original Approved	5.7	1
Jan 15	Real Variation – Transfer	1.2	2
May 16	Government Combined Pass Approval	497.6	
	<b>Total at Second Pass Approval</b> (or key Government pre-Second Pass Approval)	504.5	
Jun 20	Exchange Variation	(0.2)	
Jun 20	<b>Total Budget</b>	504.3	
<b>Project Expenditure</b>			
Prior to Jul 19	Contract Expenditure - Austal	(97.3)	3
	Other Contract Payments/Internal Expenses	(15.0)	
		(112.3)	
FY to Jun 20	Contract Expenditure - Austal	(57.8)	4
	Other Contract Payments/Internal Expenses	(8.7)	
		(66.5)	
Jun 20	<b>Total Expenditure</b>	(178.8)	
Jun 20	<b>Remaining Budget</b>	325.5	
<b>Notes</b>			
1	This amount was for Initial Pass Project Approval.		
2	Transfer of funding to Defence Materiel Organisation, now known as Capability Acquisition and Sustainment Group, to support Offer Definition Improvement Activity and Anthropometric Study.		
3	Other contract payments and expenditure comprises of Pre Combined Pass expenditure (\$3.5m) and other project support contracted staff costs (\$7.4m), infrastructure costs (\$3.8m) and other direct project costs (\$0.3m).		
4	Other contract payments and expenditure includes infrastructure costs of (\$5.6m), project support contracted staff costs of (\$3.0m) and other direct project costs of (\$0.1m).		

### 2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
78.0	78.2	78.1	PBS – PAES: \$0.2m due to foreign exchange fluctuations. PAES – Final Plan: \$0.1m due to foreign exchange fluctuations.
Variance \$m	0.2	0.1	Total Variance (\$m): 0.1
Variance %	0.3	0.1	Total Variance (%): 0.1

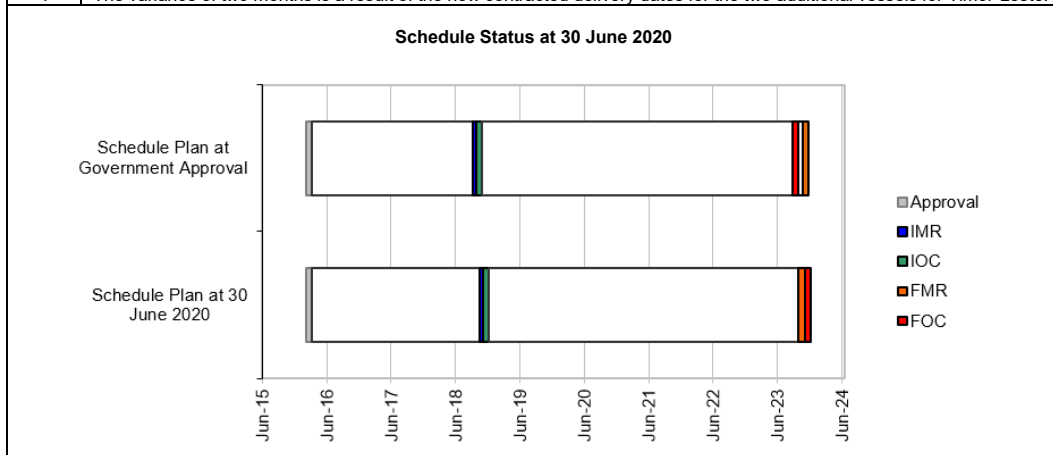


Notes	
1	The variance of three months is primarily due to equipment supply chain delays and first of class issues with set-to-work activities.
2	Testing of Boat 1 includes operation-like test activities in advance of Acceptance of Boat 1.
3	Acceptance marks the successful completion of all tests and crew conversion training. The Commonwealth accepts the vessel from the contractor and then gifts the vessel to the receiving nation.

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

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Oct 18	Nov 18	1	1,2
Initial Operational Capability (IOC)	Oct 18	Nov 18	1	3
Final Materiel Release (FMR)	Nov 23	Nov 23	0	1,2
Final Operational Capability (FOC)	Sep 23	Nov 23	2	3,4

Notes	
1	IMR and FMR dates were not scheduled at Combined Pass Government Approval.
2	IMR and FMR will be achieved at acceptance of boats by the Commonwealth.
3	IOC and FOC will be achieved at acceptance of the boats into PIC operational service. This is expected to occur simultaneously with IMR and FMR. The variance of one month is a result of delayed commencement of SATS and HATS for the first vessel, leading to a delay to delivery.
4	The variance of two months is a result of the now contracted delivery dates for the two additional vessels for Timor-Leste.

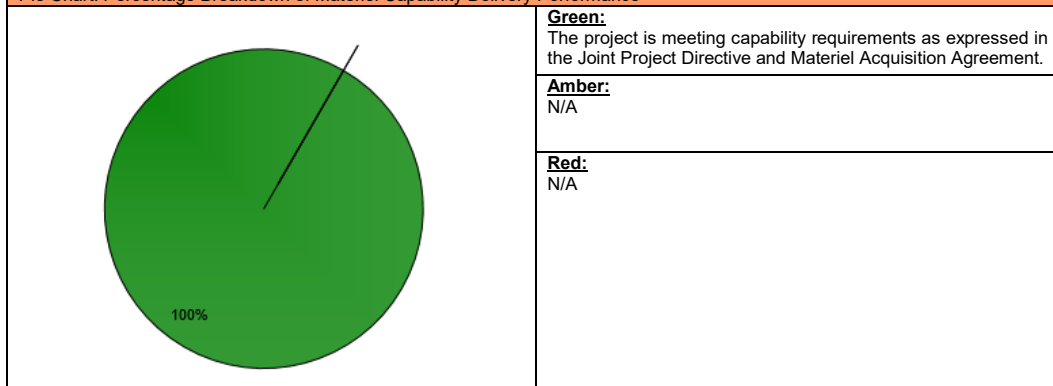


Note	
Forecast dates in Section 3 are excluded from the scope of the Auditor-General's Independent Assurance Report.	

## Section 4 – Materiel Capability Delivery Performance

### 4.1 Measures of Materiel Capability Delivery Performance

#### Pie Chart: Percentage Breakdown of Materiel Capability Delivery Performance



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)	First vessel and associated support system technical documentation, initial spares and logistics documentation delivered and accepted by the Commonwealth. IMR was achieved 30 November 2018.	Achieved
Initial Operational Capability (IOC)	First vessel accepted into the Pacific Island Country operational service. IOC was achieved 30 November 2018.	Achieved
Final Materiel Release (FMR)	Last Vessel (21) delivered, completed delivery of all remaining Acquisition Project Support deliverables and accepted by the Commonwealth including completion of transition tasks in accordance with the PPB-R Transition Plan. FMR is forecast to be achieved in November 2023.	Not yet achieved
Final Operational Capability (FOC)	All vessels accepted into their Pacific Island Country operational service. FOC is forecast to be achieved in November 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
There is a chance the infrastructure work required in each Pacific Island Country will not be completed prior to the arrival of the replacement vessels leading to an impact on reputation. This risk is relevant to the Pacific Maritime Security Program.	<b>Risk retired in Project Risk Log. Execution for Infrastructure Contracts has been transitioned from the Project to IPACE, Infrastructure and Contracting as at 06 Sep 2019. IPACE I&amp;C is the risk/issue owner and will manage this risk/issue. IPACE I&amp;C will be reporting on these program risks/issues in the Integrated Project Team meetings (held fortnightly) and Project Steering Group meetings (held biannually).</b>
There is a risk that the current PPBs will be either unable to transit to Australia or moved to Australia out of alignment with current planning leading to an impact to the phasing of Disposals costs incurred as part of the overall Project Budget.	Engage with Pacific Island Countries (PICs) & Maritime Surveillance Adviser and Technical Adviser via International Policy Division and Pacific Patrol Boat Systems Program Office to gain earliest advice on risk realisation.  Flexibility has been incorporated into the PPB Disposal contract signed 6 July 2018, however this is limited in scope. Funds have been made available to Materiel Logistics Disposal and Sales Branch (MLDS) for undertaking movement of vessels unable to transit to the disposal site under own power. These funds are to enable MLDS to promptly arrange movement of boats so as to avoid the risk of Disposals Contract costs being incurred. PPBSPO to conduct material condition assessments and advise on seaworthiness to sail.
Emergent Risks (risk not previously identified but has emerged during 2019-20)	
Description	Remedial Action
There is a chance that project deliverables will be affected by the COVID-19 pandemic leading to an impact on project scope, schedule and cost.	<b>Risk Management plan</b> <b>Remain aware of Government Departments' advice and actions regarding:</b> <ul style="list-style-type: none"> <li>Defence: WHS policy, flexible work arrangements, intelligence.</li> <li>Health: public health policy, restrictions and advice.</li> <li>Foreign Affairs and Trade: country and travel advice.</li> <li>Home Affairs: travel restrictions and border control.</li> <li>State/Local Governments' restrictions.</li> </ul>

#### 5.2 Major Project Issues

Description	Remedial Action
The acceptance of GCPBs has been affected by provision of crews to Austal for conversion training leading to an impact on project milestones.	PIC Government policies and restrictions Risk Management Plan Government Departments: <ul style="list-style-type: none"> <li>Defence: WHS policy, flexible work arrangements, intelligence.</li> <li>Health: public health policy, restrictions and advice.</li> <li>Foreign Affairs and Trade: country and travel advice.</li> <li>Home Affairs: travel restrictions and border control.</li> <li>State/Local Governments' restrictions.</li> </ul>

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The scope of Pacific Maritime Security Program infrastructure works required exceeds those to be implemented by the SEA3036 Phase 1 Project (using allocated funding) resulting in the inability for GCPB vessels to dock and remain docked in a safe and secure manner without significant inefficiency at all designated PIC home berths. This issue is relevant to the Pacific Maritime Security Program.	Issue retired in Project Risk Log. Execution for Infrastructure Contracts has been transitioned from the Project to IPACE, Infrastructure and Contracting as at 06 Sep 2019. IPACE I&C is the risk/issue owner and will manage this risk/issue. IPACE I&C will be reporting on these program risks/issues in the Integrated Project Team meetings (held fortnightly) and Project Steering Group meetings (held biannually).
Infrastructure works to be executed for Papua New Guinea were not completed in advance of the first GCPB (Ted Diro) arriving in country (at HMPNGS Tarangau), with a resultant minor impact to wharf operations and potential associated impact to the PNG international relationship. This issue is as a result of the realised first risk at Section 5.1.	Issue retired in Project Risk Log. Execution for Infrastructure Contracts has been transitioned from the Project to IPACE, Infrastructure and Contracting as at 06 Sep 2019. IPACE I&C is the risk/issue owner and will manage this risk/issue. IPACE I&C will be reporting on these program risks/issues in the Integrated Project Team meetings (held fortnightly) and Project Steering Group meetings (held biannually).
The second Tongan PPB (VOEA PANGAI) is due into the disposal site in Jul 19 and will not be able to transit.	Issue retired in Project Risk Log. VOEA PANGAI towed to Port Macquarie, NSW and transferred to Birdon Marine for disposal on 12 May 2020.
<b>Note</b>	
Major risks and issues in Section 5 are excluded from the scope of the Auditor-General's Independent Assurance Report.	

## Section 6 – Project Maturity

### 6.1 Project Maturity Score and Benchmark

Maturity Score		Attributes							Total
		Schedule	Cost	Requirement	Technical Understanding	Technical Difficulty	Commercial	Operations and Support	
Project Stage	Benchmark	10	8	8	8	9	8	9	60
Initial Materiel Release	Project Status	8	8	9	9	9	8	9	60
	Explanation	<ul style="list-style-type: none"><li>• Schedule: delivery of Boat 01 was delayed from 24 Oct 2018 to 30 Nov 2018, representing an approx. 5 week delay to Initial Material Release and coincidentally Initial Operational Capability. IMR and IOC were achieved on 30 Nov 2018</li><li>• Requirement: The design has been shown to meet all functional and performance requirements and has been accepted into service by the first three recipient nations</li><li>• Technical Understanding: The design is complete and the first three vessel have been accepted by Defence and transferred to recipient nations.</li></ul>							

The graph illustrates the Project Maturity Score progression from 13 to 70 across various project stages. A dashed red line marks the 60 score at the Initial Material Release (IMR) stage.

Project Stage	Maturity Score
Enter DCP	13
Decide Viable Capability Options	16
1st Pass Approval	21
Industry Proposals / Offers	30
2nd Pass Approval	35
Contract Signature	42
Preliminary Design Review(s)	45
Detailed Design Review(s)	50
Complete Sys. Integ. & Test	55
Complete Acceptance Testing	57
Initial Material Release (IMR)	60
Final Material Release (FMR)	63
Final Contract Acceptance	65
MAA Closure	66
Acceptance Into Service	67
Project Completion	70

2018-19 MPR Status - - - - - 2019-20 MPR Status - - - - -

Section 7 – Lessons Learned

7.1 Key Lessons Learned

Project Lesson	Categories of Systemic Lessons
Allocate schedule allowance to enable ramp-up and learning of Defence requirements for Contractors inexperienced with Defence contracting templates.	Schedule Management
Develop, maintain and leverage positive Contractor relationships.	Contract Management
Use of review teams for assurance on Contract Development when tailoring Defence contracting templates.	Requirements Management
Work with Contractor to ensure the broader implications of key milestone delay are understood and encourage early advice on delay.	Schedule Management

Section 8 – Project Line Management

8.1 Project Line Management as at 30 June 2020

Position	Name
Division Head	Ms Sheryl Lutz
Branch Head	Mr. Peter Croser
Project Director	Mr. David Kingston

Project Data Summary Sheet<sup>171</sup>

Project Number	Land 53 Phase 1BR
Project Name	Night Fighting Equipment Replacement
First Year Reported in the MPR	2018-19
Capability Type	Replacement
Acquisition Type	MOTS
Capability Manager	Chief of Army
Government 1st Pass Approval	Dec 13
Government 2nd Pass Approval (or key Government pre-Second Pass Approval)	Aug 16
Budget at 2nd Pass Approval (or key Government pre-Second Pass Approval)	\$460.3m
Total Approved Budget (Current)	<b>\$446.7m</b>
2019-20 Budget	<b>\$78.9m</b>
Project Stage	Initial Materiel Release
Complexity	ACAT III



## Section 1 – Project Summary

## 1.1 Project Description

Land 53 Phase 1BR addresses the situational awareness requirements of the dismounted combatant through the progressive replacement of night vision and night aiming devices over the period 2017 to 2023.

The project is being implemented in two tranches. Tranche 1 is replacing the current NINOX system (acquired in 1998) with leading edge Military Off the Shelf (MOTS) Binocular Night Vision Devices (BNVD), Laser Aiming and Illumination Devices (LAID), Laser Aiming Illumination and Ranging Devices (LAIRD), and mounting systems to Combat Helmets.

Tranche 2 of the project will examine emerging technologies that may augment, supplement or enhance the Tranche 1 capability. A submission regarding Tranche 2 will be considered by Government in 2020.

The project is also responsible for establishing the support arrangements for the equipment being acquired.

## 1.2 Current Status

**Cost Performance**In-year

As at **30 June 2020**, the **overspend of \$1.8m primarily due to COVID-19 pandemic related FOREX losses (\$2.5m). FOREX losses have been partly offset by reduced Defence activity (\$0.7m).**

Project Financial Assurance Statement

As at **30 June 2020**, project Land 53 Phase 1 BR has reviewed the project's approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial contractual obligations of Defence for this project, current known risks and estimated future expenditure, Defence considers as at the reporting date, there is sufficient budget remaining for the project to complete against the agreed scope.

Contingency Statement

The project has not applied contingency in the financial year.

**Schedule Performance**

The project is designed around progressive production, receipt and issue of systems to combat elements throughout the Australian Defence Force, combined with individual and group training and the establishment of support systems in each location.

The project has achieved the first **three** of five delivery based milestones (Materiel Releases) which will occur over the period 2017 to 2021.

Initial Materiel Release (IMR) concluded on 29 November 2017, as scheduled. The Chief of Army declared Initial Operating Capability (IOC) on 4 December 2018 based on completion of Materiel Release 2, and the project is on track to meet the remaining milestones.

**Materiel Capability Delivery Performance**

The project has achieved IMR and IOC, and remains on track to deliver the capability approved at Second Pass. No material issues or changes have occurred that will adversely affect ongoing delivery of requirements.

**Note**

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

<sup>171</sup> Notice to reader

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

## 1.3 Project Context

<b>Background</b>	
<p>Land 53 Phase 1BR obtained First Pass Approval on 16 December 2013 and is the Australian Defence Force's major effort for the continued development of the Land Force night fighting capability. The project will refresh the dismantled night fighting capability via the replacement of individual night fighting systems to maintain operational superiority on night operations.</p> <p>On 23 August 2016, the Project achieved Second Pass Approval to replace the in-service NINOX and Night Aiming Devices progressively over five years through the acquisition and support of:</p> <ul style="list-style-type: none"> <li>• Improved Binocular Night Vision Devices (BNVD)</li> <li>• Lighter and more ergonomic helmet mounting systems (Mounts)</li> <li>• Lighter and more ergonomic Head Harnesses (Harnesses)</li> <li>• An improved Laser Aiming, Illumination Device (LAID)</li> <li>• Laser Aiming Illumination Ranging Device (LAIRD)</li> <li>• Weapons integration of the LAID and LAIRD for specified ADF weapons</li> </ul> <p>There have been no strategic changes since Government approval, with the project remaining within its approved scope, on schedule and within budget.</p> <p>The Land 53 Phase 1BR Tranche 1 Acquisition and Support Contracts were enabled on 29 September 2016 with <b>Mission Systems Australia Pty Ltd (formerly known as L3 Oceania Pty Limited), a subsidiary of L3Harris Technologies Inc</b>, supplying BNVD, Mounts, LAID and LAIRD. The acquisition of laser devices under those contracts was partially funded by Land 125 Phase 3C. A Standing Offer Deed for Head Harnesses was established on 15 December 2016 with Spearpoint Solutions &amp; Technology Pty Ltd.</p> <p>In addition to the acquisition and support of the Tranche 1 equipment, the project will integrate the LAID and LAIRD with specified ADF small weapons by June 2021. Integration will be achieved using existing ARMTSPO contracts with the relevant weapon suppliers, principally Thales Australia Limited.</p> <p>Land 53 Phase 1BR (Tranche 2): The 23 August 2016 Second Pass Approval established a tranching approach to delivering night fighting capability, that will allow Defence to augment, supplement or enhance the Tranche 1 fleet with emerging technology to maintain operational superiority.</p> <p>An open Invitation to Register Interest (ITRI) in supplying emerging night vision technology for Tranche 2 closed on 13 July 2018. Based on ITRI responses, potential tenderers were selected to participate in a limited Request for Tender which closed on 14 February 2019. Evaluation of potential technologies (including through extensive field trials) will conclude in October 2019 and will inform the Gate 2 submission to Government. The submission will seek access to <b>\$170.4m</b> allocated in the Defence Integrated Investment Program.</p>	
<b>Uniqueness</b>	
<p>The project has established a non-traditional support system, transferring transactional responsibility for warehousing, distribution, and maintenance and inventory management to its supplier.</p> <p><b>Mission Systems Australia</b> has established a secure facility at Eight Mile Plains in Queensland to support the project. <b>Mission Systems Australia</b> uses Defence logistics management information systems to manage the equipment from acceptance to disposal, and arranges secure commercial freight providers to deliver, recover and replace unserviceable equipment from regional locations.</p>	
<b>Major Risks and Issues</b>	
<p>There are no major risks impacting the project. While all aspects are monitored, significant issues have not impacted capability or project delivery to date.</p>	
<b>Other Current Related Projects/Phases</b>	
<p>Land 125 Phase 3C is delivering the Enhanced F88 weapons system, including enhanced target acquisition ancillaries to the Australian Defence Force. Project Land 125 Phase 3C Second Pass approval included provision for the acquisition of 4,360 LAIRD and 5,010 LAID aiming devices. Land 53 Ph1BR acquired those aiming devices by November 2018 and is managing those targeting devices.</p>	
<b>Notes</b>	
<p>Major risks and issues are excluded from the scope of the Auditor-General's Independent Assurance Report.</p>	

## Section 2 – Financial Performance

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

Date	Description	\$m	Notes
<b>Project Budget</b>			
Dec 13	Original Approved (Government First Pass Approval)	3.0	
Aug 16	Government Second Pass Approval	457.3	
	<b>Total at Second Pass Approval</b> (or key Government pre-Second Pass Approval)	<b>460.3</b>	
Jun 20	Exchange Variation	(13.6)	
	<b>Total Budget</b>	<b>446.7</b>	
<b>Project Expenditure</b>			
Prior to Jun 19	Contract Expenditure – <b>Mission Systems Australia</b> (Acquisition)	(176.1)	1
	Contract Expenditure – <b>Mission Systems Australia</b> (Support)	(10.2)	1
	Other Contract Payments/Internal Expenses	(19.5)	2
		(205.8)	
FY to Jun 20	Contract Expenditure – <b>Mission Systems Australia</b> (Acquisition)	(73.6)	1
	Contract Expenditure – <b>Mission Systems Australia</b> (Support)	(4.5)	1

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	Other Contract Payments/Internal Expenses	(2.6)	3
Jun 20	<b>Total Expenditure</b>	(80.7) (286.5)	
Jun 20	<b>Remaining Budget</b>	160.2	
<b>Notes</b>			
1	In addition to this expenditure by Land 53 Phase 1BR, Land 125 Phase 3C has expended \$45.9m against this contract. This reflects a total expenditure of <b>\$310.3m</b> to date by both Land 125 Phase 3C and Land 53 Phase 1BR.		
2	Other expenditure comprises <b>Thales Australia</b> weapons integration, operating expenditure, contractors, legal costs, travel, and other capital expenditure not attributable to the main contracts.		
3	Other expenditure comprises weapons integration, operating expenditure, contractors, travel, and other capital expenditure not attributable to the main contracts.		

## 2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Defence's Explanation of Material Movements
90.8	79.5	78.9	PBS to PAES: The variation is primarily due to efficiencies made in the support requirements for Tranche 1 of this project, which are now forecast for reinvestment in Tranche 2 deliveries. PAES to Final Plan: The variation relates to Pre-ERC exchange rate update.
Variance \$m	(11.3)	(0.6)	Total Variance (\$m): (11.9)
Variance %	(12.4)	(0.8)	Total Variance (%): (13.1)

## 2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
			Australian Industry	The overspend of \$1.8m is primarily due to COVID-19 pandemic related FOREX losses (\$2.5m). FOREX losses have been partly offset by reduced Defence activity (\$0.7m).
			Foreign Industry	
			Early Processes	
			Defence Processes	
		2.5	Foreign Government Negotiations/Payments	
		(0.7)	Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
78.9	80.7	1.8	<b>Total Variance</b>	
		2.3	<b>% Variance</b>	

## 2.3 Details of Project Major Contracts

Contractor		Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
			Signature \$m	30 Jun 20 \$m			
Mission Systems Australia (Acquisition)		Jul 16	48.5	337.7	Firm	ASDEFCON (Complex)	1,2
Mission Systems Australia (Support)		Sep 16	24.9	23.4	Firm	ASDEFCON (Complex)	1,3
Notes							
1	Contract value as at <b>30 June 2020</b> is based on actual expenditure to <b>30 June 2020</b> and remaining commitment at current exchange rates, including adjustments for indexation (where applicable).						
2	At signature, this contract was entirely funded by Land 125 Phase 3C and only included Land 125 Phase 3C scope (see Quantities as at Signature). The contract scope was expanded in September 2016 to include Land 53 Phase 1BR systems. Additional quantities of BNVD, LAID, and LAIRD and associated consumable items have been acquired to address repair and attrition requirements, with corresponding increases in price. <b>The increase in Contract value from 30 Jun 19 (\$288.3m) was due to programmed acquisition of \$41.010m AUD of Binocular Night Vision Devices (BNVD) and Laser Aiming and Illumination Devices (LAID).</b>						
3	The support contract for the equipment acquired by Land 53 Phase 1BR was signed concurrently with the expansion of the acquisition contract to include Land 53 Phase 1BR scope. This contract will support all equipment under the acquisition contract, funded by both Land 125 Phase 3C and Land 53 Phase 1BR.						
Contractor		Contracted Quantities as at			Scope		Notes
		Signature	30 Jun 20				
Mission Systems Australia (Acquisition)		4,360 LAIRD 5,010 LAID	21,833 BNVD 18,295 LAID 5,562 LAIRD 4,800 Mounts		The contractor will deliver BNVD, LAID, LAIRD and Mounts.		1,2
Mission Systems Australia (Support)		N/A	N/A		The contractor will support, repair, and maintain the equipment delivered under the acquisition contract.		

<b>Major equipment accepted and quantities to 30 Jun 20</b>	
<b>20,825 BNVD; 16,440 LAID; 5,562 LAIRD; 4,555 Mounts; and a quantity of spare parts items.</b>	
<b>Notes</b>	
1	The contract includes provision for acquisition of quantities "as required" for repair and attrition stock.
2	The number of Mounts to be provided is dependent on existing holdings and attrition, as this is an in service item.

### 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	N/A	N/A	N/A	N/A	N/A	1
Preliminary Design	N/A	N/A	N/A	N/A	N/A	1
Critical Design	N/A	N/A	N/A	N/A	N/A	1
<b>Notes</b>						
1	Primary Items are Military Off the Shelf (MOTS), and the contracts include agreed commercial product specifications. Technical Certification of BNVD, LAID and LAIRD was concluded in May 2017, prior to achievement of IMR.					

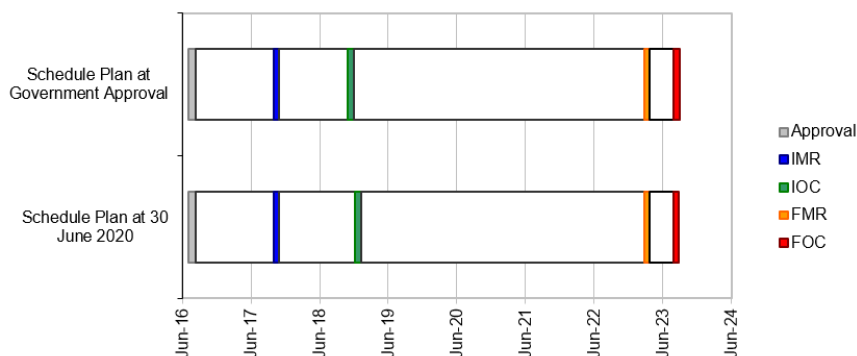
#### 3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System / Platform Variant	Original Planned	Current Contracted	Achieved / Forecast	Variance (Months)	Notes
System Integration	N/A	N/A	N/A	N/A	0	1
Acceptance	N/A	N/A	N/A	N/A	0	2
<b>Notes</b>						
1	As the equipment is MOTS, System Integration assessment was undertaken as part of product selection and subsequent technical certification. Contractor Test and Evaluation of Systems Integration is not required as there are no Major System or Platform Variants.					
2	Delivery of equipment occurs monthly, in accordance with the contract delivery schedule. Product and Function Compliance Assurance (FCA / PCA) of compliance with the contract specifications is undertaken by the supplier prior to Acceptance.					

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

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Nov 17	Nov 17	0	
Materiel Release 2 (MR2)	Nov 18	Dec 18	1	1
Initial Operational Capability (IOC)	Nov 18	Dec 18	1	1
Materiel Release 3 (MR3)	Nov 19	Nov 19	0	
Materiel Release 4 (MR4)	Nov 20	Nov 20	0	
Materiel Release 5 (MR5)	Mar 21	May 21	0	
Final Materiel Release (FMR)	Mar 23	Mar 23	0	2
Final Operational Capability (FOC)	Sep 23	Sep 23	0	2
<b>Notes</b>				
1	Achievement of IOC reflected completion of MR2. The Capability Manager declared IOC in December 2018 and the delay was administrative.			
2	FMR is scheduled for two years after the last issue of Tranche 1 equipment to units under the MAA. The MAA will be amended to reflect Governments decision on any Tranche 2 acquisition. Any residual funding from Tranche 1 funding is to be reinvested into Tranche 2 funding in accordance with Government decisions. FOC occurs six months after FMR, enabling alignment of those milestones with the supply of Tranche 2 equipment, if approved.			

**Schedule Status at 30 June 2020**



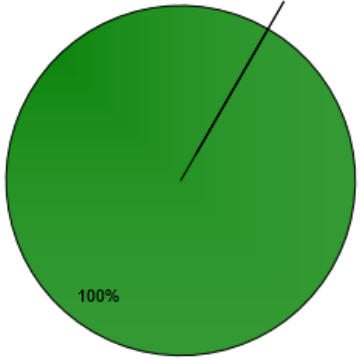
<b>Notes</b>	
Forecast dates in Section 3 are excluded from the scope of the Auditor-General's Independent Assurance Report.	

### Project Data Summary Sheets

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## Section 4 – Materiel Capability Delivery Performance

### 4.1 Measures of Materiel Capability Delivery Performance

Pie Chart: Percentage Breakdown of Materiel Capability Delivery Performance	
	<b>Green:</b> The project is currently meeting the Materiel Capability Requirements as expressed in the Materiel Acquisition Agreement.
	<b>Amber:</b>
	<b>Red:</b>
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 constituted the delivery and acceptance of 807 BNVD, 390 LAID, 416 LAIRD, 177 Mounts and 807 Harnesses to the ADF. IMR was achieved in November 2017.	Achieved
Initial Operational Capability (IOC)	IOC constituted the acceptance, delivery and certification of equipment into a Combat Brigade with associated support systems including training, facilities and supplies. IOC was declared in December 2018.	Achieved
Final Materiel Release (FMR)	FMR includes the delivery and acceptance of the Tranche 1 Mission System defined as 18760 BNVD, 14400 LAID, 4360 LAIRD, up to 2792 Helmet Mounts and up to 9380 Head Harnesses.  FMR also includes the delivery and acceptance of a Support System comprising a Loan Pool and Repair and Attrition Stock (which will be acquired as required). The Loan Pool is defined as 2008 BNVD, 3129 LAID, 946 LAIRD, 2008 Helmet Mounts and up to 1413 Head Harnesses.  FMR is forecast to be achieved in March 2023. The constitution of FMR may be altered by the approval of Tranche 2.	Not Yet Achieved
Final Operational Capability (FOC)	FOC constitutes acceptance, delivery and certification of all equipment and a support system, approval of the training system and confirmation that all updates to doctrine and policy are achieved.  FOC is forecast to be achieved in September 2023. The constitution of FOC may be altered by the approval of Tranche 2.	Not Yet Achieved

## Section 5 – Major Risks and Issues

### 5.1 Major Project Risks

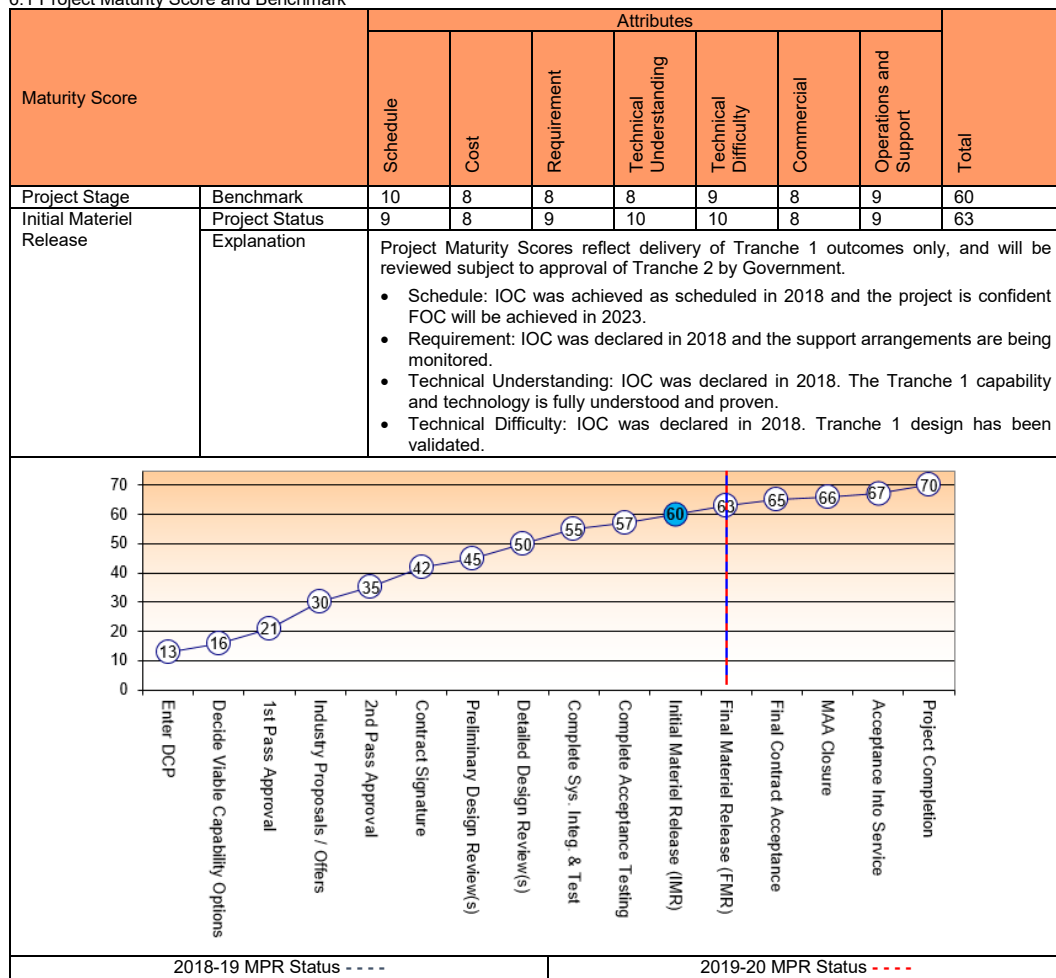
Description	Remedial Action
N/A	N/A

### 5.2 Major Project Issues

Description	Remedial Action
N/A	N/A
Notes	
Major risks and issues in Section 5 are excluded from the scope of the Auditor-General's Independent Assurance Report.	

## Section 6 – Project Maturity

### 6.1 Project Maturity Score and Benchmark



## Section 7 – Lessons Learned

### 7.1 Key Lessons Learned

Project Lesson	Categories of Systemic Lessons
N/A	N/A

## Section 8 – Project Line Management

### 8.1 Project Line Management as at 30 June 2020

Position	Name
Division Head	MAJGEN Andrew Bottrell
Branch Head	BRIG David Smith
Project Director	Emma Enever
Project Manager	Mark Newman

## Project Data Summary Sheets

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## Project Data Summary Sheet<sup>172</sup>

Project Number	SEA 1439 Phase 3
Project Name	<b>COLLINS CLASS SUBMARINE RELIABILITY AND SUSTAINABILITY</b>
First Year Reported in the MPR	2009-10
Capability Type	Upgrade
Acquisition Type	Australianised MOTS
Capability Manager	Chief of Navy
Government 1st Pass Approval	N/A
Government 2nd Pass Approval (or key Government pre-Second Pass Approval)	Sep 00
Budget at 2 <sup>nd</sup> Pass Approval (or key Government pre-Second Pass Approval)	\$72.0m
Total Approved Budget (Current)	<b>\$445.8m</b>
2019-20 Budget	<b>\$15.9m</b>
Project Stage	Initial Materiel Release
Complexity	ACAT III



### Section 1 – Project Summary

#### 1.1 Project Description

SEA 1439 Phase 3 is a program of upgrades to Collins Class platform systems and shore infrastructure to improve the Class reliability, sustainability, safety and capability for each of the six submarines.

#### 1.2 Current Status

##### Cost Performance

###### In-year

This year the project underspent by **\$2.7m** against the **2019-20** budget of **\$15.9m**. The underspend was **primarily due to a lower than anticipated spend with the prime contractor**.

##### Project Financial Assurance Statement

As at **30 June 2020**, project SEA 1439 Phase 3 has reviewed the approved scope and budget for those elements required to be delivered by the project. Having reviewed the current financial and contractual obligations of the project, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget remaining for the project to complete against the agreed scope.

##### Contingency Statement

The project has not applied contingency in the financial year.

##### Schedule Performance

The project consists of 24 separate sub-projects of which the outstanding elements are aligned to the Collins Class Submarine Integrated Master Schedule (IMS). The IMS depicts the submarine maintenance periods where project implementation can be performed. Submarine installations are consistent with the approved Materiel Acquisition Agreement (MAA) schedule; however, each installation is dependent on the Full Cycle Docking (FCD) program and Enterprise priorities, consequently completion dates vary according to the maintenance program and the focus of ensuring submarines availability targets are achieved.

Testing for Special Forces upgrades and torpedo decoy capability has been completed, with formal IOC for Special Forces upgrade forecast for **October 2021** and formal FOC subsequently forecast for **December 2022**. Formal FOC for the torpedo decoy has been realigned with the remaining sub-projects. FMR and FOC (all capabilities delivered) remains forecast for **December 2022** and June 2023 respectively.

#### 172 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 Assurance Report* by the Auditor-General in **Part 3** of this report.

### **Materiel Capability Delivery Performance**

Only two sub-projects provide new capabilities; Special Forces Upgrade and the Torpedo Decoy. The remaining sub-projects are medium to low complexity engineering enhancements. The Special Forces upgrade provides three capabilities. Two have achieved Operational Release (OR), while the third capability was delayed due to required safety modifications which are now complete, with formal Initial OR expected to be achieved by **July 2021**.

Torpedo Decoy received Initial OR on 2 May 2014 by Chief of Navy.

Fourteen engineering enhancements have been completed by the project. The remaining enhancements will be implemented progressively until 2022 subject to submarine availability and the FCD program.

#### **Note**

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

### **1.3 Project Context**

#### **Background**

In 1999, Government sponsored the '*McIntosh and Prescott Report*' into submarine capability, which was followed by a subsequent review by Head Submarine Capability Team who identified capability, reliability and sustainability issues with the Collins Class platform and associated shore infrastructure. In 2000, Government approved project funds to design and implement engineering enhancements for as many of these capability and materiel deficiencies as possible within the allocated budget. Government also approved a "global budget" whereby Head Maritime Systems could approve transfer of funding between SEA 1439 Phase 3, SEA 1439 Phase 4B (Improvements to Collins Sensors), SEA 1439 Phase 4A (Replacement Combat Systems) and SEA 1429 (Replacement Heavyweight Torpedo) to achieve optimum capability. Under the global budget there have been reductions in funding allocations to SEA 1439 Phase 3 in favour of SEA 1439 Phase 4A and SEA 1429, with a commensurate reduction in the number of engineering enhancements to be implemented through SEA 1439 Phase 3.

The scope of this project is limited to the reliability and sustainability issues identified in the 1999 review and not the more contemporary reliability and sustainability issues relating to diesel engines, generators, batteries or the main motor; those issues are being addressed under the submarine sustainment program.

Many of the engineering enhancements can only be installed during the submarine FCD program and although most design and development activities are complete, submarine upgrades are contingent on the FCD program, which will run to 2022.

A total of 24 platform upgrades were originally identified in the initial MAA. However, in 2011 two were removed due to one being technically infeasible and the other overlapping with another project. The remaining 22, which consisted of two new capabilities and 20 engineering enhancements, were identified for action under the project. Fourteen of these engineering enhancements have been completed and the two new capabilities are being implemented.

At that time, the two new capabilities and core engineering enhancements managed by the SEA 1439 Phase 3 project, which represented the highest priority and spend profile, and specifically disclosed in this report include:

- **Special Forces Upgrade (New Capability):** To provide three basic levels of capability and to further enhance the capabilities to a fully deployable state.
- **Torpedo Counter Measures Internal Stores (Torpedo Decoy) (New Capability):** To provide a programmable counter measure against torpedos.
- **Fire Fighting Upgrade (Engineering Enhancement):** Upgrade to the firefighting systems onboard including greater protection from fire and its toxic by-products.
- **Sewage System Upgrade (Engineering Enhancement):** Automation of the sewage discharge system and thereby reduce the risks of exposure to toxic gases.
- **Fast-Track modifications to HMA Ships *Collins, Farncomb, Waller and Rankin* (Engineering Enhancement):** Address platform build deficiencies in a holistic get-well program.

The remaining platform upgrades (engineering enhancements) are outlined in ANAO Report No. 17 2010-11: *2009-10 Major Projects Report*.

In November 2017, Government approved the transfer of the remaining budget and scope of projects SEA 1114 Phase 3 and SEA 1439 Phase 5B1 into SEA 1439 Phase 3 to realise project management, reporting and workforce efficiencies in the Collins Class Submarine Program. This represents two additional engineering enhancements:

- **Dived Safety Modifications:** To improve safety while submarines are dived. The SEA 1439 Phase 3 project will perform the final two submarine installations.
- **Communications Mast and Antenna Replacement:** To replace the communications fit developed under Project SEA1439 Phase 4B. The SEA 1439 Phase 3 project will perform the final submarine installation.

The transfer of this scope has not impacted the forecast FMR or FOC milestones.

#### **Uniqueness**

Project SEA 1439 Phase 3 installs prioritised engineering enhancements and acquires replacement materiel as a part of ensuring continuous improvement of the Submarine fleet. Engineering enhancements were undertaken by ASC under an annualised cost-plus Through Life Support Agreement (TLSA); however as of 1 July 2012 this work is now contracted under an ISSC initially as a performance based and cost-reimbursement arrangement with a subsequent three year target based incentive period. Implementation of the ASC contract scope of work is linked to the boat IMS and driven by availability requirements mandated by Chief of Navy and General Manager Submarines.

Budget management under the cost reimbursement arrangement of the ISSC presents a major challenge for the project in achieving monthly expenditure. This is due to the alignment of linear phased expenditure and the supplier's ability to move work within the total work program to achieve Enterprise agreed objectives and contracted performance goals.

## **Project Data Summary Sheets**

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<p><b>Major Risks and Issues</b></p> <p>Risks associated with engineering enhancements (including elements of the Firefighting and Special Forces upgrades) are being actively addressed by the project, as evidenced by two risks being retired in 2019 and a further two risks having post mitigation risk ratings of Low and Medium.</p> <p>The technical challenges with the Special Forces and Fire Fighting sub-projects of the project have increased overall cost and schedule risk, however neither sub-project is expected to require amendment to the project's approved budget, capability delivery or Final Operational Capability date.</p>
<p><b>Other Current Related Projects/ Phases</b></p> <p><b>SEA 1114 Phase 3 Dived Safety Modifications:</b> The remaining project scope includes modifications to increase the safety of the submarines while dived. Government approved a change of scope to have SEA 1114 Phase 3 fit four submarines with the modifications and SEA 1439 Phase 3 fit two submarines with the modifications. <b>The Chief of Navy declared Final Operational Capability for this project in August 2019.</b></p> <p><b>SEA 1439 Phase 3.1 Collins Obsolescence Management - Integrated Ship Control Management and Monitoring System Obsolescence:</b> Project scope includes remediating obsolescence of the Integrated Ship Control Management and Monitoring System in the Collins Submarines and shore facilities.</p> <p><b>SEA 1439 Phase 5B1 Communications Mast and Antenna Replacement Class Fit:</b> The project aims to fit five submarines with the communications fit developed and tested under Project SEA 1439 Phase 4B, along with one spare antenna, one spare mast raising equipment and spares. In November 2017, Government approved a change of scope to have SEA 1439 Phase 5B1 fit four submarines with the communications fit and SEA 1439 Phase 3 fit one submarine with the communication fit. <b>The Chief of Navy declared Final Operational Capability for this project in October 2019.</b></p> <p><b>SEA 1439 Phase 5B2 Collins Class Communications and Electronic Warfare Program:</b> The Project scope is to enhance the Communications and Electronic Warfare capabilities of the Collins Class submarine. The project is broken up into two sections - the Modernised Submarine Communications System, an upgrade to the existing on board communications system, and the Microwave Electronic Support Measures, an enhancement to the existing Electronic Warfare capability.</p> <p><b>SEA 1439 Phase RCE3 EHF Communications Capability:</b> Extreme High Frequency (EHF) Communications Capability for a single Collins Class Submarine. <b>The Chief of Navy declared Final Operational Capability for this project in October 2019.</b></p> <p><b>SEA 1439 Phase 6 Collins Sonar Capability Assurance Program:</b> The project scope is to address obsolescence and capability deficiencies in the Collins Class Sonar System and establish an ongoing capability assurance program.</p>
<p><b>Note</b></p> <p>Major risks and issues are excluded from the scope of the Auditor-General's Independent Assurance Report.</p>

## Section 2 – Financial Performance

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

Date	Description	\$m	Notes
	<b>Project Budget</b>		
Sep 00	Original Approved (Second Pass equivalent)	72.0	
Apr 01	Real Variation - Transfers	3.7	1
Jul 01	Real Variation - Scope	302.8	2
Sep 02	Real Variation - Transfers	(42.0)	3
Aug 04	Real Variation - Budgetary Adjustments	(0.3)	4
Aug 05	Real Variation - Budgetary Adjustments	(0.5)	5
Oct 06	Real Variation - Scope	7.5	6
Feb 19	Real Variation - Scope	33.7	8
		304.9	
Jul 10	Price Indexation	74.4	7
Jun 20	Exchange Variation	(5.5)	
Jun 20	<b>Total Budget</b>	<b>445.8</b>	
	<b>Project Expenditure</b>		
Prior to Jul 19	Contract Expenditure - ASC Pty Ltd	(262.5)	
	Other Contract Payments / Internal Expenses	(115.8)	9
		(378.3)	
FY to Jun 20	Contract Expenditure - ASC Pty Ltd	(3.8)	
	Other Contract Payments / Internal Expenses	(9.3)	10
		(13.1)	
Jun 20	<b>Total Expenditure</b>	<b>(391.4)</b>	
Jun 20	<b>Remaining Budget</b>	<b>54.4</b>	
	<b>Notes</b>		
1	Transfer from SEA 1439 Phase 1B.		
2	Implementation of a reliable and sustainable Platform (full scope).		



3	Transfer to SEA 1439 Phase 4A as part of initial approval.
4	Administrative Savings harvest.
5	Skilling of Australia's Defence Industry harvest.
6	Real Cost Increase for Special Forces Upgrade modification to an additional Collins Class submarine.
7	Up until July 2010, indexation was applied to project budgets on a periodic basis. The cumulative impact of this approach was \$66.7m. In addition to this amount, the impact on the project budget as a result of out-turning was a further \$7.7m having been applied to the remaining life of the project.
8	The Total Budget was increased in FY18/19 to \$445.3m, following the transfer of scope from Projects SEA 1114 Phase 3 and SEA 1439 Phase 5B1.
9	Other expenditure comprises <b>\$56.7m</b> against multiple minor contracts with Defence companies (including Australian companies), contractor and consultancy services associated with the delivery of this project and project specific travel expenses. Other examples of significant expenditure include \$12.3m for the Propulsion Control Reference System, \$11.7m to L3 Nautronix Ltd for the underwater communications system and sonobuoy, \$9.3m for the Towed Array Handling System, <b>\$8.2m</b> for general operating expenditure, \$4.7m for contractor service providers, \$4.1m for minor contracts, \$3.7m with Thales for the Underwater Telephone, \$3.1m for decoy procurement, and \$2.0m for generator procurement.
10	Other expenditure comprises <b>\$8.4m</b> for <b>propeller FMS case payment</b> , <b>\$0.6m</b> for <b>decoy procurement</b> <b>\$0.3m</b> for other <b>capital and operating expenditure</b> .

## 2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
5.8	15.9	15.9	PBS-PAES: Revised upwards by <b>\$10.1m</b> due to <b>propeller FMS case payment moved from FY18/19, additional decoy procurement and revised CASG estimates</b> .
Variance \$m	10.1	0.0	Total Variance (\$m): <b>10.1</b>
Variance %	174.1	0.0	Total Variance (%): <b>174.1</b>

## 2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(2.7)	Australian Industry	The <b>\$2.7m underspend</b> was primarily due to the lower than anticipated spend with the prime contractor.
			Foreign Industry	
			Early Processes	
			Defence Processes	
			Foreign Government	
			Negotiations/Payments	
			Cost Saving	
			Effort in Support in Operations	
			Additional Government Approvals	
15.9	13.1	(2.7)	Total Variance	
		(17.2)	% Variance	

## 2.3 Details of Project Major Contracts

Details of Project Major Contracts						
Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 20 \$m			
ASC Pty Ltd	Jul 12	N/A	N/A	Variable (Cost Reimbursement)	ASDEFCON	1
Notes						
1	The contract is comprised of five year Performance Periods from 1 July 2014 - Target Cost Incentive Model arrangements with Direct Project Costs (DPCs) reimbursed subject to defined rules and constraints and an agreed Target Cost Estimate of DPCs for the five year Period, reset at the end of three years. The PP3 extension to the ISSC was signed in June 2017.					
Contractor		Quantities as at		Scope		Notes
		Signature	30 Jun 20			
ASC Pty Ltd		N/A	N/A	See 1.3 Project Context: Background for further information.		
Major equipment accepted and quantities to 30 Jun 20						
A total of 24 platform upgrades (consisting of two new capabilities and 22 engineering enhancements) continue to be progressed for each of the six submarines - subject to the IMS.						

## Section 3 – Schedule Performance

## 3.1 Design Review Progress

Review	Major System / Platform Variant	Original Planned	Current Planned (Note 1)	Achieved / Forecast (Note 1)	Variance (Months)	Notes
• Final Design Review	Special Forces Upgrade	N/A	N/A	Dec 04	N/A	2
	Torpedo Decoy	Jun 10	N/A	Jul 10	1	

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• First of Class Implementation	Fire Fighting Upgrade	N/A	N/A	Jun 04	N/A	2
	Sewage System Upgrade	N/A	N/A	Nov 04	N/A	2
	Fast Track Enhancements	N/A	N/A	N/A	N/A	2
	Special Forces Upgrade	Jun 05	N/A	Oct 07	28	3,4,7
	Torpedo Decoy	Jun 10	N/A	Jun 10	0	
	Fire Fighting Upgrade (RANKIN)	Jul 06	N/A	Oct 07	15	
	Sewage System Upgrade (WALLER)	Jul 06	N/A	Jul 08	24	
	Fast Track Enhancements (RANKIN)	May 01	N/A	Jun 06	61	
• Full Class Implementation	Special Forces Upgrade	May 08	May 18	Jul 18	122	3,4,7
	Torpedo Decoy	Oct 13	N/A	Dec 13	2	5
	Fire Fighting Upgrade (DECHANEUX)	Sep 22	N/A	May 22	(4)	6
	Sewage System Upgrade (COLLINS)	Mar 17	N/A	Jun 18	15	7
	Fast Track Enhancements (WALLER)	Jul 06	N/A	Nov 07	16	

## Notes

1	The above data represents rolled-up information within the listed sub-projects each of which has many independent design review activities associated with over 100 Configuration Change Proposals. As the critical path for these sub-projects was broadly defined by the submarine docking program, individual activities within each of the above sub projects were allowed to move provided the delivery of the capability was not impacted adversely by delaying the completion of the specific docking. Although some individual activities were ahead or behind schedule the project has maintained the critical path as defined by the submarine docking program.
2	In some instances, the original planned schedule for sub projects was incorporated into the submarine maintenance schedule which was maintained by ASC. ASC update the maintenance schedule annually and do not retain original schedule information. Consequently, apart from post June 2005 activities supported by a MAA, it is not possible to provide the original planned dates for some platform upgrade projects, which were scheduled to occur during an unstable FCD Program. Fast Track was initially installed on two submarines and managed under SEA 1446 Phase 1 Collins Class Interim Minimum Operating Capability. SEA 1439 Phase 3 is responsible for rolling out those changes to the remaining four submarines. As such, all design and associated design review and approval was achieved under SEA 1446 Phase 1.
3	The first of class received two of the three Special Forces capabilities. The third required redesign to increase diver safety following sea trials in 2008. The redesigned safety modifications identified were completed December 2014 and installation was completed in July 2018. Initial OR and OR are scheduled to be achieved in the months following installation.
4	The Special Forces Upgrade safety modifications identified during the manned Sea Verification Trial have been installed and harbour and sea acceptance testing completed in June 2015 and installation was completed in July 2018. Initial OR and OR are scheduled to be achieved in the months following installation.
5	Full class implementation has been achieved with the approval of the Configuration Change Instruction. Variance is a result of minor delays in the Configuration Management process.
6	Full class implementation will be achieved on completion of HMAS <i>Dechaineux</i> which is scheduled for May 2022. Initial OR and OR are scheduled to be achieved in the months following installation.
7	Full class implementation was achieved on completion in June 2018. Initial OR and OR are scheduled to be achieved in the months following installation.

## 3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System/Platform Variant	Original Planned	Current Planned (Note 1)	Achieved/Forecast (Note 1)	Variance (Months)	Notes
• Harbour Acceptance Test (HAT)	Special Forces Upgrade	Jun 05	N/A	Sep 06	15	
	Torpedo Decoy	Jun 10	N/A	Jun 10	0	
	Fire Fighting Upgrade (RANKIN)	Oct 13	May 14	May 14	7	2
	Sewage System Upgrade (WALLER)	Jul 06	N/A	Mar 07	8	
	Fast Track Enhancements	N/A	N/A	N/A	N/A	
• Sea Acceptance Test (SAT)	Special Forces Upgrade	Aug 05	N/A	Dec 07	28	3
	Torpedo Decoy	Jul 10	N/A	Jul 10	0	
	Fire Fighting Upgrade	N/A	N/A	N/A	N/A	
	Sewage System Upgrade (WALLER)	Aug 06	N/A	Oct 07	14	
	Fast Track Enhancements	N/A	N/A	N/A	N/A	

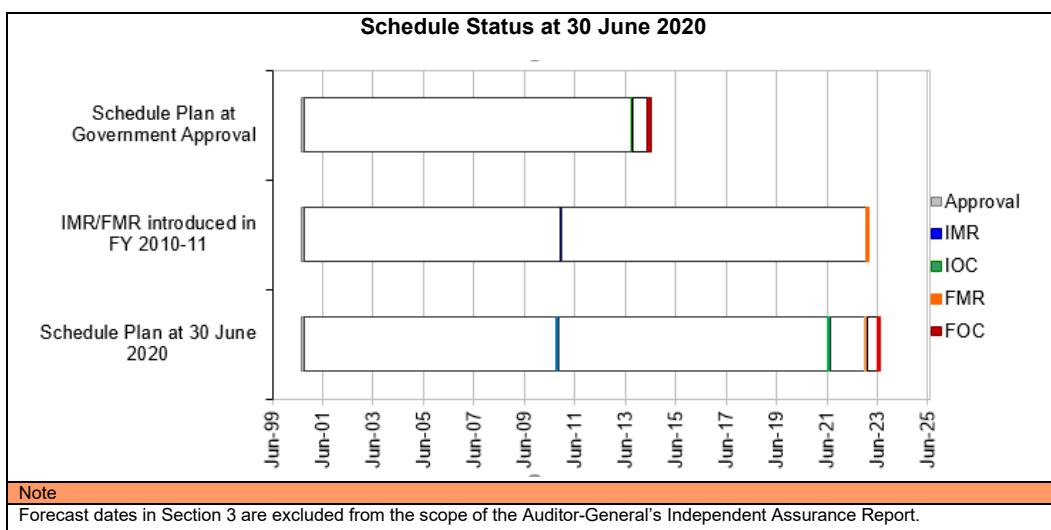
Notes	
1	Refer Section 3.1 Note 2. Fast Track was initially installed on two submarines and managed under SEA 1446 Phase 1. SEA 1439 Phase 3 is responsible for rolling out those changes to the remaining four submarines. As such, HAT and SAT was achieved under SEA 1446 Phase 1.
2	Variance was attributed to the change in schedule completion of HMAS <i>Rankin</i> FCD from October 2013 Version (IMS V3.3) and the current baselined IMS.
3	Refer Section 3.1 Note 3 and 4 and Section 3.3 Note 1.

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

Item		Original Planned	Achieved / Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)		N/A	Jan 11	N/A	
Initial Operational Capability (IOC)					
Initial Operating Capability for:	Initial Operational Release Special Forces Upgrade	Nov 10	Jul 21	128	1
	Initial Operational Release Torpedo Decoy	Aug 10	May 14	45	2
	Fire Fighting Upgrade (RANKIN)	Oct 13	May 14	7	3
	Sewage System Upgrade (WALLER)	Aug 06	Oct 07	14	4
	Fast Track Enhancements	N/A	N/A	N/A	5
Final Materiel Release (FMR)		Oct 22	Dec 22	2	6
Final Operational Capability (FOC)					
Final Operating Capability for:	Operational Release of Special Forces Upgrade	Jun 07	Dec 22	186	7
	Operational Release of Torpedo Decoy	Jun 14	Jun 23	108	8
	Fire Fighting Upgrade (DECHAINEUX)	Jun 14	May 22	95	9
	Sewage System Upgrade (COLLINS)	Jun 14	Jun 18	48	10
	Fast Track Enhancements (WALLER)	Jul 06	Nov 07	16	11
Six Collins Class submarines with all Supplies fitted and formally accepted		N/A	Jun 23	N/A	12
Notes					
1	The project successfully completed trials in March 2019 and is in the process of seeking formal Initial Operational Release (IOR) from the Capability Manager. The administrative process of formal IOR has been rescheduled, with agreement from the Capability Manager Representative.				
2	Torpedo Decoy received Initial OR on 2 May 2014 by Chief of Navy. The delay in schedule has been due to a combination of delays in acceptance of the safety case and a delay in approval of the OR due to the appointment of a new Chief of Navy.				
3	IOC is linked to successful completion of the HAT, where any variance will be caused through movement in the docking maintenance schedule. These dates are based on the IMS.				
4	IOC is linked to completion of the FOC SAT. Variance due to changes in docking maintenance schedule since original MAA.				
5	Fast Track initially installed on two submarines and managed under SEA 1446 Phase 1. SEA 1439 Phase 3 is responsible to roll out to remaining four submarines. IOC was the responsibility of SEA 1446 Phase 1.				
6	FMR dates have now been aligned to the current baselined IMS and reflected in the 18 June 2018 MAA.				
7	The original MAA delivery date was for first of class only. An MAA amendment in 2006 that increased the scope created variance. FOC has been re-aligned with the current IMS program, with agreement from the Capability Manager Representative.				
8	Delay in achieving IOR for the Torpedo Decoy has caused a delay to FOR to allow for Navy to conduct the required Operational Test and Evaluation Period. Operational Test and Evaluation (OT&E) (in conjunction with other firings) was completed in 2018 and the forecast formal FOC date is June 2023 in alignment with the Project FOC date.				
9	Variance due to changes in docking maintenance schedule since original MAA.				
10	Variance due to changes in docking maintenance schedule since original MAA. Completion date linked to HMAS <i>Collins</i> FCD completion in June 2018.				
11	Fast Track initially installed on two submarines and managed under SEA 1446 Phase 1. This project installed the Fast Track upgrades across the remaining four submarines. Variance due to changes in docking maintenance schedule since original MAA.				
12	Final Operational Capability forecast date added in FY17/18 and includes the scope from Projects SEA 1114 Phase 3 and SEA 1439 Phase 5B1 that were transferred to SEA 1439 Phase 3 in FY18/19.				

## Project Data Summary Sheets

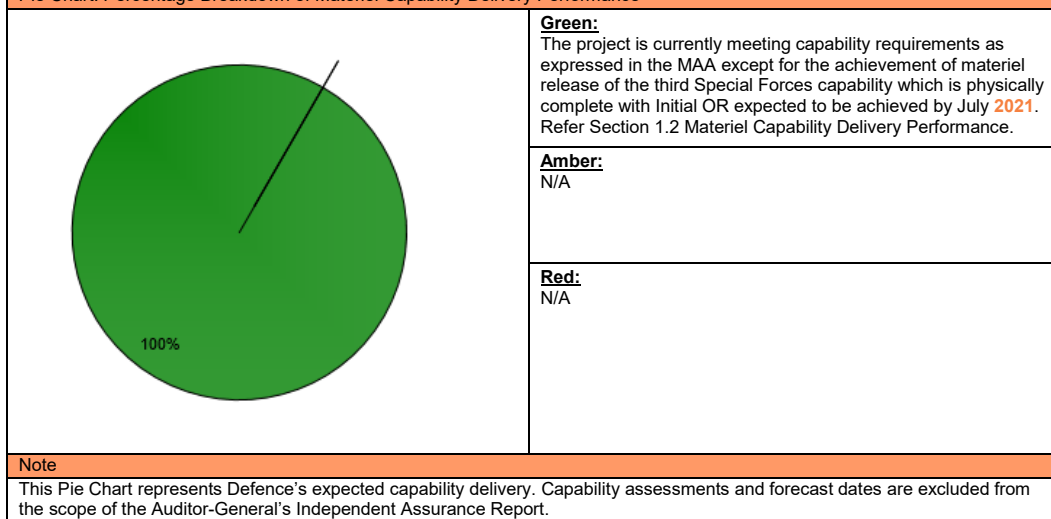
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## Section 4 – Materiel Capability Delivery Performance

### 4.1 Measures of Materiel Capability Delivery Performance

#### Pie Chart: Percentage Breakdown of Materiel Capability Delivery Performance



### 4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	<p>Completion of the following platform upgrades on all submarines unless otherwise specified:</p> <ul style="list-style-type: none"> <li>Special Forces Upgrade: Two of the three capabilities;</li> <li>Torpedo Countermeasures.</li> <li>Fire Fighting Upgrade: HMA Ships <i>Waller</i>, <i>Dechaineux</i> and <i>Sheean</i>.</li> <li>Sewage System Upgrade: HMA Ships <i>Waller</i> and <i>Dechaineux</i>.</li> <li>Fast-Track modifications: HMA Ships <i>Collins</i>, <i>Farncomb</i>, <i>Waller</i> and <i>Rankin</i>.</li> <li>Other remaining subordinate projects relating to platform build deficiencies in a holistic get-well program.</li> </ul> <p>IMR was achieved in January 2011.</p>	Achieved

Initial Operational Capability (IOC)	The Capability Manager declared Initial Operational Release for the SUBSCUT torpedo decoy in May 2014. The date of this milestone was subsequently accepted as IOC within the MAA in 2018.	Achieved
Final Materiel Release (FMR)	<p>Completion of previous Materiel Releases (Refer Section 1) and dockings up to and including HMA Ships <i>Waller</i> and <i>Dechaineux</i> FCD consisting of:</p> <ul style="list-style-type: none"> <li>• Special Forces Upgrade – All nominated Submarines, all capabilities;</li> <li>• Diesel Engine Upgrades: All Submarines (expected end HMAS <i>Waller</i> FCD (May 2020);</li> <li>• Dived Safety Modifications to HMA Ships <i>Waller</i> and <i>Dechaineux</i>; and</li> <li>• Communications Antenna Capability Enhancement to HMAS <i>Waller</i>.</li> </ul> <p>FMR is planned for December 2022.</p>	Not yet achieved
Final Operational Capability (FOC)	<p>Six Collins Class submarines with all Supplies delivered, formally accepted, and operationally ready to deploy, including:</p> <ul style="list-style-type: none"> <li>• All 22 engineering enhancements and 2 new capabilities accepted by the Capability manager, and</li> <li>• All Fundamental Inputs to Capability (FIC) delivered to support the submarines.</li> </ul> <p>FOC is planned for June 2023.</p>	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 chance that current improvements required for the Fire Panel will not be implemented to meet schedule of current planned installations during FCDs and MCDs because of delays in integrating the panel into its planned operating environment.	<ul style="list-style-type: none"> <li>• Regular meetings with stakeholders to monitor progress.</li> <li>• Development of an interim solution as a work around.</li> </ul> <p>This risk has been reduced to Medium (post-mitigation) due to reduced likelihood of risk realisation.</p>
There is a chance that one of the Special Forces subsystems will require maintenance and repair on each occasion the subsystem is utilised because of limited schedule maintenance opportunities.	<ul style="list-style-type: none"> <li>• Improvement in the of regular maintenance regime of the DABS Systems to reduce defects.</li> </ul> <p>This risk has been reduced to Low (post-mitigation) due to reduced likelihood of risk realisation.</p>
Emergent Risks (risk not previously identified but has emerged during 2019-20)	
Description	Remedial Action
N/A	N/A

### 5.2 Major Project Issues

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

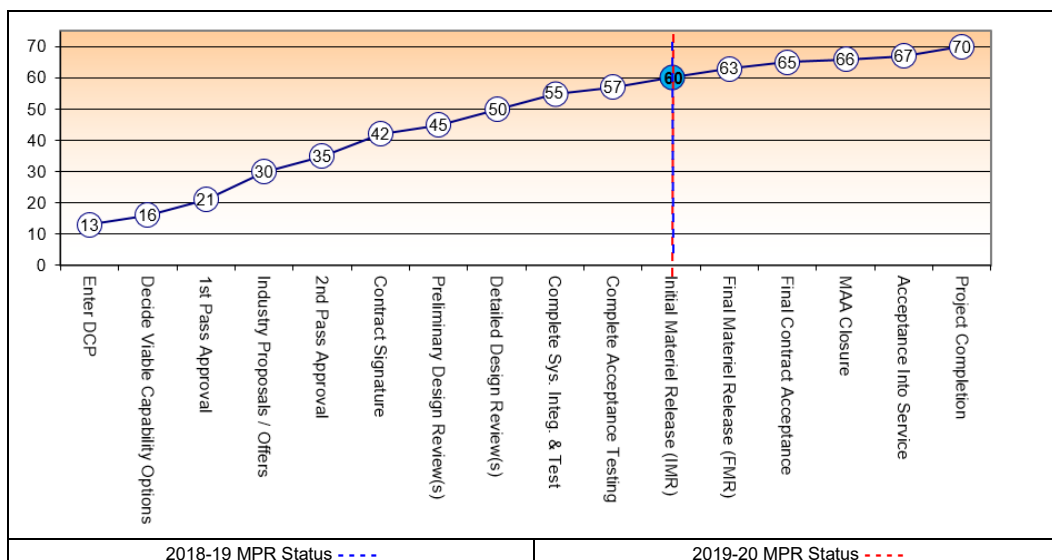
## Section 6 – Project Maturity

### 6.1 Project Maturity Score and Benchmark

Maturity Score		Attributes							Total
		Schedule	Cost	Requirement	Technical Understanding	Technical Difficulty	Commercial	Operations and Support	
Project Stage	Benchmark	10	8	8	8	9	8	9	60
Initial Materiel Release	Project Status	9	8	8	9	9	8	9	60
	Explanation	<ul style="list-style-type: none"> <li>• Schedule: The schedules for the two additional sub-projects are aligned with the existing sub-projects hence there is no additional schedule pressure or change to maturity score.</li> <li>• Technical Understanding: All 24 sub-projects have had installation completed on at least one submarine. Over half of the sub-projects are in operation and have been transferred to the end users.</li> </ul>							

## Project Data Summary Sheets

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## Section 7 – Lessons Learned

### 7.1 Key Lessons Learned

Project Lesson	Categories of Systemic Lessons
Ensure that all capability requirements are clearly defined, approved and appropriately funded before detailed acquisition planning commences.	Requirements Management
Ensure that maintenance period schedule dependencies are identified and appropriate risk management strategies developed.	Schedule Management
Consider the impact associated with long term sole source cost plus contracts.	Contract Management
Understand the competing priorities within a program (ISS Performance Term Contract) and how they will impact on individual project performance.	Schedule Management Contract Management
Responsibilities need to be clearly defined between project stakeholders in regards to the development and endorsement of trial documents and that this is identified well in advance of scheduled trials.	Governance

## Section 8 – Project Line Management

### 8.1 Project Line Management as at 30 Jun 2020

Position	Name
Division Head	Mr Gregory Sammut
Branch Head	CDRE Richard Fitzgerald
Project Director	CAPT Adam Lindsay
Project Manager	Mr George Paragios



## Project Data Summary Sheet<sup>173</sup>

Project Number	SEA 1442 Phase 4
Project Name	MARITIME COMMUNICATIONS MODERNISATION
First Year Reported in the MPR	2014-15
Capability Type	Upgrade
Acquisition Type	Australianised MOTS
Capability Manager	Chief of Navy
Government 1st Pass Approval	Dec 10
Government 2nd Pass Approval (or key Government pre-Second Pass Approval)	Jul 13
Budget at 2 <sup>nd</sup> Pass Approval (or key Government pre-Second Pass Approval)	\$385.6m
Total Approved Budget (Current)	\$444.0m
2019-20 Budget	\$46.4m
Project Stage	Detailed Design Review
Complexity	ACAT II



### Section 1 – Project Summary

#### 1.1 Project Description

SEA 1442 Phase 4 will upgrade the communications capability in the eight Anzac Class Frigates and address communications system obsolescence in the Class, by modernising it with improved communications management, secure voice and tactical intercom, red/black switching, tactical radios and a high data rate line-of-sight capability. The project will also deliver support systems, a secondary Maritime Tactical Wide Area Network (MTWAN) Shore Gateway and upgrade the Anzac Combat System Trainer Communications Terminals.

#### 1.2 Current Status

##### Cost Performance

###### In-year

This year the project has spent \$36.7m to 30 June 2020 of a budget of \$46.4m. The \$9.7m underspend is due to delays in Ship 2 installation complete milestone, Shore Voice Communications System upgrade and delivery of replacement Power Distribution Panels.

###### Project Financial Assurance Statement

As at 30 June 2020, project SEA 1442 Phase 4 has reviewed the projects approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial contractual obligations of Defence for this project, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget remaining for the project to complete against the agreed scope.

###### Contingency Statement

The project has not applied contingency in the financial year.

##### Schedule Performance

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

**Training System and Shore Integration Test Facility Acceptance occurred in November 2019, with system integration of the NewGen MCS and Ship 1 planned for April 2021.**

The SEA 1442 Phase 4 delivery and installation schedule has been aligned to the Anzac Midlife Capability Assurance Program (AMCAP) scheduling and this alignment of programs has resulted in the SEA1442 Phase 4 Initial Materiel Release (IMR) moving from June 2018 to October 2020 and Final Operating Capability (FOC) moving from December 23 to April 25.

##### Materiel Capability Delivery Performance

The MTWAN Secondary Shore Gateway has been delivered and is operational, including the Training System and the Shore

#### 173 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 Assurance Report by the Auditor-General in Part 3 of this report.

**Integration Test Facility which were both accepted in November 2019.** The first Anzac ship capability with associated support systems is scheduled for delivery in **April 2021**.

**Note**

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

### 1.3 Project Context

#### Background

SEA 1442 (Maritime Communications Modernisation) is a multi-phased program that will modernise the Royal Australian Navy's (RAN) communications infrastructure. The preceding phase (Phase 3) delivered an initial MTWAN and Message Handling System to the RAN's Major Fleet Units.

SEA 1442 Phase 4 will address critical obsolescence problems affecting the communication systems in the RAN Anzac Class frigates. The modernised communications system (NewGen MCS) will be highly integrated and automated to deliver more agile and faster communication and reduce operator intervention. The project scope includes upgrade of various communications systems in the eight Anzac frigates, establishment of a training system at HMAS *Stirling* and a shore integration and test capability at the prime contractor's facility for in-service support, delivery of a secondary MTWAN shore gateway, and upgrade of the Anzac Combat System Trainer Communications Terminals.

The majority of individual equipment and sub-systems is either Military Off The Shelf (MOTS) or Commercial Off The Shelf (COTS). Some development is required and involves functionality enhancements and Australianisation of the MOTS and COTS. The main complexity is in bringing the sub-systems together as a highly integrated and automated system and installation in the ships, cognisant of existing weapons, sensors, emitters, and specific platform requirements.

Government Second Pass approval was achieved in July 2013. Prime acquisition and 5-year support services contracts were awarded to Selex ES Ltd in November 2013 following an open tender process. Selex ES Ltd changed its name to Leonardo MW Ltd in September 2016.

Under the acquisition contract, Leonardo MW will: design, develop and install the NewGen MCS into the eight Anzac Class frigates; design, develop and install the support systems (including a training system and an integration and test capability); and develop and deliver integrated logistic support products. The support services contract will become operative following acceptance of the first Anzac frigate and the associated support systems.

The project is also managing the acquisition of ARC-210 Gen 5 V/UHF multi-band multi-mode software defined radios through FMS with the US Government. The radios form part of the NewGen MCS.

#### Uniqueness

An advanced feature of the system includes a unique radio frequency distribution system that will allow automated and efficient switching of the multitude of radios and antennae on each ship in order to establish the most effective communications path.

The high data rate line of sight system is a new capability and will be a step towards enabling the RAN to operate in a satellite denied environment and enable more efficient ship-to-ship communication.

#### Major Risks and Issues

The key risks and issues for this project include: **ship availability; external concurrent installation activities; integration into the complex electromagnetic environment of the Anzac Class Frigates; availability of sufficient local resources; the Communications Control & Management System (CCMS) not being delivered with full functionality; risks associated with the Prime Contractor's management of the Project; and the effect Covid-19 restricting travel on UK and Melbourne based contractor personnel, as well as the Canberra based project team, in support of production activities in WA.**

#### Other Current Related Projects/Phases

N/A

#### Note

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

## Section 2 – Financial Performance

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

Date	Description	\$m	Notes
<b>Project Budget</b>			
Dec 10	Original Approved (First Pass Approval)	11.4	
Jul 13	<b>Government Second Pass Approval</b>	374.2	
	Total at Second Pass approval	385.6	
Jun 20	Exchange Variation	58.4	
Jun 20	<b>Total Budget</b>	444.0	
<b>Project Expenditure</b>			
Prior to Jul 19	Contract Expenditure – Leonardo MW	(139.7)	1
	Contract Expenditure – US Government	(15.1)	1
	Other Contract Payments / Internal Expenses	(21.6)	2
		(176.4)	
FY to 30 Jun 20	Contract Expenditure –Leonardo MW	(26.9)	1
	Other Contract Payments / Internal Expenses	(9.8)	3
		(36.7)	
Jun 20	<b>Total Expenditure</b>	(213.1)	
Jun 20	<b>Remaining Budget</b>	230.9	

## Project Data Summary Sheets

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Notes	
1	The scope of this contract is explained further in Section 2.3 – Details of Project Major Contracts.
2	Other expenditure comprises \$5.9m for Pre-contract work with Leonardo MW, <b>\$2.7m for other minor contract expenditure, project management costs and travel, \$2.5m for Multi-couplers</b> , \$2.2m for technical and engineering support, \$2.1m for other pre Second Pass studies and work, <b>\$1.5m for Viasat modems, \$1.5m for MK3 Operations Room upgrade, \$1.3m for Contractor Support</b> , \$0.5m for Shore Gateway West, \$0.3m for legal services, <b>\$0.3m Power Distribution Panel Replacement</b> , \$0.3m for AVA-20 Antennas, <b>\$0.2m for the Shore Integration Facility</b> , \$0.2m for WAMA support and \$0.1m for the High Data Rate Line of Sight (HDRLOS) integration Study.
3	Other expenditure comprises <b>\$2.4m for contractor support, \$2.2m for Multi-couplers, \$2.1m for other minor contract expenditure, project management costs and travel, \$1.6m for MK3 Operations Room upgrade, \$1.2m for Interim Support and \$0.3m Power Distribution Panel replacement.</b>

## 2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
57.2	45.7	46.4	PBS to PAES – The variation is primarily due to the delay in the planned installations and acquisition of spares to align with the revised ship availability, and a realignment of milestone activities for the acceptance of the First of Class. PAES to Final Plan – The variation is due to exchange rate gains and losses.
Variance \$m	(11.5)	0.7	Total Variance (\$m): (10.8)
Variance %	(20.1)	1.5	Total Variance (%): (18.9)

## 2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
			Australian Industry	Underspend is due to delays in Ship 2 installation complete contracted milestone, Shore Voice Communications System upgrade and delivery of replacement Power Distribution Panels.
		(9.7)	Foreign Industry	
			Early Processes	
			Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
46.4	36.7	(9.7)	<b>Total Variance</b>	
		(20.9)	<b>% Variance</b>	

## 2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 20 \$m			
Leonardo MW	Nov 2013	187.7	248.6	Variable	ASDEFCON Strategic	1, 2, 3
US Government (AT-P-BSH)	Dec 2014	17.0	15.5	Firm	FMS	1, 3, 4
Notes						
1	Contract value is based on actual expenditure and remaining commitment based on the commitment report as well as the Australian dollar value for Contract Change Proposal CCP-012 which was executed as at 18 December 2018. CCP-012 incorporates the 'Not to Exceed' amount for the approved recommended spare parts list into the Acquisition Contract.					
2	In addition to Note 1 above, the variation in Leonardo MW contract price at 30 June 2020 is due to fluctuations in exchange rates.					
3	The scope of this contract is explained further below.					
4	Change in FMS value is due to acceptance of Amendment number 1 to FMS case AT-P-BSH. Decrease in FMS value is due to lower unit prices and associated costs for technical assistance and administration fees.					
Contractor	Contracted Quantities as at		Scope	Notes		
	Signature	30 Jun 20				
Leonardo MW	See scope	See scope	8 ship mission systems 1 training system 1 Shore Integration and Test facility 3 deployable High Data Rate line-of-sight systems			
US Government (AT-P-BSH)	131	140	ARC-210 Gen 5 radios, technical data, and technical support.	1		
Major equipment accepted and quantities to 30 Jun 20						
MTWAN Secondary Gateway, Training Systems and Shore Integration and Test Facility (SITF) has been accepted.						
Notes						
1	Additional radios ordered as spare parts.					

## Section 3 – Schedule Performance

### 3.1 Design Review Progress

Review	Major System / Platform Variant	Original Planned	Current Contracted	Achieved / Forecast	Variance (Months)	Notes
System Requirements	NewGen MCS and Support System	Sep 14	N/A	Dec 14	3	1
Preliminary Design	NewGen MCS and Support System	May 15	Sep 15	Sep 15	4	2
Detailed Design	MTWAN Secondary Gateway	Sep 14	N/A	Jan 15	4	3
	NewGen MCS	Oct 16	N/A	Feb 17	4	4
	Support System	Apr 17	Jun 17	Sep 17	5	5
	First of Class Integration Detailed Design Review (IDDR)	May 17	N/A	Oct 17	5	6
<b>Notes</b>						
1	Delayed from originally planned due to slow ramp up/contractor performance.					
2	Contract schedule re-baselined to reflect previous (SDR) milestone slippage and contractor's improved understanding of the work.					
3	MTWAN System Requirements and Preliminary Design addressed prior to Second Pass Approval. In order to minimise risk to the operational network upon connection of the MTWAN Secondary Gateway, a demonstration of the design in the MTWAN shore integration facility was requested prior to design acceptance. This required additional time to complete.					
4	The conduct of the Detailed Design Review (DDR) and its associated system demonstration occurred four months later than the contracted date which triggered liquidated damages.					
5	The Contractor achieved the Support System DDR in September 2017 (five months later than the Contract Date due to delays resulting from the later than planned achievement of DDR).					
6	The Contractor achieved the First of Class Integration Detailed Design Review (IDDR) in October 2017 (five months later than the Contract Date due to delays resulting from the later than planned achievement of DDR).					

### 3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System / Platform Variant	Original Planned	Current Contracted	Achieved / Forecast	Variance (Months)	Notes
System Integration	NewGen MCS	Jun 18	Jul 20	Apr 21	34	1
Acceptance	MTWAN Secondary Gateway	Apr 15	N/A	Mar 15	(1)	
	Training System	Jun 17	Nov 18	Nov 19	29	2
	Shore Integration and Test Facility (SITF)	Dec 16	Mar 19	Nov 19	35	3
	Ship #1	Jun 18	Jul 20	Apr 21	34	1,4,5
	Ship #2	Apr 19	Oct 20	Apr 21	24	1,4
	Ship #3	Nov 19	Sep 21	Sep 21	22	4
	Ship #4	Jun 20	Jul 22	Jul 22	25	4
	Ship #5	Feb 21	Jan 23	Jan 23	23	4
	Ship #6	Sep 21	Sep 23	Sep 23	24	4
	Ship #7	Apr 22	Feb 24	Feb 24	22	4
	Ship #8	Sep 22	Sep 24	Sep 24	24	4
<b>Notes</b>						
1	Contract Change Proposal (CCP-014) of 17 November 2019 included an adjustment of the schedule for the Ship #1 Acceptance Date to occur in July 2020 (eight months later than the previous Contract Date). This revised Acceptance Date reflects the alignment of SEA1442 Phase 4 with the planned AMCAP and ship deployment / availability dates as at November 2019. Additional delays were due to the impact of the COVID-19 pandemic, specifically travel restrictions have resulted in the contractor's UK based personnel being unable to travel to undertake set-to-work and Acceptance testing in WA. The project has also been unable to travel to carry out onsite Test & Trials activities with the contractor. CCP-16 was subsequently approved (28 July 20) to realign the milestones as a result of the known disruptions caused by the pandemic. Further impact may be experienced contingent upon COVID-19 pandemic spread.					
2	Contract Change Proposal (CCP-011) of 25 June 2018 included an adjustment of the schedule for this Milestone. This Milestone was achieved in November 19, being twelve months later than the updated Contract Date.					
3	SITF acceptance date initially incorrectly positioned in the contract. The delay is due to the need to use the SITF during Ship # 1 test and acceptance period which was extended when SEA1442 Phase 4 was aligned to AMCAP. This Milestone was achieved in November 2019, being eight months later than the updated Contract Date.					
4	Ship availability and schedule is driven by AMCAP. Whilst the availability dates for Ships #1-#5 have been agreed, the availability dates for the remaining ships is subject to change. Forecast and current contract dates have been aligned with the AMCAP dates as at November 2019 via CCP 015 of 07 May 2020). Leonardo MW to be advised 90 days prior to commencement of each ship installation period.					
5	Ship #1 Acceptance is currently forecast to occur after Initial Materiel Release because minor software deficiencies are preventing contractual acceptance of this milestone until Apr 21. These minor deficiencies are not anticipated to prevent declaration of Initial Materiel Release, forecast for October 2020.					

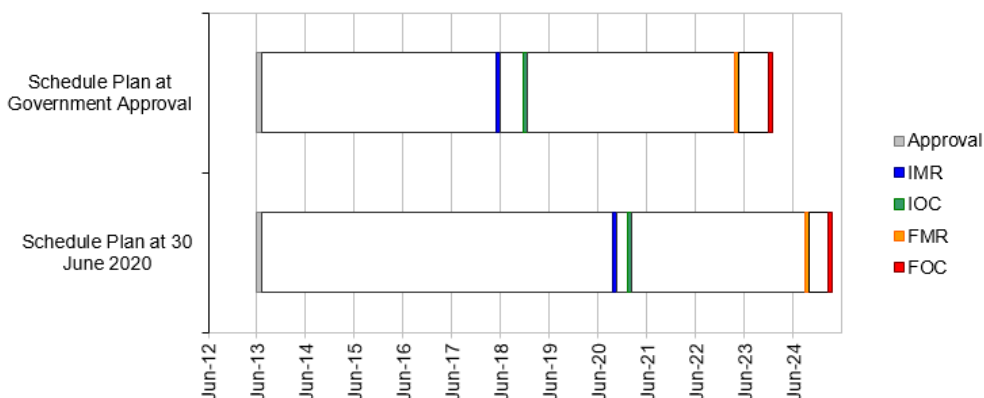
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### 3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Jun 18	Oct 20	28	1
Initial Operational Capability (IOC)	Dec 18	Jan 21	25	1
Materiel Release 2 – Ship # 2	Apr 19	Apr 21	24	1
Materiel Release 3 – Ship # 3	Dec 19	Sep 21	21	1
Materiel Release 4 – Ship # 4	Aug 20	Jul 22	23	1
Materiel Release 5 – Ship # 5	Apr 21	Jan 23	21	1
Materiel Release 6 – Ship # 6	Dec 21	Sep 23	21	1
Materiel Release 7 – Ship # 7	Aug 22	Feb 24	18	1
Final Materiel Release (FMR)	May 23	Sep 24	16	1
Final Operational Capability (FOC)	Dec 23	Apr 25	16	1

**Schedule Status at 30 June 2020**



#### Notes

1

Ship availability and schedule is driven by AMCAP. Whilst the availability dates for Ships #1-#5 have been agreed, the availability dates for the remaining ships are subject to change. Forecast dates have been aligned with the AMCAP dates as at November 2019. Leonardo MW to be advised 90 days prior to commencement of each ship installation period. Changes to ship availability have also affected IOC and FOC dates and these are now planned to occur 6 months after the revised dates for IMR and FMR respectively.

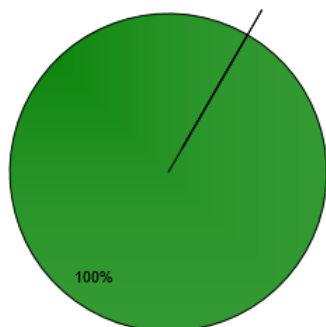
#### Note

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 capability materiel requirements as per the Joint Project Directive, Materiel Acquisition Agreement and relevant Technical Regulatory Authority.

#### Amber:

N/A

#### Red:

N/A

#### Note

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

#### 4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	Ship 1 acceptance, training system, shore integration and test facility, ship 1 crew training, and support arrangements in place. IMR is expected to be achieved in <b>October 2020</b> .	Not yet achieved.
Initial Operational Capability (IOC)	ANZAC Class ship fitted with the new equipment and proven through testing to communicate with other platforms using voice, High Frequency Internet Protocol and High Data Rate Line of sight. IOC expected to be achieved in <b>January 2021</b> .	Not yet achieved
Final Materiel Release (FMR)	All 8 ships accepted and all support arrangements in place. FMR is expected to be achieved in <b>October 2024</b> .	Not yet achieved.
Final Operational Capability (FOC)	Operational Release and FMR have been met and endorsed by CN. FOC will occur when all 8 Ships have been Accepted and all Crew Training has been successfully completed, and the Support System elements are in place and running in accordance with respective Contract requirements. FOC is expected to be achieved in <b>April 25</b> .	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
<b>Platform Integration</b> – There is a chance that installation completion will be affected by other AMCAP activities which are being conducted on the ship concurrently with each SEA 1442 installation.	<ul style="list-style-type: none"> <li>Work collaboratively on the Integrated Master Schedule (IMS) with the Contractor, ANZAC System Program Office (SPO) and the AMCAP.</li> <li>Continue to liaise closely with ANZAC SPO and the AMCAP through established working groups and regular meetings to monitor the progress of the installation.</li> <li>In consultation and collaboration with AMCAP, manage schedule throughout the installation to limit interruptions and avoid conflicts with other activities and re-plan if necessary.</li> </ul>
<b>Platform Integration</b> – There is a chance that installation will be affected by unknown or late changes to ship configuration.	<ul style="list-style-type: none"> <li>Continue to work collaboratively with the ANZAC SPO through established working groups and regular meetings to monitor changes to ship configuration.</li> <li>In consultation and collaboration with AMCAP, ensure site surveys are conducted as late as possible prior to installation to verify ship configuration and modify installation design if necessary.</li> </ul>
<b>Platform Integration</b> – There is a chance that system performance may be affected by integration into the complex electromagnetic environment of the Anzac Class Frigates.	<ul style="list-style-type: none"> <li>The Contractor has conducted an Electromagnetic Environmental Effects (E3) program which involves co-site performance analysis, measurements and modelling.</li> <li>If issues arise, the Project Team will implement the recommended engineering and procedural processes to address the issues.</li> <li><b>Downgraded to a Medium Risk following Ship One Deployment.</b></li> </ul>
<b>System Integration</b> – There is a chance that system design will be affected by unavailability, complexity, or changing external and legacy interfaces.	<ul style="list-style-type: none"> <li>Continue to liaise closely with ANZAC SPO and the AMCAP through established working groups and regular meetings to monitor any changes to the external or legacy interfaces.</li> <li>Respond to any incompatibility with integrated components in a collaborative fashion with AMCAP to determine remedial action that best suits the project and the Navy.</li> <li><b>Downgraded to a Medium Risk following Ship One Deployment.</b></li> </ul>
<b>Resourcing</b> – There is a chance that the project will be affected by a lack of staff.	<ul style="list-style-type: none"> <li>Continue to monitor human resource requirement through the life of the SEA 1442 Phase 4 project to ensure that it meets its obligations under the contract with the Contractor, its partnership with the AMCAP and its commitment to the Navy.</li> <li>Where required, continue to recruit to replace as quickly as possible and utilise contracted support as necessary.</li> <li><b>Downgraded to a Medium Risk following streamlining of the provision of contracted resources.</b></li> </ul>
<b>Training Facility</b> – There is a chance that delays in the preparation of the Training Room may result in Contractor claims for excusable delay and lost schedule.	<ul style="list-style-type: none"> <li>Continue to work with the WAMA to expedite the allocation of this task.</li> <li><b>Risk Retired following Acceptance of Training System.</b></li> </ul>
<b>Training System</b> – There is a chance that an adequate training system is not delivered in time to train the Ship 1 crew.	<ul style="list-style-type: none"> <li>Remedial action being progressed to ensure delivery of Ship 1 is not impacted.</li> <li>Contract an additional resource within the Project Team to manage the Training function.</li> <li><b>Risk Retired following Acceptance of Training System.</b></li> </ul>

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<b>CCMS</b> – There is a chance that the CCMS may not be delivered with full functionality, which may result in a loss of schedule and or system performance.	<ul style="list-style-type: none"> <li>Continue to work with the Contractor to ensure sufficient resources are allocated to delivering the CCMS with the prescribed level of functionality as scheduled.</li> <li><b>Downgraded to a Medium Risk following Ship One deployment.</b></li> </ul>
<b>Availability of Crew for Training</b> – There is a chance that insufficient ship's crew will be trained to meet Ship 1, leading to an impact on schedule or performance.	<ul style="list-style-type: none"> <li>Continue to liaise with Navy to agree training dates as early as possible.</li> <li>Contract an additional resource within the Project Team to manage the Training function.</li> <li><b>Risk Retired following training of Ships One &amp; Two crews.</b></li> </ul>
<b>Emergent Risks (risk not previously identified but has emerged during 2019-20)</b>	
<b>Description</b>	<b>Remedial Action</b>
<b>Platform Integration</b> – There is a chance that installation will be affected by delays to acceptance testing due to rework required by poor workmanship.	<ul style="list-style-type: none"> <li>Continue to liaise closely with the Contractor, ANZAC SPO and the AMCAP through established working groups and regular meetings to monitor the progress of the installation.</li> </ul>
<b>Engineering Mgt Performance</b> – There is a chance that deficiencies in the Contractor's Engineering Management performance may adversely affect the achievement of future Milestones, leading to an impact on schedule.	<ul style="list-style-type: none"> <li>Continue to liaise closely with the Contractor, through regular meetings and interaction with respect to its preparedness for future Milestones.</li> <li>Utilisation of Contractual mechanisms.</li> </ul>
<b>Estimation of Required Resources</b> – There is a chance that the Contractor may fail to adequately estimate the time & resources required to complete all required work to meet a Milestone, leading to an impact on schedule.	<ul style="list-style-type: none"> <li>Continue to liaise closely with the Contractor, through regular meetings and interaction with respect to its preparedness for future Milestones.</li> <li>Utilisation of Contractual mechanisms.</li> </ul>

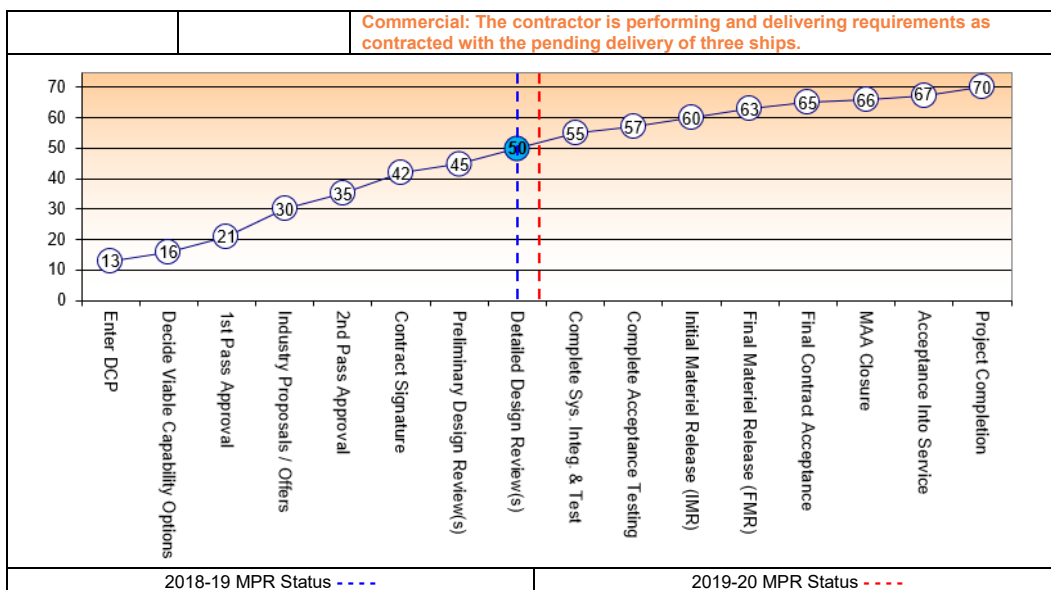
## 5.2 Major Project Issues

<b>Description</b>	<b>Remedial Action</b>
<b>Preparedness for Training</b> – The Training Program was not completely ready in time for the commencement of Navy Training.	<ul style="list-style-type: none"> <li>The Project Team worked with the contractor and Navy Training to modify the initial course/s to allow training to commence as planned with subsequent 'Delta' courses being provided by the contractor to cover topics not able to be taught initially.</li> <li>The TNGRR was progressed with known deficiencies to allow training to commence in support of Ship 1 readiness. To enter the next Milestone Review, the Contractor is required to ensure risks associated with the Training Program are mitigated to the level acceptable to the Commonwealth.</li> <li><b>This issue is now closed following deployment of Ships One &amp; Two.</b></li> </ul>
<b>Milestone Delays</b> – Three Contract Milestones are in delay by the Contractor; SITF and Training System Acceptance & the Ship 1 Installation Complete Milestone.	<ul style="list-style-type: none"> <li>This delay is being actively managed by the Project Team and Contractor to ensure the impact does not affect First of Class activities and to maintain Ship 1 Acceptance Milestones.</li> <li><b>This issue is now closed following completion of these Milestones.</b></li> </ul>
<b>Covid-19 Outbreak Disruption</b> – The outbreak has had a number of effects on the Project.	<ul style="list-style-type: none"> <li>The effects of Covid 19 have created a number of issues for the Project including:</li> <li>Inability of the ACT-based Project team &amp; Defence SME's to travel to WA to support the installation &amp; carry out testing &amp; witnessing activities;</li> <li>Inability of the UK contractor's team to travel to Australia to support installation</li> </ul>
<b>Note</b>	
Major risks and issues in Section 5 are excluded from the scope of the Auditor-General's Independent Assurance Report.	

## Section 6 – Project Maturity

## 6.1 Project Maturity Score and Benchmark

Maturity Score		Attributes							Total
		Schedule	Cost	Requirement	Technical Understanding	Technical Difficulty	Commercial	Operations and Support	
Project Stage	Benchmark	7	7	7	8	7	7	7	50
Detailed Design Review	Project Status	7	7	8	8	7	8	7	52
	Explanation	<b>Requirement:</b> An Equipment Demonstration has been completed and detailed design indicates all operationally critical requirements as per the Operational Concept Document and Function and Performance Specification can be met.							



## Section 7 – Lessons Learned

### 7.1 Key Lessons Learned

Project Lesson	Categories of Systemic Lessons
Ensure requirements are clear, unambiguous, and that a common understanding is established between all parties as early as possible, including the Capability Acquisition and Sustainment Group, Capability Manager, end-user community and the contractor.	Requirements Management
Interfaces, and in particular legacy interfaces, need to be well defined, consistent, documented, and well understood by all parties. The risk profile and associated contingency needs to include interface management.	Requirements Management
More attention needs to be given to the possible impacts when tailoring the ASDEFCON suite of contracting templates to suit individual project context and strategy in order to avoid unnecessary detail, resource burden, cost and schedule.	Contract Management
Additional effort is required by the project team during contract negotiations to assess and better understand scope, schedule, risk, cost and resource commitments made under the contract, including an assessment that the schedule is realistic.	Contract Management
Pay close attention to schedule and ensure all work is captured, logical and can form a basis for sound management post contract award. Alignment of multiple schedules in a complex multi contractor environment, such as between SEA 1442 Phase 4 and AMCAP, can be a source of additional and unnecessary effort if not closely monitored and aligned.	Schedule Management
Access to appropriately skilled and experienced resources is critical to achieving project planning and management objectives.	Resourcing Schedule Management
Project Team coordination of the training program and data codification involves significant effort and preferably dedicated experienced Integrated Logistics Support (ILS) resources should be allocated early in the Project.	Resourcing
<b>Ship availability may be subject to change with minimal notice and may impact on the contractor's ability to deliver against key milestones. Ensuring effective communication between the project office, the Capability Manager and other relevant Defence stakeholders is essential. This will ensure all stakeholders are aware of what capability is being received if schedules change unexpectedly.</b>	<b>Platform Availability</b>

## Section 8 – Project Line Management

### 8.1 Project Line Management as at 30 June 2020

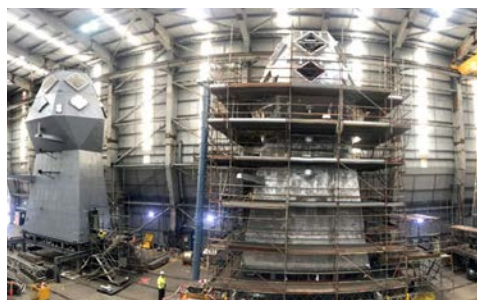
Position	Name
Division Head	Mr Ivan Zlabur
Branch Head	Ms Myra Sefton
Project Director	Mr Kevin Cunningham
Project Manager	Mr David Gibson

## Project Data Summary Sheets

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## Project Data Summary Sheet<sup>174</sup>

Project Number	SEA 1448 Phase 4B
Project Name	ANZAC AIR SEARCH RADAR REPLACEMENT
First Year Reported in the MPR	2018-19
Capability Type	Replacement
Acquisition Type	Developmental
Capability Manager	Chief of Navy
Government 1st Pass Approval	Mar 15
Government 2nd Pass Approval (or key Government pre-Second Pass Approval)	Jun 17
Budget at 2nd Pass Approval (or key Government pre-Second Pass Approval)	\$427.8m
Total Approved Budget (Current)	\$429.4m
2019-20 Budget	\$74.5m
Project Stage	Complete Acceptance Testing
Complexity	ACAT II



### Section 1 – Project Summary

#### 1.1 Project Description

SEA1448 Phase 4B is replacing the SPS-49(V) 8 Air Search Radar on the 8 Anzac class frigates with a modern digital Long Range Air Search Radar. The project will also replace the existing Identification Friend or Foe (IFF) system with a new system. By replacing the existing air search radar and IFF system, the project will deliver an integrated and supportable modern Long Range Air Search Capability (LRASC) into the Anzac Class Frigates.

#### 1.2 Current Status

##### Cost Performance

###### In-year

As at 30 June 2020, the project had underspent by \$1.8m due to late submission of invoices relating to the Quarterly Project Status Review and depot level spares. The project achieved the milestones aligned with ANZAC Midlife Capability Assurance Program.

###### Project Financial Assurance Statement

As at 30 June 2020, project SEA 1448 Phase 4B has reviewed the approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial and contractual obligations of Defence for this project, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget remaining for the project to complete against the agreed scope.

###### Contingency Statement

The Project has not applied contingency in the financial year.

##### Schedule Performance

The project has progressed through the Design phases and is now within the Delivery phase. The first mast was installed on HMAS Arunta in December 2018 and Sea Acceptance Trials were completed in February 2020, with all reports delivered in Q2 2020.

In March 2020 Government was advised of a schedule review with Industry that determined an additional 26 weeks was critical to the AMCAP realisation across the class. The schedule for ship availability to replace the Long Range Air Search Radar and integrated IFF system was amended as a consequence but did not affect the SEA 1448 Phase 4B Final Operating Capability date.

The second ship, HMAS Anzac, commenced Sea Qualification Trials in June 2020 and is scheduled to conclude in Quarter 4 2020. The delays to entering Sea Qualification Trials correspond to delays in the AMCAP program. Initial Operating Capability (IOC) has been delayed from the original planned date due to the complexities in achieving United States Identification Friend or Foe (IFF) certification requirements. Additionally COVID-19 international travel restrictions have prevented United States IFF certification authorities from participating in certification activities. Actions are progressing to enable certification authority attendance to trials later this year.

#### 174 Notice to reader

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



Part 3. Project Data Summary Sheets	<p><b>Materiel Capability Delivery Performance</b></p> <p>The project expects to deliver eight modern digital air search radars with integrated Identification Friend or Foe (IFF) system in the Anzac Class Frigates. The first mission system ship set capability with associated support systems is scheduled for acceptance in Quarter 1 2021, but is dependent on IFF certification which is impacted by COVID-19 travel restrictions.</p>
	<p><b>Note</b></p> <p>Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.</p>
	<p>1.3 Project Context</p>
	<p><b>Background</b></p> <p>SEA1448 Phase 4B was entered into the 2009 Defence Capability Plan (DCP) to replace the existing and aging Anzac Class AN/SPS-49(V)8 Long Range Air Search Radar System with a modern, digital air search radar that complements the capabilities and functionality of the Phased Array Radar System delivered under the SEA1448 Phases 2A and 2B – Anti Ship Missile Defence (ASMD) Program. In addition, the current Identification Friend or Foe (IFF) does not support the next generation of encrypted military IFF (Mode 5) which is required to operate effectively with our Allies as deemed by Vice Chief of the Defence Force (VCDF).</p> <p>In March 2015, at Gate 1 (previously first pass) multiple options were presented to Government, spanning Militarily-Off-The-Shelf (MOTS) and Developmental options. The MOTS solution; an upgraded variant of the AN/SPS-49(V)8 was not progressed further as it did not resolve the obsolescence issues faced by the radar.</p> <p>Government did approve Defence's proposal to select CEA Technologies Pty Limited (CEA) as the sole Australian provider of Phased Array Radars (PAR) to supply a replacement long range air search radar using the developmental technology successfully installed under the SEA 1448 Phase 2A and 2B ASMD Program. This solution provided a three dimensional PAR with six fixed faces and an integrated IFF capability. The Mission System Integrator role would be undertaken by Industry Participants of the Anzac Warship Asset Management Agreement ((WAMA) (previously Anzac Ship Integration Materiel Support Program Alliance (ASIPA)).</p> <p>The Project adopted the Smart Buyer Framework proceeding to Gate 2 Government Approval committees throughout the 2016-17 period. In November 2016, Government approved early access to Acquisition Phase funding, to enable the project to progress a number of time-critical activities prior to Second Pass Approval. This allowed the project to maintain schedule and continue to effectively mitigate 2016-17 key schedule risks (subsequently retired) that were identified during application of the Smart Buyer framework. Those activities included:</p> <ul style="list-style-type: none"> <li>Advanced material purchases for CEA; and</li> <li>BAE to commence Mast production.</li> </ul> <p>In June 2017, at Gate 2, Government approved Defence's proposal to act as the Prime integrator for the Long Range Air Search Capability (LRASC), and that the project has overall responsibility for procuring and managing the key components that make up the final Mission System:</p> <ul style="list-style-type: none"> <li>A new Long Range Air Search Radar (LRASR) with integrated IFF, to be delivered by CEA;</li> <li>The integration of the LRASR and IFF system into the Anzac Platform and Combat Management System (CMS), to be delivered by the industry participants under the Anzac Warship Asset Management Agreement (WAMA); and</li> <li>Acquisition of supporting equipment (and services) under Foreign Military Sales (FMS).</li> </ul> <p>Production timings and integration of the mission system(s) into the Anzac Class is driven by the AMCAP schedule, managed by the ANZAC System Program Office.</p> <p><b>Uniqueness</b></p> <p>The CEA Phased Array Radar (PAR) technology on which SEA1448 Phase 4B is based is considered to be a Strategic Industry Capability (SIC). The acquisition of which will ensure the RAN has regionally superior technology into the future. The IFF system will be integrated into the PAR faces. This is a world leading technological step to have the IFF interrogator integrated into the PAR faces without a secondary system requirement.</p> <p><b>Major Risks and Issues</b></p> <p>The Major risks the project faces are:</p> <ul style="list-style-type: none"> <li>There is a chance that the First of Class system certifications may not be achieved by Navy's introduction into service date requiring additional testing to achieve agreed level of seaworthiness;</li> <li>There is a chance that Navy's expectations as outlined in the Operational Concept Document (OCD) and Function and Performance Specification (FPS) will not match the delivered capability;</li> <li>There is a chance that Certification for the Identification Friend or Foe (IFF) interrogator may not be achieved in time to meet the IOC date due to the complexities in achieving United States IFF certification requirements and COVID-19 international travel restrictions, which prevented United States IFF certification authorities from participating in certification activities.</li> </ul> <p>The Major issues the project faces are:</p> <ul style="list-style-type: none"> <li>Contractual deliverables are impact the forecast spend spread of the project.</li> <li>Certification for the Identification Friend or Foe (IFF) interrogator was not achieved in time to meet the original IOC date due to the complexities in meeting requirements for United States IFF certification and Australia not being able to certify the equipment internally.</li> <li>There is a likelihood that integration of the new radar and CMS experience delays leading to a delay to First of Class IOC.</li> </ul> <p><b>Other Current related Projects/Phases</b></p> <p>The deliverables provided by SEA1448 Phase 4B have been incorporated into the overall ANZAC Midlife Capability Assurance Program (AMCAP) schedule. The ANZAC AMCAP involves a suite of upgrades to the ANZAC platform being delivered by multiple projects, of which SEA1448 Phase 4B is one. Delays or issues with other AMCAP projects can delay the schedule of SEA1448 Phase 4B.</p>

## Project Data Summary Sheets

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The AMCAP projects consist of:

SEA1448 Phase 4A – this Phase delivered a contemporary Electronic Support Measures (ESM) system as part of the ASMD upgrade program and is being re-installed under the SEA1448PH4B program. SEA1442 Phase 4 – this Phase will upgrade the communication capability in the eight Anzac Class Frigates and address communications system obsolescence in the Anzac Class.

Anzac Platform System Remediation (PSR) program – the PSR will see the upgrade of on board systems that includes ventilation, the propulsion control system to improve power and efficiency, waste management and water production systems.

**Note**

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

## Section 2 – Financial Performance

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

Date	Description	\$m	Notes
	<b>Project Budget</b>		
Oct 13	Original Approved	3.0	1
Jun 14	Real Variation – Scope	5.9	2
<b>Mar 15</b>	<b>Government First Pass Approval</b>	45.2	3
Jan 17	Real Variation –Scope	20.4	4
Aug 17	Government Second Pass Approval	353.3	
	<b>Total at Second Pass Approval</b> (or key Government pre-Second Pass Approval)	427.8	
Jun 20	Exchange Variation	1.6	
Jun 20	<b>Total Budget</b>	<b>429.4</b>	
	<b>Project Expenditure</b>		
Prior to Jul 19	Contract Expenditure - CEA	(103.5)	5
	Contract Expenditure - WAMA	(86.8)	
	Other Contract Payments/Internal Expenses	(6.3)	
		(196.6)	
FY to Jun 20	Contract Expenditure - CEA	(35.1)	
	Contract Expenditure - WAMA	(35.1)	
	Other Contract Payments/Internal Expenses	(2.5)	
		(72.7)	
Jun 20	<b>Total Expenditure</b>	<b>(269.3)</b>	
Jun 20	<b>Remaining Budget</b>	<b>160.1</b>	
<b>Notes</b>			
1	The project's original approved budget was the amount received for project initiation prior to Government Second Pass Approval.		
2	To advance the L-Phased Array Radar Risk Reduction Program		
3	Government First Pass approval to advance the progress of the risk reduction program to Gate 2.		
4	Early release of funding to commence activities in advance of Gate 2 Approval.		
5	Other expenses comprises FMS payments, operating expenditure and other capital expenditure not attributable to the listed contracts.		

### 2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Defence's Explanation of Material Movements
71.2	74.5	74.5	PBS - PAES: The variation is primarily due to delays in the installation milestones of the second of class vessel HMAS Anzac mission system to align with the ANZAC SPO AMCAP Sustainment Program. All contractual milestones associated with Mission System Ship Set Two production and factory acceptance testing now occur in FY 19/20.
Variance \$m	3.3	(0.0)	Total Variance (\$m): 3.3
Variance %	4.6	(0.0)	Total Variance (%): 4.6

### 2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(1.8)	Australian Industry	Late payment clearances for the Quarterly Progress Status Review and Depot Level Spares were the main contributors towards the variance in June 2020.
			Foreign Industry	
			Early Processes	
			Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
74.5	72.7	(1.8)	<b>Total Variance</b>	
		(2.4)	<b>% Variance</b>	

### 2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 20 \$m			
CEA	Sep 17	166.6	165.1	Fixed with indices escalation	ASDEFCON Strategic	1,2
WAMA	Aug 17	136.1	139.5	Variable with Pain/Gain Share	Alliance	2,3
<b>Notes</b>						
1	SEA1448 Phase 4B contract execution date is official order under the Head Contract DMO/ESD/00297/2013 Standing Offer for Phased Array Radar Development Services, executed 30 Oct 2013. CCP01 reduced the contract price by removing the performance security as the technology had been demonstrated.					
2	Contract value as at <b>30 June 2020</b> is based on actual expenditure to <b>30 June 2020</b> and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable).					
3	WAMA consists of Commonwealth of Australia, BAE Systems Maritime Australia (BAE), Saab Australia Pty Ltd (Saab) and Naval Ship Management Pty Ltd (NSM). The primary Industry Partners for SEA 1448 Phase 4B tasking is BAE and Saab.					
Contractor	Contracted Quantities as at		Scope			Notes
	Signature	30 Jun 20				
CEA	1	1	Qualification and Verification System			
	8	8	Mission System Ship Sets			
	2	2	Depot Spare Systems			
	4	8	Training Simulators			1
WAMA	8	8	Mast, Ship Systems and integration			
	8	8	Combat Management System (CMS) upgrades and integration			
<b>Major equipment accepted and quantities to 30 Jun 20</b>						
<b>Aft masts have been</b> installed on HMAS <i>Arunfa</i> , HMAS <i>Anzac</i> and HMAS <i>Warramunga</i> . As of <b>30 June 2020</b> , integration, set to work and harbour acceptance trials of CEA's Mission System Ship Sets One (1) and Two (2) are complete.						
<b>Notes</b>						
1	CEA contract change proposal was <b>accepted</b> to modify the number of training simulators from (4) to (8) to support the <b>training requirements</b> solution <b>put forward by the WAMA</b> .					

## Section 3 – Schedule Performance

### 3.1 Design Review Progress

Review	Major System / Platform Variant	Original Planned	Current Contracted	Achieved / Forecast	Variance (Months)	Notes
System Requirements	CEA Radar System Performance Specification	N/A	N/A	Aug 17	N/A	
Preliminary Design	Mast	N/A	N/A	Apr 17	N/A	1
	Platform	N/A	N/A	Sep 17	N/A	1
	Whole of Ship	N/A	N/A	Nov 17	N/A	1
Critical Design	Mast	N/A	N/A	Sep 17	N/A	1
	Platform	N/A	N/A	Jun 18	N/A	1
	Whole of Ship	N/A	N/A	Jun 18	N/A	1
<b>Notes</b>						
1	Original Planned dates for completion of Preliminary and Critical Design activities not disclosed within the Integrated Master Schedule as these dates were determined prior to Second Pass Approval.					

### 3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System / Platform Variant	Original Planned	Current Contracted	Achieved / Forecast	Variance (Months)	Notes
System Integration	Ship 1 – CAT1 (Factory Acceptance Testing)	Nov 18	N/A	Apr 19	5	1
	Ship 1 – CAT2 (Environmental Qualifications) and CAT3 (Integration)	Jan 19	May 20	Jul 20	18	2,3
	Ship 1 – CAT4 (Harbour Acceptance Trials)	Feb 19	N/A	Oct 19	8	4
	Ship 2 – CAT4 (Harbour Acceptance Trials)	Aug 19	N/A	May 20	9	4,5
	Ship 3 – CAT4 (Harbour Acceptance Trials)	Jul 20	Mar 21	Mar 21	8	6
	Ship 4 – CAT4 (Harbour Acceptance Trials)	Dec 20	Jan 22	Jan 22	13	6
	Ship 5 – CAT4 (Harbour Acceptance Trials)	Nov 21	Jul 22	Jul 22	8	6
	Ship 6 – CAT4 (Harbour Acceptance Trials)	May 22	Apr 23	Apr 23	11	6
	Ship 7 – CAT4 (Harbour Acceptance Trials)	Feb 23	Aug 23	Aug 23	6	6

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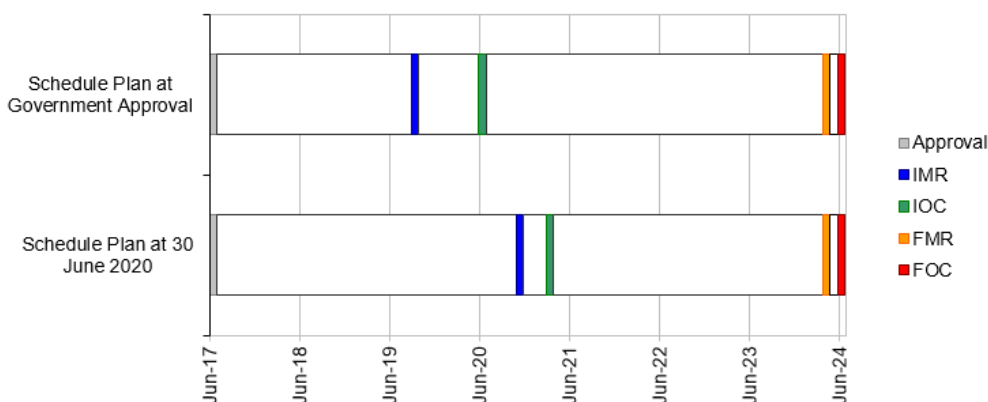
	Ship 8 – CAT4 (Harbour Acceptance Trials)	Aug 23	Apr 24	Apr 24	8	6
Acceptance	Ship 1 – CAT5 (Sea Acceptance Trials)	Sep 19	N/A	Mar 20	6	4
	Ship 2 – CAT5 (Sea Acceptance Trials)	May 20	N/A	Oct 20	5	6
	Ship 3 – CAT5 (Sea Acceptance Trials)	Feb 21	May 21	May 21	3	6
	Ship 4 – CAT5 (Sea Acceptance Trials)	Sep 21	Mar 22	Mar 22	6	6
	Ship 5 – CAT5 (Sea Acceptance Trials)	Jun 22	Sep 22	Sep 22	3	6
	Ship 6 – CAT5 (Sea Acceptance Trials)	Dec 22	May 23	May 23	5	6
	Ship 7 – CAT5 (Sea Acceptance Trials)	Oct 23	Sep 23	Sep 23	-1	6
	Ship 8 – CAT5 (Sea Acceptance Trials)	Apr 24	Apr 24	Apr 24	0	6
<b>Notes</b>						
1	A manufacturing delay with CEA resulted in the Factory Acceptance Testing from November to December 2018. Test Reports were accepted in April 2019.					
2	CEA Contract Change Proposal approved the delay in which CEA are to obtain Environmental Qualification for the LRASR.					
3	CAT 3 integration activities were completed in May 2019. Acceptance of CAT 3 reports occurred in September 2019. The CAT2 test results are expected to be complete in July 2020. This delay was caused by the limited number of appropriately certified third party test facilities and longer than anticipated test durations.					
4	Delays in the AMCAP Schedule for Ship 1 and Ship 2 has resulted in delays to CAT 4 and CAT 5.					
5	Ship 2 CAT4 testing was undertaken in Apr 2020, with acceptance of the test reports in May 2020.					
6	Forecast dates for ship availability based on the approved AMCAP Ship Maintenance Availability Master Plan (SMAMP).					

## 3.3 Progress toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Oct 19	Dec 20	14	1
Initial Operational Capability (IOC)	Jun 20	Mar 21	9	1
Final Materiel Release (FMR)	Apr 24	Apr 24	0	
Final Operational Capability (FOC)	Jun 24	Jun 24	0	

<b>Notes</b>				
1	Initial Materiel Release (IMR) and Initial Operating Capability (IOC) dates are dependent on Identification Friend or Foe (IFF) certification, which is impacted by COVID-19 travel restrictions.			
2	IMR with radar acceptance will occur prior to Dec 20 and IFF certification is anticipated to be completed by Mar 21.			

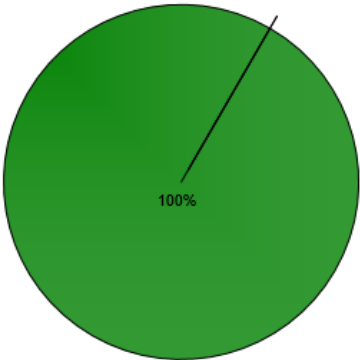
Schedule Status at 30 June 2020



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

Section 4 – Materiel Capability Delivery Performance

4.1 Measures of Materiel Capability Delivery Performance

Pie Chart: Percentage Breakdown of Materiel Capability Delivery Performance	
	<b>Green:</b> The project expects to meet capability requirements as expressed in the Joint Project Directive and Materiel Acquisition Agreement.
	<b>Amber:</b> N/A
	<b>Red:</b> N/A
<b>Note</b> This Pie Chart represents Defence's expected capability delivery. Capability assessments and forecast dates are excluded from the scope of the Auditor-General's Independent Assurance Report.	

4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	Integration of one (1) Air Search Radar and IFF System into the first ship, including installation of a new aft-mast and reinstallation of all extant systems. Delivery of on-board spares and training packages. Establishment of Initial Support Contracts for both Radar and Integration. Achievement of IMR is <b>scheduled in December 2020 but is dependent of Identification Friend or Foe (IFF) certification.</b>	Not Yet Achieved
Initial Operational Capability (IOC)	Installation of equipment onto one ship, development of operator and maintainer training package and initial package completed, tactical doctrine updated, completion of acceptance trials on the first ship completed, and the logistics support arrangements in place. Achievement of <b>IOC is scheduled in March 2021 but is dependent of Identification Friend or Foe (IFF) certification.</b>	Not Yet Achieved
Final Materiel Release (FMR)	Integration of one (1) Air Search Radar and IFF System into the final ship. Delivery of all outstanding logistic documentation. Delivery of a Support system. Final delivery of on-board spares and depot spares. Achievement of FMR is <b>scheduled</b> in April 2024.	Not Yet Achieved
Final Operational Capability (FOC)	Installation of equipment onto all ships is complete, training facilities have been set to work, operator and maintainer trainer is in a steady state, tactical doctrine is mature, full logistics support arrangements are in place, establishment and other Fundamental Inputs to Capability arrangements are complete. Achievement of FOC is <b>scheduled</b> in June 2024.	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 chance that the SEA1448 Phase 4B project may not meet Navy's forecast date for introduction into service for the first of class ship as a result of contracted deliverables, integration activities or external project dependencies.	<b>This risk has been retired as HMAS Arunta received the replacement air search radar with Identification Friend or Foe (IFF) Transponder.</b>
There is a chance that the first of class system certifications may not be achieved by Navy's introduction into service date requiring additional testing to achieve agreed level of seaworthiness.	<b>Engagement of the certifying agencies early to allow for the required consultation and development of plans to meet certification requirements.</b>

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There is a chance that Navy's expectations as outlined in the OCD and FPS will not match the delivered capability.	Follow on activities may occur on the 2nd ship to rectify any identified shortfalls. This risk will remain until acceptance of Final Operational Capability.
<b>Emergent Risks (risk not previously identified but has emerged during 2019-20)</b>	
<b>Description</b>	<b>Remedial Action</b>
There is a <b>chance</b> that Certification for the <b>Identification Friend or Foe</b> (IFF) interrogator may not be achieved in time to meet the IOC date due to the complexities in achieving United States IFF certification requirements and <b>COVID-19 international travel restrictions which prevented United States IFF certification authorities from participating in certification activities.</b>	Regular liaison activities with the US IFF certification authority (Air Traffic Control Radar Beacon System Identification Friend or Foe Mark XIIA electronic identification System (AIMS) Program Office (PO)). <b>Defence and Australian industry to fully understand the technical requirements and travel constraints applied to the project and work with the US AIMS PO to develop options so as to complete certification testing in the most efficient manner. This risk has been realised as an issue and is explained in 5.2</b>

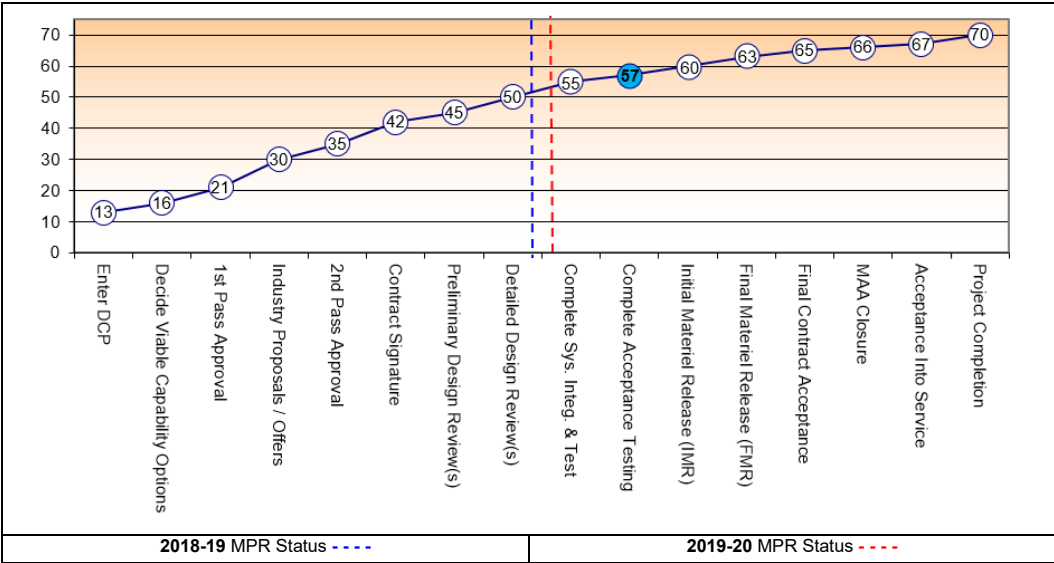
## 5.2 Major Project Issues

<b>Description</b>	<b>Remedial Action</b>
Contractual deliverables are impacting the forecast spend spread of the project.	<b>Arrayed faces have been required to undertake minor hardware design changes that have impacted schedule. Project Office has agreed to the re-prioritisation of some deliverables to focus on ship integration activities.</b>
<b>Certification for the Identification Friend or Foe (IFF) interrogator was not achieved in time to meet the original IOC date due to the complexities in meeting requirements for United States IFF certification and Australia not being able to certify the equipment internally.</b>	<b>In February 2020 Government was advised that the IOC date had been changed to March 2021.</b>
<b>There is a likelihood that integration of the new radar and CMS experiences delays leading to a delay to First of Class IOC.</b>	<b>Major work has been brought forward for First of Class. Long lead time items have been procured to enable the schedule to remain on time. Regular engagement with industry partners, WAMA and other projects.</b>
<b>Note</b>	
Major risks and issues in Section 5 are excluded from the scope of the Auditor-General's Independent Assurance Report.	

## Section 6 – Project Maturity

### 6.1 Project Maturity Score and Benchmark

Maturity Score		Attributes							Total
		Schedule	Cost	Requirement	Technical Understanding	Technical Difficulty	Commercial	Operations and Support	
Project Stage	Benchmark	8	8	8	8	9	8	8	57
<b>Complete Acceptance Testing</b>	Project Status	6	7	8	8	9	8	8	54
	Explanation	<ul style="list-style-type: none"> <li><b>Schedule:</b> The achievement of Mode 5 IFF Certification has been affected by the uniqueness of the Phased Array Radar (PAR) system, complexities of the United States Identification Friend or Foe (IFF) certification requirements and COVID-19 related travel restrictions. The project schedule to achieve Initial Materiel Release (IMR) and Initial Operating Capability (IOC) has been negatively affected but the schedule to achieve Final Materiel Release (FMR) and Final Operating Capability (FOC) remains as forecast.</li> <li><b>Cost:</b> Delays in the IFF certification activities have created variations between budgets, but the overall Estimate at project completion is expected to remain within total project contingency based on cost variance trends and cost risk assessments.</li> </ul>							



### Section 7 – Lessons Learned

#### 7.1 Key Lessons Learned

Project Lesson	Categories of Systemic Lessons
The Phased Array Radar and IFF technology used in SEA1448-4B is the same as intended to be used in other vessels. The experience gained and achievements made in SEA1448-4B will reduce the risks to the delivery schedule for future projects.	First of Type Equipment
Understanding of certification authority test requirements to ensure sufficient resources, facilities and personnel can be scheduled to minimise the chance of delays.	Schedule Management
Understanding of Operational Security requirements prior to the development of the acceptance program to minimise the chance of delays.	Requirements Management
Improved project assurance and governance oversight requirements, due to the uniqueness of the CEA technology, has necessitated a non-traditional approach to requirements specification and acceptance.	Governance
Establishing Two-Star review boards to ensure the project's priority is maintained, particularly noting there are other Commonwealth and overseas customers vying for priority on CEA resources.	Governance

### Section 8 – Project Line Management

#### 8.1 Project Line Management as at 30 June 2020

Position	Name
Division Head	Ms Sheryl Lutz
Branch Head	CDRE Darron Kavanagh, RAN
Project Director	CAPT Martin Charles, RAN
Project Manager	Ms Toni Chalmers

### Project Data Summary Sheets

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Project Data Summary Sheet<sup>175</sup>

Project Number	JP 2008 Phase 5A
Project Name	INDIAN OCEAN REGION UHF SATCOM
First Year Reported in the MPR	2010-11
Capability Type	Upgrade
Acquisition Type	MOTS
Capability Manager	Chief of Joint Capabilities
Government 1st Pass Approval	Mar 09
Government 2nd Pass Approval (or key Government pre-Second Pass Approval)	Mar 09 and Mar 10
Budget at 2 <sup>nd</sup> Pass Approval (or key Government pre-Second Pass Approval)	\$460.9m
Total Approved Budget (Current)	<b>\$422.1m</b>
2019-20 Budget	<b>\$10.8m</b>
Project Stage	<b>System Integration and Test</b>
Complexity	ACAT II



## Section 1 – Project Summary

## 1.1 Project Description

This Project will provide the Australian Defence Force (ADF) with twenty 25kHz UHF SATCOM channels on a hosted payload on a commercial Intelsat Satellite (IS-22), to provide coverage of the Indian Ocean Region, and associated ground infrastructure to provide network control.

## 1.2 Current Status

**Cost Performance**In-year

As at **30 June 2020**, project JP 2008 Phase 5A recorded underspend of **\$5.2m** against a planned FY **2019/20** Budget of **\$10.8m**. **The shortfall in expenditure is attributable to the System Acceptance milestone not being achieved and Defence being reimbursed by the Prime Contractor for achieving the contracted installation and integration milestones 15 months behind schedule.**

Project Financial Assurance Statement

As at **30 June 2020**, project JP 2008 Phase 5A has reviewed the project's approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial 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 this financial year.

**Schedule Performance**

In November 2018, Contract Change Proposal 4 (CCP4) was executed between the Commonwealth and Viasat to re-baseline the project schedule and remediate delays caused mostly by Viasat software development. **Following achievement of the Product Baseline Review in July 2019, Viasat commenced and completed system upgrades between September and December 2019. All defects except core software elements of the Network Control System were remediated in the period up to April 2020 and Defence acceptance of the contracted installation and integration milestones was achieved in June 2020. Software development issues continued to impede progress on System Acceptance for the Network Control System (NCS) and Final Material Release (FMR) has been delayed to July 2021.** The requirement for United States (US) Government certification of the NCS is a key input for Final Operating Capability (FOC), which is forecast **to occur by end 2021**.

**Material Capability Delivery Performance**

The IS-22 satellite is currently meeting all performance measures, including:

- the hosted payload; and

## 175 Notice to reader

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



- the Communications System Monitor (CSM).

The NCS contract was executed on 16 May 2012, factoring US Government requirements of the Defense Information Systems Agency and Space and Naval Warfare System Command. The implementation strategy was reported to Government. The Integrated Waveform (IW) NCS is the largest remaining scope to be delivered and issues with the modification and integration of Commercial Off The Shelf (COTS) software has been the cause of the delay. Due to the scale of modification and integration, it is considered developmental for this project. To partially mitigate the impact of the delay, IW Phase I was introduced in 2016 under an Interim Capability (IC) state. IW Phase II is forecast for delivery by end of 2020.

#### 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 JP 2008 Phase 5 project was created to provide capability originally planned for under the JP 2008 Phase 4 Next Generation SATCOM Capability project (a result of Phase 4 of the project being re-scoped to provide access to the Wideband Global Satellite (WGS) capability).

UHF SATCOM provides critical tactical radio coverage over the Middle East Area of Operations. Coverage was provided by leases on two commercial satellites and channels loaned by the US Government on an availability basis, which proved to be significantly less than the capability needed by the ADF. This project was also formed on the basis that LEASAT 5 would reach end of life in 2011.

A market survey was conducted in September 2008 to inform cost and capability options for JP 2008 Phase 5A. It revealed an opportunity for Defence to host a payload on an Intelsat commercial satellite over the region in mid-2012. A Restricted Request For Tender was subsequently let to ten companies for the capability in November 2008 and Intelsat was selected as the preferred tenderer.

Combined First and Second pass Government Approval was given in March 2009 and a contract was signed with Intelsat for eight 25 kHz channels and 15 years support in April 2009.

First pass Government approval was given for the project to pursue a Memorandum Of Understanding with the US to provide global UHF SATCOM coverage using US satellites in return for access to ten 25 kHz channels on IS-22. A subsequent Second Pass approval was given in March 2010 which allowed the project to procure the full payload on IS-22.

The IS-22 satellite was successfully launched on 25 March 2012. Materiel Release (MR) for the Indian Ocean Region was achieved on 21 December 2012.

In May 2012, a contract was signed with Viasat US to upgrade the existing NCS. In December 2013, a Contract Change Proposal (CCP1) was executed to re-baseline delivery of Final Materiel Release (FMR) for the NCS to September 2014. A second Contract Change Proposal (CCP2) was executed in December 2015 after Viasat experienced delays in software development. The delay resulted in a further slip to FMR (NCS) milestone which was subsequently re-baselined and delivery forecast for April 2018 (49 months behind schedule). Defence in an attempt to minimise the capability impacts of the JP 2008 Phase 5 project delays introduced two new milestones under CCP2; the NCS Manager Software Readiness Review (NSWRR) and Software Deployment Readiness Review (SDRR).

A third Contract Change Proposal (CCP3) was executed in March 2017 to introduce architectural enhancements to the NCS to align with increased Defence security requirements. In August 2017, delayed provision of GFM and persistent challenges in Viasat's development of the NCS triggered the need to execute a fourth Contract Change Proposal (CCP4). Technical discussions regarding capability delivery resulted in the Contractor providing a revised schedule in April 2018. The revised schedule highlighted that Viasat was 10 months behind on its software development plan.

The parties entered into negotiations in June 2018 to implement strategies to constrain the delay and establish a new baseline for the project. CCP4 was signed in November 2018 with a forecast contract completion date of 29 August 2019. In February 2019, Viasat experienced further software, system integration and security issues and this has slipped contract completion, now forecast to occur by end 2020.

#### Uniqueness

The contract with Intelsat is based on the standard ASDEFCON template; however, it required significant tailoring based on input from specialist space lawyers. There are also a number of unique aspects to a contract for a satellite, including the unusual risk profile of the Launch and the corresponding high degree of schedule uncertainty which is typical of a satellite program where product quality requires a high priority.

A UHF Channel Control system was designed and developed to meet the requirements of Australian and US forces.

#### Major Risks and Issues

There was a risk that further security and integration challenges during site installation may cause additional schedule delays. However, following NCS upgrades during 2019, security and integration risks were retired. The project has, and continues to, suffer significant schedule slippage related to the development of NCS software.

There was an ongoing risk relating to facilities and compliance with current Australian Standards, i.e. electrical distribution, which may have caused delay to project closure. This risk has also been retired following the upgrades that occurred during 2019.

There is a risk that the Project Office may exhaust contingency before the final delivery of the program. The prolonged schedule delay has required the project to retain a contracted workforce beyond original estimates and this puts significant pressure on project finances. The successful outcomes negotiated under CCP4 has alleviated the pressure and the risk has been reduced to low.

## Project Data Summary Sheets

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There is a risk that the US Government certification of the NCS system may delay FOC as the certification is subject to US priorities and demand for the services of the test agency. Assessment of the NCS system by the Joint Interoperability and Test Command (JITC) is a US Government requirement for access to US military satellites. Defence has had positive engagements and planning with JITC **which has resulted in progress in obtaining assessment of System products in the past twelve months.**

There is a risk that Viasat will be delayed in delivering the Integrated Logistics Support products necessary to complete the Support System. The Project Office has taken action to assist Viasat in the development of products in order to mitigate likelihood of this risk occurring.

**An emergent risk was the impact of COVID-19 measures delaying the delivery of the NCS. Viasat has utilised the workforce from within its Australian subsidiary to manage the issue, providing remote support and guidance. Viasat has worked collaboratively with Defence to identify ways to minimise impacts on schedule including seeking Commonwealth support for travel exemptions for interstate staff to enable critical activities for install and integration of the NCS to continue.**

#### Other Related Projects and Phases

**JP 2008 Phase 3E Advanced SATCOM Terrestrial Infrastructure System:** This project provides the supporting ground infrastructure for Satellite Communications including UHF, X and Ka band communication services.

**JP 2008 Phase 3F ADF SATCOM Terrestrial Enhancements:** This project will provide the mature Australian anchoring capability for the WGS constellation.

**JP 2008 Phase 4 Next Generation SATCOM Capability:** This project provides WGS capability.

#### 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
<b>Project Budget</b>			
Feb 09	Original Approved	4.0	
Apr 09	Government Initial Second Pass Approval	269.1	
Apr 10	Government Subsequent Second Pass Approval	187.8	1
	<b>Total at Second Pass Approval</b>	<b>460.9</b>	
Jun 14	Real Variation - Real Cost Decrease	(18.0)	2
Jul 10	Price Indexation	18.0	3
Jun 20	Exchange Variation	(38.8)	
	<b>Total Budget</b>	<b>422.1</b>	
<b>Project Expenditure</b>			
Prior to Jul 19	Contract Expenditure - Intelsat	(294.4)	
	Contract Expenditure - Viasat	(32.8)	4
	Other Contract Payments / Internal Expenses	(43.5)	5
		(370.7)	
FY to Jun 20	Contract Expenditure - Viasat	(2.6)	
	Other Contract Payments / Internal Expenses	(3.0)	6
		(5.6)	
Jun 20	<b>Total Expenditure</b>	<b>(376.3)</b>	
Jun 20	<b>Remaining Budget</b>	<b>45.8</b>	
<b>Notes</b>			
1	The Initial Second Pass Approval was for eight channels and the Subsequent Second Pass Approval was for the remaining channels of the hosted payload.		
2	Real Cost Decrease was a result of Project Office negotiating insurance for payload launch into the contract. Separate launch insurance is no longer needed.		
3	Up until July 2010, indexation was applied to project budgets on a periodic basis. The cumulative impact of this approach was \$16.5m. In addition to this amount, the impact on the project budget as a result of out-turning was a further (\$19.6m) having been applied to the remaining life of the project. For this project, that process was incorrectly executed but corrected in January 2012 by returning \$30.9m to the budget; \$21.1m and \$9.9m for impacts of price and exchange variations respectively.		
4	This contract was in Stop Payment from July 2014 to December 2015 and subsequently from December 2017 to November 2018. Stop Payment was triggered from March 2019 for the Product Baseline Review, completed in July 2019. A Stop Payment for the Stirling Completion was triggered in May 2019 pending the completion of the Stirling and System Acceptance milestones. The Stirling Completion milestone was achieved June 2020 with the System Acceptance milestone remaining outstanding.		
5	Other Contract Payments / Internal Expenses of \$43.5m comprise of Capital and Operating Expenditure (\$19.6m) and expenditure for contracted workforce related contractor support services provided by Nova Defence (\$23.9).		
6	Other Contract Payments / Internal Expenses total \$3.0m comprise of other Capital and Operating Expenditure (\$0.1m) and expenditure for contracted workforce related contractor support services provided by Nova Defence (\$2.9m).		

## 2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
9.4	10.8	10.8	<b>PBS to PAES: Increase is due to the final contract milestone brought into current financial year.</b> <b>PAES to Final Plan: Reduction in estimates due to delay in completing contract milestones.</b>
Variance \$m	1.4	(0.0)	Total Variance (\$m): 1.4
Variance %	14.9	(0.0)	Total Variance (%): 14.9

## 2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(1.8)	Australian Industry	<b>The shortfall in expenditure is attributable to the System Acceptance milestone not being achieved and Defence being reimbursed by the Prime Contractor for achieving the contracted installation and integration milestones 15 months behind schedule.</b>
		(3.4)	Foreign Industry	
			Early Processes	
			Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
10.8	5.6	(5.2)	Total Variance	
		(48.1)	% Variance	

## 2.3 Details of Project Major Contracts

3.5 Details of Project Major Contracts						
Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 20 \$m			
Intelsat	Mar 09	202.5	294.4	Firm	ASDEFCON (COMPLEX)	1, 3
Viasat	May 12	36.5	42.9	Firm	ASDEFCON (COMPLEX)	2, 3
Notes						
1	The increase in contract price is due to a Contract Change Proposal in 2010 which included 12 additional hosted UHF payload channels and a Communications System Monitor. The contract was transferred to Sustainment in April 2014 for support of the Communications System Monitor.					
2	CCP2, approved in December 2015, was a nil cost CCP related to the redevelopment of the NCS design. CCP3, approved in March 2017 increased the Viasat contract price. CCP4 in November 2018, decreased Viasat's contract price due to modifications to the scope of the contract. The scope modifications were implemented to constrain and mitigate further delays to the delivery of the NCS.					
3	Contract value as at 30 June 2020 is based on actual expenditure to 30 June 2020 and remaining commitment at current exchange rates and includes adjustments for indexation (where applicable).					
Contractor	Contracted Quantities as at		Scope			Notes
	Signature	30 Jun 20				
Intelsat	8	20	25kHz UHF SATCOM channels on IS-22 Hosted Payload			
Viasat	N/A	N/A	NCS comprising three channel control sites, and a Test and Training System for support.			
Major equipment accepted and quantities to 30 Jun 20						
All 20 channels were delivered successfully on 25 May 2012 and are now operational.						

## 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	IS-22 Hosted Payload	Jun 09	N/A	Jun 09	0	
	NCS	Aug 12	N/A	Aug 12	0	
Preliminary Design	IS-22 Hosted Payload	Nov 09	N/A	Oct 09	(1)	
	CSM	Oct 10	N/A	Nov 10	1	1
Critical Design	IS-22 Hosted Payload	Sep 10	N/A	Sep 10	0	
	CSM	Mar 11	N/A	Mar 11	0	
	NCS	Mar 13	N/A	Mar 13	0	
Product Baseline Review	NCS	May 17	Feb 19	Jul 19	26	2, 3

## Project Data Summary Sheets

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Notes	
1	The review was conducted in October 2010 but approval by the Project Office did not occur until November 2010 due to a number of issues with requirements traceability that required rectification.
2	This milestone was re-scheduled under CCP3 signed in March 2017. The previously contracted NCS Software Readiness milestone was removed as part of CCP4.
3	Criteria against the Software Deployment Readiness Review (SDRR) was amended, aligning delivery to a Commercial Of The Shelf (COTS) process. For this reason SDRR was renamed Product Baseline Review. The Product Baseline Review was held in June 2019 with actions forecast to be closed and milestone achieved in July 2019.

### 3.2 Contractor Test and Evaluation Progress

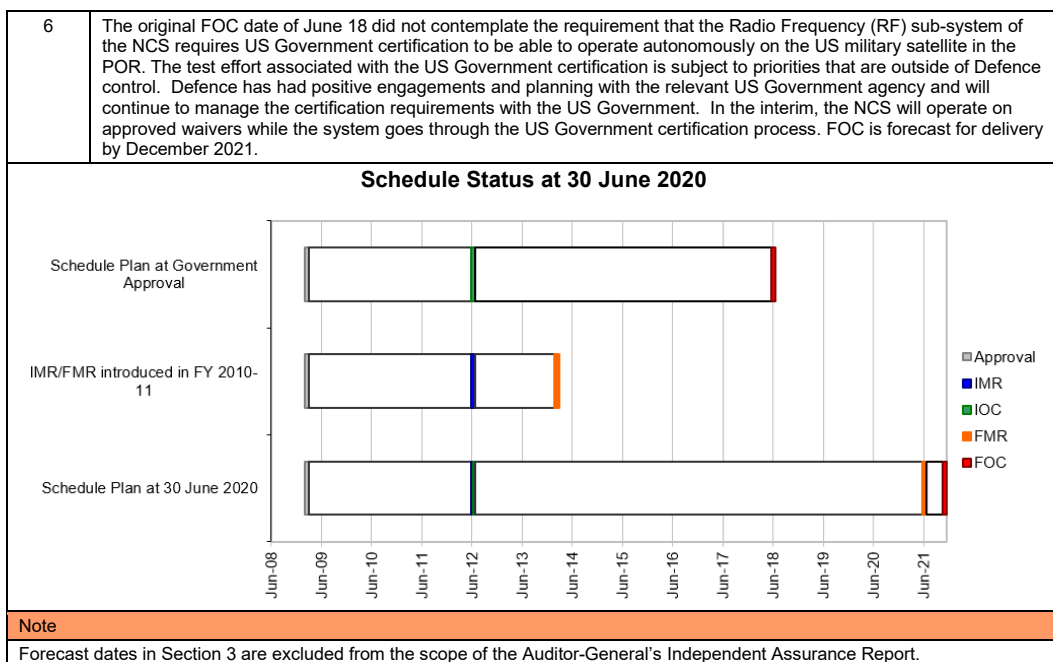
Test and Evaluation	Major System / Platform Variant	Original Planned	Current Contracted	Achieved /Forecast	Variance (Months)	Notes
System Integration	IS-22 Hosted Payload	Nov 10	N/A	Feb 11	3	1
	CSM	Sep 11	N/A	Oct 11	1	2
	NCS	Nov 13	Jun 19	Jun 20	79	3,5,6
Acceptance	IS-22 Hosted Payload	Jun 12	N/A	May 12	(1)	
	CSM	Jul 12	N/A	Jun 12	(1)	
	NCS	Mar 14	Aug 19	Nov 20	80	3,4,5,6

Notes	
1	Delay to commencement of integration was driven by a number of delays in sub system deliveries forming part of the hosted payload including C and Ku antennas (not forming part of this capability) and the UHF antenna.
2	While installation commenced in September 2011, testing to confirm that the installation met requirements was completed in October 2011.
3	In February 2014, Viasat advised the Commonwealth of software design delays affecting the NCS schedule. In February 2015 Viasat advised the Commonwealth of their decision to take on elements of work previously contracted to their sub-contractor and continue the software development in house. Variance is a result of software design delays captured in CCP2 signed in December 2015.
4	In March 2017, the Commonwealth signed CCP3 with Viasat for improvements to the network architecture and the inclusion of GFM into the NCS.
5	Delay to NCS System Integration and Acceptance milestones result from delay in delivery of Government Furnished Materiel and Viasat software development at August 2017.
6	In February 2019, Viasat experienced <b>software</b> , security and system integration issues <b>that delayed commencement of upgrades to the NCS. Following approval of the Mandated System Review and Product Baseline Review (PBLR), Viasat delivered NCS upgrades in December 2019 and completed remedial works in April 2020. System Acceptance remains delayed due to issues with software development.</b>

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

Item	Original Planned	Achieved /Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Jul 12	Jul 12	0	
Initial Operational Capability (IOC)	Jul 12	Jul 12	0	
Materiel Release (MR) # 1 (Indian Ocean)	Sep 12	Dec 12	3	1
Operational Capability (Indian Ocean)	Sep 12	N/A	0	5
Final Materiel Release (FMR) # 2 (Network Control System)	Mar 14	Jul 21	88	2
Final Operational Capability (FOC) (Pacific Ocean)	Jun 18	Dec 21	42	3, 4, 6

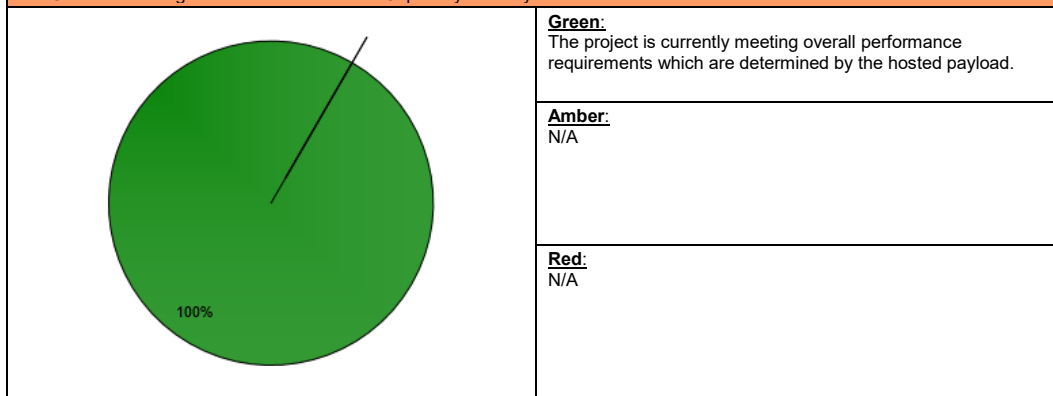
Notes	
1	MR was claimed on 28 September 2012. Chief Information Officer Group (CIOG) requested additional information which was supplied and MR was achieved on 21 December 2012.
2	Software delays noted in Section 3.2 Note 3 and Note 6 impacted FOC.
3	CIOG will be in a position to acquire agreed UHF capacity from the US as their capacity builds up in the region. A review of project submission documents to Government highlighted the omission of some key milestone dates in the PDSS.
4	FOC (Pacific Ocean) is scheduled to be delayed due to FMR#2 being re-forecast for achievement by March 2020. The requirement for US Government certification of the NCS, additional security integration and implementation issues and subsequent accreditation are the key contributors to the delay.
5	FMR IOR was claimed on 28 September 2012. The ADF has been utilising the capability defined under the Operational Capability Indian Ocean (OC IOR) milestone since this time. The absence of an appropriate Technical Regulatory Framework (TRF) has limited the project to fully meet the Material Acquisition Agreement requirements. FMR IOR is not expected to be declared. This is not expected to have an impact on the achievement of FOC as the project has amalgamated outstanding Operational Capabilities.



## Section 4 – Materiel Capability Delivery Performance

### 4.1 Measures of Materiel Capability Delivery Performance

#### Pie Chart: Percentage Breakdown of Materiel Capability Delivery Performance



#### 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 (IS-22)	1. In Orbit Test of hosted payload. 2. IMR was achieved in July 2012.	Achieved.
Initial Operational Capability (IS-22)	1. UHF SATCOM services on the IS-22 hosted payload. Quantity of ten 25kHz channels.	Achieved.
Final Materiel Release (IS-22)	1. 20 channels on a UHF Hosted Payload, including Operational Support Services for life-of-type in place, telemetry feed operational and initial training for telemetry feed. 2. CSM and initial training for CSM. 3. FMR IS-22 was achieved in December 2012.	Achieved.
Final Materiel Release (NCS)	1. NCS comprising three channel control sites, and NCS Manager (IW) training package.	Not yet achieved.

## Project Data Summary Sheets

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	2. FMR NCS is forecast to be achieved in <b>July 2021</b> .	
Final Operational Capability	<p>1. Capability State FOC (POR) is the commencement of Australian assured access to 200 kHz in the POR and 50 kHz for the Rest of the World coordinated through the US Government.</p> <p>2. <b>Operational Release of the NCS. Forecast delivery is December 2021.</b></p>	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 Final Capability installations will be delayed at Defence Communication Station – Perth as it has been identified the building's roof is damaged and requires replacement. This may result in delay in delivering the UHF NCS.	<b>Installations under the current phase of the project were completed in October 2019; subsequently this risk has been retired.</b>
There is a risk that current facilities are not fit for purpose or do not comply with Building Safety Regulations.	<b>This risk has been retired following the upgrades that occurred during 2019.</b>
There is a risk that the project may exhaust contingency funding before delivery of FOC. The prolonged schedule delays has put significant pressure on project finances.	The risk is now assessed as very low post-mitigation. The successful outcomes of CCP4 mean exhausting Contingency funding is unlikely. The project is anticipated to be delivered within the approved budget.
There is a risk that the US Government certification of the NCS system may delay FOC as the certification is subject to US Government priorities and demand for the services of the test agency. <b>Restrictions on workplace attendance due to COVID-19 may affect the US Government schedule.</b> Assessment of the NCS by the Joint Interoperability and Test Command is a US Government requirement for access to US military satellites.	<b>A schedule has been established between key stakeholders. To date, whilst minor delay has been experienced the broader program remains on track to complete in early 2021.</b>
There is a risk that further security and integration issues may materialise during site installation which may cause further schedule delays.	<b>The NCS was upgraded with an initial testing completing in December 2019. Subsequently, it was identified that issues relating to software maturity were causing delay and not security and other integration risks. As a result, the risk has been retired.</b>
There is a risk that there may be delay in Viasat delivering products necessary to complete the Support System. The risk is a consequence of Viasat's workforce limitations and commercial focus to complete Mission System installations.	The Project Office is managing the risk by undertaking some of the supporting works required to develop artefacts to support training. The Project Office will monitor the risk through ongoing reviews.
Emergent Risks (risk not previously identified but has emerged during 2019-20)	
<b>COVID-19 work and travel restrictions affected NCS installation and integration strategy due to project reliance on international and interstate contractor staff.</b>	<b>Viasat has utilised the workforce from within its Australian subsidiary to manage the issue, providing remote support and guidance. Viasat has worked collaboratively with the Defence to identify ways to minimise impacts on schedule including seeking Commonwealth support for travel exemptions for interstate staff to enable critical activities for install and integration of the NCS to continue.</b>

### 5.2 Major Project Issues

Description	Remedial Action
The project has and continues to suffer significant schedule slippage related to the development of NCS software.	Viasat has applied more resources to resolve the issue. Viasat has also been working closely with the Commonwealth to identify ways to recover schedule, i.e. sharing risks in the test and acceptance program. There are also Senior Leadership engagement between Chief Joint Capabilities, Deputy Secretary CASG and Viasat President to ensure Viasat is delivering against the final capability schedule forecasts.
Note	
Major risks and issues in Section 5 are excluded from the scope of the Auditor-General's Independent Assurance Report.	

Section 6 – Project Maturity

6.1 Project Maturity Score and Benchmark

Maturity Score		Attributes							Total
		Schedule	Cost	Requirement	Technical Understanding	Technical Difficulty	Commercial	Operations and Support	
Project Stage	Benchmark	8	7	8	8	8	8	8	55
System Integration and Test	Project Status	7	9	8	7	8	8	8	55
	Explanation	Project Maturity Scores reflect delivery of the NCS outcomes only. The IS-22 Hosted Payload (Materiel Release 1) was achieved in 2012 and has been supporting UHF SATCOM operations since this time. <ul style="list-style-type: none"><li><b>FOC Schedule:</b> The schedule for the NCS has slipped 42 months. The confidence level of the latest forecast is high.</li><li><b>Cost:</b> IS-22 and the NCS are on firm fixed price contracts. Overall costs for the NCS have gradually increased due to additional work required by the Project Office following signing of CCP2 and CCP3. However, CCP4 resulted a contract price reduction <b>and increases in project workforce costs due to prolonged delay are offset by reimbursement</b> from Viasat.</li><li><b>Technical Understanding:</b> <b>A long-term Through Life Support contract is in place to support of the IS-22 capability.</b> Viasat is supporting the Interim NCS capability until <b>delivery of the final capability.</b></li></ul>							

Project Stage	Maturity Score
Enter DCP	13
Decide Viable Capability Options	16
1st Pass Approval	21
Industry Proposals / Offers	30
2nd Pass Approval	35
Contract Signature	42
Preliminary Design Review(s)	45
Detailed Design Review(s)	50
Complete Sys. Integ & Test	55
Complete Acceptance Testing	57
Initial Materiel Release (IMR)	60
Final Materiel Release (FMR)	63
Final Contract Acceptance	65
MAA Closure	66
Acceptance Into Service	67
Project Completion	70

2018-19 MPR Status - - - -

2019-20 MPR Status - - - -

Section 7 – Lessons Learned

7.1 Key Lessons Learned

Project Lesson	Categories of Systemic Lessons
N/A	N/A

Section 8 – Project Line Management

8.1 Project Line Management as at 30 June 2020

Position	Name
Division Head	Mr Ivan Zlabur
Branch Head	Ms Myra Sefton
Project Director	Mr Victor Asumadu
Project Manager	Mr Kasey Jordan

Project Data Summary Sheets

Auditor-General Report No.19 2020–21  
2019–20 Major Projects Report

# Part 4. JCPAA 2019–20 Major Projects Report Guidelines







**Australian Government**  
**Department of Defence**



Endorsed by the Joint Committee of Public Accounts and Audit

**23 September 2019**

**JCPAA 2019–20 Major Projects Report Guidelines**  
Auditor-General Report No.19 2020–21  
2019–20 Major Projects Report

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## Purpose

**1.1** The objective of the Major Projects Report (MPR) is ‘to improve the accountability and transparency of Defence acquisitions for the benefit of Parliament and other stakeholders.’<sup>1</sup> In February 2012, the JCPAA identified this review as a ‘Priority Assurance Review’, under section 19A(5) of the *Auditor-General Act 1997*, allowing the ANAO full access to the information gathering powers under the *Auditor-General Act 1997*.

## Introduction

**1.2** The Defence MPR will form part of the Australian National Audit Office’s (ANAO) 2019–20 MPR, which is to be tabled in Parliament.<sup>2</sup> The MPR will report on the performance of selected major Defence equipment acquisition projects (Major Projects) since Second Pass Approval<sup>3</sup>, and associated sustainment activities (where applicable), managed by Defence.<sup>4</sup> The summary project data is prepared by Defence and reviewed by the ANAO.

**1.3** The Major Projects included within the MPR are proposed by Defence, based on criteria endorsed by the Joint Committee of Public Accounts and Audit (JCPAA), and provided to the JCPAA by the ANAO.

**1.4** The 2019–20 MPR will report on 30 projects as endorsed by the JCPAA. The number of projects included in the MPR since its inception is shown in the following table.

**Table 1: Number of projects included in the MPR**

MPR	Number of projects	MPR	Number of projects
2007–08	9	2014–15	25
2008–09	15	2015–16	26
2009–10	22	2016–17	27
2010–11	28	2017–18	26
2011–12 and 2012–13	29	2018–19	26
2013–14	30	2019–20	30

**1.5** Project data is presented by way of Project Data Summary Sheets (PDSSs), as at 30 June each year. The ANAO will review the PDSSs in accordance with the Australian Standard on Assurance Engagements (ASAE) 3000 *Assurance Engagements Other than Audits or Reviews of Historical Financial Information*. The ANAO’s review is designed to enable the ANAO to obtain sufficient appropriate evidence to form a conclusion. This conclusion being whether anything has come to the ANAO’s attention which indicates that the information in the PDSSs, which is within the scope of the review, has not been prepared, in all material respects, in accordance with the Guidelines.

**1.6** These Guidelines:

- (a) provide the criteria for project selection and the list of projects for inclusion in the 2019–20 MPR;

1 Joint Committee of Public Accounts and Audit, Parliament of the Commonwealth of Australia, *Report 473: Defence Major Projects Report (2016–17)*, (2018), Executive Summary, p. 1.

2 The ANAO’s 2019–20 MPR will also include the ANAO’s review and analysis, and the Auditor-General’s Independent Assurance Report.

3 Projects which are pre-Second Pass Approval but have a spent more than \$500m will also be considered.

4 For the purposes of the MPR, a project is defined as the acquisition or upgrade of Specialist Military Equipment, which normally excludes facilities and other Fundamental Inputs to Capability.

- (b) outline the roles and responsibilities of Defence in the production and quality assurance of Defence's 2019–20 MPR<sup>5</sup>;
- (c) provide requirements for the preparation of the PDSSs;
- (d) provide the PDSS template; and
- (e) provide an indicative program schedule in support of a November 2020 tabling.

**1.7** Each year the MPR Guidelines are reviewed and amended to reflect lessons learned and the outcomes of JCPAA review, in order to improve the MPR processes and to ensure the report meets its objective. At the JCPAA's request, the ANAO has taken administrative responsibility for updating the Guidelines annually and submitting them to the Committee for endorsement, following consultation with Defence.

## Criteria for Project Selection

**1.8** The inclusion of projects in the MPR is generally based on the projects included in the Defence Integrated Investment Program and subject to the following criteria:

- (a) Projects only admitted one year after Second Pass Approval, or projects pre-Second Pass Approval that have spent > \$500m<sup>6</sup>;
- (b) a total approved project budget of > \$300m;
- (c) a project should have at least three years of asset delivery remaining;
- (d) a project must have at least \$50m or 10% (whichever is greater) of its budget remaining over the next two years; and
- (e) a maximum of five new projects in any one year.

**1.9** All projects selected for inclusion in the MPR will be proposed by Defence, based on the above criteria, and provided to the JCPAA by the ANAO annually by 31 August, for endorsement.

**1.10** The removal of projects from the MPR is generally based on declaration of Final Operational Capability (FOC), or on a pre-FOC risk assessment of the timely declaration of FOC where a significant portion of the project's deliverables are complete, and subject to the following criteria:

- (a) the outstanding deliverables pre-FOC, against the relevant Materiel Acquisition Agreement (MAA)<sup>7</sup> and/or Joint Project Directive (JPD)<sup>8</sup>;
- (b) the remaining schedule to FOC, against the relevant MAA and/or JPD;
- (c) the remaining budget to FOC, against the relevant MAA and/or JPD;

5 The ANAO's roles and responsibilities are defined by the *Auditor-General Act 1997* and relevant legislation, and are outlined for each engagement with the responsible parties.

6 The Capability Life Cycle (CLC) is being redesigned following the First Principles Review, to deliver a risk-based decision-making and asset management process. Not all projects in the 2019–20 MPR will have been approved under the updated process, but will have had at least one Second Pass approval or key Government decision.

7 MAAs are intended to be phased out and gradually replaced by Product Delivery Agreements (PDAs). Projects in the 2019–20 MPR will have an approved MAA. A PDA is an agreement between the Sponsor and Lead Delivery Group which specifies the scope, resourcing, priorities and performance and preparedness requirements for support of a capability system throughout its life, to support performance measurement. Department of Defence, *Interim Capability Life Cycle Manual*, August 2017, Annex A, Definitions, p. 92.

8 The Project Directive is a tasking statement from Vice Chief of the Defence Force and defines the Project, in terms of fundamental inputs to capability, together with the resources necessary to deliver the project. It is developed in accordance with the exact parameters agreed by government. Department of Defence, *Interim Capability Life Cycle Manual*, August 2017, Annex A, p. 93. The mechanism for providing the directive is via the CLC management tool, which records the Government decision in relation to a project. The accountabilities and responsibilities of specific roles within the CLC are defined in the *Interim Capability Life Cycle Manual*. Where necessary, the Joint Force Authority may provide a specific documented directive.

- (d) the remaining project risks and issues; and
- (e) the Capability Manager's assessment, including overall risk rating and the extent to which this risk rating relates to the Capability Acquisition and Sustainment Group's (CASG's) responsibilities.<sup>9</sup>

**1.11** All projects selected for removal from the MPR will be proposed by Defence, based on the above criteria, and provided to the JCPAA by the ANAO annually by 31 August, for endorsement.

**1.12** Once projects have met the exit criteria and removal has been endorsed by the JCPAA, they should be removed from the PDSSs, and expenditure and milestone information included within the Defence MPR in the subsequent year.

**1.13** Projects which have been removed from the MPR which still have outstanding caveats, significant remaining materiel capability or milestones to be delivered, are required to report on the status of these activities in the *Statement by the Secretary of Defence* until their final status is accepted by the Capability Manager.

## 2019–20 Project Selection

**1.14** The following table reflects projects included in the 2019–20 MPR program.<sup>10</sup> For each project which has been removed, the lessons learned at both the project level and the whole-of-organisation level should be included as a separate section in the following Defence MPR.

**Table 2: Projects for the 2019–20 MPR**

Project Number	Project Name	Defence Abbreviation
AIR 6000 Phase 2A/2B	New Air Combat Capability	Joint Strike Fighter
SEA 4000 Phase 3	Air Warfare Destroyer Build	AWD Ships
SEA 5000 Phase 1	Future Frigates	Future Frigates <sup>1</sup>
SEA 1000 Phase 1B	Future Submarines Design Acquisition	Future Subs <sup>1</sup>
LAND 400 Phase 2	Combat Reconnaissance Vehicles	Combat Recon. Vehicles <sup>1</sup>
AIR 7000 Phase 2B	Maritime Patrol and Response Aircraft System	P-8A Poseidon
AIR 9000 Phase 2/4/6	Multi-Role Helicopter	MRH90 Helicopters
SEA 1180 Phase 1	Offshore Patrol Vessel	Offshore Patrol Vessel
AIR 5349 Phase 3	EA-18G Growler Airborne Electronic Attack Capability	Growler
AIR 9000 Phase 8	Future Naval Aviation Combat System Helicopter	MH-60R Seahawk
LAND 121 Phase 3B	Medium Heavy Capability, Field Vehicles, Modules and Trailers	Overlander Medium/Heavy
JP 2048 Phase 4A/4B	Amphibious Ships (LHD)	LHD Ships
LAND 121 Phase 4	Protected Mobility Vehicle – Light (PMV-L)	Hawkei
AIR 8000 Phase 2	Battlefield Airlift – Caribou Replacement	Battlefield Airlifter
SEA 1654 Phase 3	Maritime Operational Support Capability	Repl Replenishment Ships
AIR 7000 Phase 1B	Multi-mission Unmanned Aircraft System	Triton Drones <sup>1</sup>
AIR 5431 Phase 3	Civil Military Air Management System	CMATS
LAND 200 Tranche 2	Battlefield Command System	Battlefield Command System <sup>1</sup>

<sup>9</sup> The Capability Acquisition and Sustainment Group (CASG) purchases and maintains military equipment and supplies in the quantities and to the service levels that are required by Defence and approved by Government. Available from <<http://www.defence.gov.au/casg/About.asp>> [accessed 8 August 2019].

<sup>10</sup> The SEA 1448 Phase 2B ANZAC Anti-Ship Missile Defence project was removed from the MPR program following the achievement of FOC in June 2019.

JP 2072 Phase 2B	Battlespace Communications System Phase 2B	Battle Comm. Sys. (Land) 2B
AIR 7403 Phase 3	Additional KC-30A Multi-role Tanker Transport	Additional MRTT
SEA 1439 Phase 5B2	Collins Class Communications and Electronic Warfare Improvement Program	Collins Comms and EW
SEA 3036 Phase 1	Pacific Patrol Boat Replacement	Pacific Patrol Boat Repl
JP 9000 Phase 7	Helicopter Aircrew Training System	HATS
JP 2072 Phase 2A	Battlespace Communications System Phase 2A	Battle Comm. Sys. (Land) 2A
SEA 1442 Phase 4	Maritime Communications Modernisation	Maritime Comms
SEA 1448 Phase 4B	ANZAC Air Search Radar Replacement	ANZAC Air Search Radar Repl
LAND 53 Phase 1BR	Night Fighting Equipment Replacement	Night Fighting Equip Repl
JP 2008 Phase 5A	Indian Ocean Region UHF SATCOM	UHF SATCOM
SEA 1439 Phase 3	Collins Class Submarine Reliability and Sustainability <sup>2</sup>	Collins R&S
JP 2048 Phase 3	Amphibious Watercraft Replacement	LHD Landing Craft

Note 1: SEA 5000 Phase 1 Future Frigates, SEA 1000 Phase 1B Future Submarine Design Acquisition, LAND 400 Phase 2 Combat Reconnaissance Vehicles, AIR 7000 Phase 1B Multi-mission Unmanned Aircraft System and LAND 200 Tranche 2 Battlefield Command System are included in the MPR Program for the first time in 2019–20.

Note 2: SEA 1439 Phase 3 Collins Class Submarine Reliability and Sustainability is a group of 22 activities primarily sustainment in nature. While not an acquisition project, it has been included on an ongoing basis at the JCPAA's request.

## Defence's Roles and Responsibilities

**1.15** Defence will provide each project's PDSS for the ANAO's review. The Secretary of the Department of Defence (Secretary) is responsible for ensuring that the PDSSs are prepared in accordance with these Guidelines, as endorsed by the JCPAA, and for ensuring that the PDSSs and supporting evidence provided to the ANAO for review are complete and accurate. The Secretary is also responsible for formally presenting the Defence MPR to the ANAO on completion of the PDSSs and associated commentary.

**1.16** Defence is responsible for ensuring information of a classified nature is made available to the ANAO for review, as it relates to the data contained within the PDSSs. Data of a classified nature is to be prepared in such a way as to allow for unclassified publication. Defence will confirm to the ANAO the classification of information proposed to be published in the MPR. Defence will provide advice with regards to the aggregated security classification of information contained within the PDSS suite, and suitability for unclassified publication.

**1.17** Defence's positions, roles and responsibilities are outlined in the table below.

**Table 3: Defence's Positions, Roles and Responsibilities**

Position	Role	Responsibility
Secretary of Defence	Defence accountability	<ul style="list-style-type: none"> <li>Primary accountability for the completeness and accuracy of the Defence MPR.</li> <li>Sign off on the <i>Statement by the Secretary of Defence</i>, including Significant Events Occurring Post 30 June 2020.</li> </ul>
Vice Chief of the Defence Force	Joint Force Authority	<ul style="list-style-type: none"> <li>Provision of advice with regards to the aggregated security classification of information contained within the PDSS suite, and suitability for unclassified publication.</li> </ul>
Defence Deputy Secretary Capability Acquisition and Sustainment Group (CASG)	Business Process Owner	<ul style="list-style-type: none"> <li>Responsibility for CASG's portfolio of acquisition projects and sustainment products that procure and sustain materiel capability for the Australian Defence Force.</li> <li>Obtain cascading sign offs from Branch and Division Heads, on the data and content in the unclassified PDSS suite.</li> </ul>

		<ul style="list-style-type: none"> <li>• Clearance of the PDSSs and Defence analysis, or delegation as appropriate.</li> </ul>
Chief Finance Officer Defence	Financial advice and assurance	<ul style="list-style-type: none"> <li>• Responsibility for financial advice and information in the PDSS suite and Defence MPR.</li> <li>• Coordination and provision of corporate budget information.</li> <li>• Quality assurance of all financial data.</li> </ul>
First Assistant Secretary Audit and Fraud Control	Compliance and assurance over processes	<ul style="list-style-type: none"> <li>• Responsibility for ensuring Defence's compliance with the Guidelines.</li> <li>• Assurance over process and stakeholder engagement.</li> <li>• Provision of advice to, and facilitation of clearances by, the Secretary of Defence.</li> </ul>
Director Program Approvals and Agreements	MPR management, coordination, liaison and accountability	<ul style="list-style-type: none"> <li>• Liaison with ANAO senior management.</li> <li>• Advice to Deputy Secretary CASG and Secretary.</li> <li>• Clearance of the unclassified PDSS suite and Defence MPR.</li> <li>• Guidance and direction to project offices.</li> <li>• Manage the MPR Program and schedule with the ANAO MPR team.</li> <li>• Development, configuration management and quality assurance of the Defence MPR, PDSS suite and evidence packs to ensure completeness and accuracy.</li> </ul>
Project Directors/Managers	PDSS development and generation of evidence packs	<ul style="list-style-type: none"> <li>• Develop the project's PDSS and associated evidence packs, including the mapping of evidence to disclosures within the PDSS, in compliance with the Guidelines.</li> <li>• Actively engage the ANAO MPR team in its review of the project's PDSS.</li> </ul>
Capability Managers	PDSS accountability and clearance	<ul style="list-style-type: none"> <li>• Responsibility for confirming the project's status, particularly progress toward the Initial Materiel Release (IMR), Initial Operational Capability (IOC), FMR and FOC milestones.</li> <li>• Confirmation that the information contained within the PDSSs is unclassified.</li> </ul>

## MPR Process

**1.18** The JCPAA identified the MPR as a Priority Assurance Review in its Report 429, *Review of the 2010–11 Defence Materiel Organisation Major Projects Report*. Consequently, Section 31 of the *Auditor-General Act 1997* provides the ANAO with full and free access powers in the conduct of the review. This will be facilitated by the Director Program Approvals and Agreements.

**1.19** An indicative schedule for the MPR program has been established (refer to page 396). The schedule provides for a pre 30 June site visit period for the ANAO to conduct PDSS reviews of all projects. All project data should be prepared for this period at the date selected for the ANAO's review, without anticipating outcomes for the post 30 June review. A second period will be set aside after the end of the financial year for reviewing completed PDSSs.

**1.20** Normally, at least five working days prior to the commencement of a project site visit, Defence will provide the ANAO with a Defence quality assured copy of the PDSS together with the relevant evidence pack (electronically). The evidence pack will be appropriately structured and mapped to the PDSS by the project for efficient review.

**1.21** In accordance with natural justice provisions, contractors named within a PDSS will be consulted before Defence finalises the PDSS. The aim of the consultation is to provide the contractor with an opportunity to comment on relevant extracts from a project's PDSS. Defence will request contractors to provide the ANAO with a copy of their comments (including nil returns) in relation to any errors or misstatements in the PDSS. Defence will consider contractors' comments received within specified and reasonable time limits. Defence will also keep the ANAO apprised on how Defence intends to deal with the contractor responses to the PDSS suite.

**1.22** The ANAO may also directly engage with contractors to seek any clarification on their comments on the project data, and will keep Defence apprised on feedback and outcomes.

## Other Items to Note

**1.23** As the PDSS is part of a public document, the following style conventions must be followed:

- (a) PDSSs should be kept to an optimum length of 10 pages, focus on key information, and updated based on the latest template included in this document (refer to page 391).
- (b) For repeat projects, changes from prior years are to be depicted in bold orange text.
- (c) Where possible, acronyms and jargon are not to be used. When acronyms are used, the first use must be spelt out in full.
- (d) Project names should be written in full or with the approved Defence abbreviation, and should be presented with an initial capital, e.g. Joint Strike Fighter.
- (e) All costs should be shown as \$m (millions) and be rounded to one decimal place (i.e. to the nearest \$100,000), with negative amounts in brackets.
- (f) Dates in the PDSS narratives should be presented as Month 20yy, and dates in the PDSS tables should be presented as mmm yy (e.g. Jul 09). Time variations should be shown as full months.
- (g) Any cells in a table not containing data should be shown as 'N/A'.

## Requirements for the Preparation of the Project Data Summary Sheets (PDSS)

Heading	Data	Definition/Description
<b>Project Header</b>	Project Number	The number of the project as approved by government. This should be depicted in bold text.
	Project Name	The name of the project as approved by government. This should be depicted in bold upper case text.
	First Year Reported in the MPR	The year the project was first reported in the MPR. Use 20xx-xx date format.
	Capability Type	One of the following: <ul style="list-style-type: none"> <li>• New;</li> <li>• Replacement; or</li> <li>• Upgrade.</li> </ul>
	Acquisition Type	One of the following: <ul style="list-style-type: none"> <li>• MOTS (Military-Off-The-Shelf) or COTS (Commercial-Off-The-Shelf);</li> <li>• Australianised MOTS; or</li> <li>• Developmental.</li> </ul>
	Capability Manager	Either one or a combination of: <ul style="list-style-type: none"> <li>• Chief of Navy;</li> <li>• Chief of Army;</li> <li>• Chief of Air Force;</li> <li>• Chief of Joint Capability;</li> <li>• Vice Chief of the Defence Force; or</li> <li>• Deputy Secretary Strategic Policy and Intelligence.</li> </ul>
	Government 1st Pass Approval	The date Government First Pass Approval was given.



Heading	Data	Definition/Description
	Government 2nd Pass Approval (or key Government pre-Second Pass Approval)	The date Government Second Pass Approval was given (list dates for multiple Government Second Pass Approvals). Where a project has entered the MPR but has not yet achieved Second Pass Approval, a pre-Second Pass Approval date based on a key Government decision should be disclosed.
	Budget at 2nd Pass Approval	Disclose the approved project budget as at the most recent Government Second Pass Approval, excluding price indexation and exchange variation. This amount should equal the sub total of the project budget in Section 2.1 as at the most recent Second Pass Approval. Where a project has entered the MPR but has not yet achieved Second Pass Approval, a pre-Second Pass Approval budget based on a key Government decision should be disclosed.
	Total Approved Budget (Current)	The current approved project budget. This amount should equal the Total Budget in Section 2.1 Project Budget (out-turned) and Expenditure History.
	2019–20 Budget	The estimated project expenditure for 2019–20 as per the Portfolio Budget Statements (PBS) and/or the Portfolio Additional Estimates Statements (PAES), or other official budget tool when not available in the PBS or PAES. <sup>11</sup> This amount should be equal to the Estimate Final Plan in Section 2.2A and Section 2.2B.
	Project Stage	The Life Cycle Gate stage applicable to the project according to the Maturity Score procedure. This should agree to the Project Stage recorded in the Monthly Reporting System (MRS) and Section 6.1 Project Maturity Score and Benchmark.
	Complexity	The Acquisition Categorisation (ACAT) level of the project.
	Project Image	Image of the project to be provided to the ANAO by the Defence MPR team in a separate file as a high resolution JPG.
<b>SECTION 1 – PROJECT SUMMARY</b>		
<b>Section 1.1 Project Description</b>	Description	A short description of the project, which summarises capability delivery and, where appropriate, equipment quantities. This information should be consistent with other sections of the PDSS.
<b>Section 1.2 Current Status</b>	Cost Performance	<u>In-year</u> At a strategic level, state the project's current progress against its in-year budget (specifying underspend or overspend), and provide a succinct explanation of causes for variations. This statement should agree to the In-year Budget/Expenditure Variance explanation in Section 2.2B. Note: For the pre 30 June PDSS, projects should use the part-year result.

<sup>11</sup> This amount may include updates since the last PAES, such as foreign exchange under the Government's 'no win, no loss' policy, or budget impacts resulting from other government decisions.

Heading	Data	Definition/Description
		<p><u>Project Financial Assurance Statement</u></p> <p>An additional 'project financial assurance statement' on the projects' budget performance should be disclosed, noting whether the budget remaining, together with the estimated future expenditure and current known risks, is sufficient for completing the project. Where it is determined that the budget is sufficient, the statement should be based on the following standard text:</p> <p>As at 30 June 2020, project [insert project number] has reviewed the project's approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial contractual obligations of Defence for this project, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget remaining for the project to complete against the agreed scope.</p> <p>This statement should be modified accordingly when the budget is insufficient and/or to describe the project's unique circumstances (such as requiring the use of contingency, or to note cost risks disclosed in Section 5 – Major Risks and Issues of the PDSS). Where modified, the project should include a description of the actions the project is undertaking to address the insufficiency of the budget.</p> <p><u>Contingency Statement</u></p> <p>State whether the project has/has not applied contingency funds this financial year. Note that disclosure of contingency amounts is not required. Standard text:</p> <p>[positive case]: The project has applied contingency in the financial year primarily for the treatment of [a risk category<sup>12</sup>] risk [and where possible include linkage to Section 5 – Major Risks and Issues and specified remediation activities]; or</p> <p>[negative case]: The project has not applied contingency in the financial year.</p> <p>This section must be consistent with the data in Section 2 – Financial Performance.</p>
	Schedule Performance	<p>At a strategic level, briefly describe key schedule milestones achieved so far and issues facing the project in achieving future milestones. Milestone achievements or non-achievements in the current year should also be explained and include the variance in months.</p> <p>This section must be consistent with what is stated in Section 3 – Schedule Performance.</p>
	Materiel Capability Delivery Performance	<p>At a strategic level, provide a brief update on the materiel capability delivered to date, and expected future delivery. Detailed technical performance of systems is to be avoided and classified information is not to be disclosed.</p> <p>This section must be consistent with what is stated in Section 4 – Materiel Capability Delivery Performance.</p>

12 Refer to the Department of Defence, Defence Materiel Manual Project, DMM (PROJ) 11-0-002, *Project Risk Management Manual (PRMM) 2013*, July 2013, Annex G, for guidance. A replacement manual is in development.

Heading	Data	Definition/Description
<b>Section 1.3 Project Context</b>	Background	<p>A succinct summary level statement that covers Government approvals history and any strategic changes that have occurred since approval.</p> <p>For post-2011–12 MPR projects, if the projects' classification is not MOTS, an explanation must be provided to ensure that these options were explicitly considered and eliminated for particular reasons before final procurement decisions have been made.<sup>13</sup> For projects approved under the Interim Capability Life Cycle model a short description of Defence's "Smart Buyer" risk assessment considered at Second Pass approval should also be included.</p> <p>For projects that have been announced as a Project of Concern by the Minister for Defence disclose:</p> <ul style="list-style-type: none"> <li>• The date the project was announced as a PoC;</li> <li>• The reason for the project being placed on the POC list;</li> <li>• The remediation activities being undertaken; and</li> <li>• The date of removal from the list (if applicable).</li> </ul> <p>Note: Stop payments or liquidated damages should be referred to here or elsewhere in Section 1 (disclosure of amounts is not required).</p>
	Uniqueness	A brief explanation of the particular aspects that make the project unique.
	Major Risks and Issues	<p>A succinct summary of the major risks and issues disclosed in Section 5 – Major Risks and Issues.</p> <p>In addition, where the project has achieved a milestone with caveats, a brief description of the caveats should be added.</p>
	Other Current Related Projects/Phases	List the current approved projects (i.e. Second Pass has been achieved) relating to the same platform and/or with the same main project number (e.g. SEA xxxx), including the phase of the project, and provide a brief description of the capability (i.e. one or two short sentences).
<b>SECTION 2 – FINANCIAL PERFORMANCE</b>		
<b>Section 2.1 Project Budget (out- turned) and Expenditure History</b>	<b>Project Budget</b>	
	Original Approved	Each PDSS should clearly identify the first approved budget by Government. This could be through an Original, Interim, First or Second pass approval. In brackets, disclose the Approval source (e.g. Government First or Second Pass Approval).
	Real Variation	<p>The variations to be included are shown below where they are applicable to the project with an explanation for each variation included within the Notes:</p> <p><b><u>"Subsequent Government Approvals"</u></b> Where additional funds have been approved by Government, projects are to disclose the addition of funds for that specific Government Approval in the description column and not as a real scope variation. If the approval is a Government First or Second Pass Approval, ensure it is in bold text.</p>

13 JCPAA, Report 429, *Review of the 2010–11 Defence Materiel Organisation Major Projects Report*, May 2012, p. 25.

Heading	Data	Definition/Description
		<p><b>“Scope”</b> changes are attributable to changes in requirements by Defence and government. These generally take the form of changes in quantities of equipment, a change in requirements that result in specification changes in contracts, changes in logistics support requirements or changes to services to be provided which are accompanied by a corresponding budget adjustment.</p> <p><b>“Transfers”</b> occur when a portion of the budget and corresponding scope is transferred to or from another approved project or sustainment product in CASG or to another Group in Defence in order to more efficiently manage delivery of an element of project scope and to vest accountability for performance accordingly.</p> <p><b>“Budgetary Adjustment”</b> is made to account for corrections resulting from foreign exchange or indexation accounting estimation errors that might occur from time to time. Also included under this heading are administrative decisions that result in variations such as efficiency dividends imposed on project budgets or adjustments made to fund Defence initiatives.</p> <p><b>“Real Cost Increases”</b> These funds have been approved by government to increase the Project’s budget (generally without a change in scope).</p> <p><b>“Real Cost Decreases”</b> These funds have been handed back to the Defence Portfolio.</p> <p>The elements above are to be subtotalled to give a single amount for all real variations (including Government Second Pass Approvals).</p>
	Total at Second Pass Approval (or key Government pre-Second Pass Approval)	A subtotal should be in the \$m column which sums each individual Government approval and real variation, until the most recent Second Pass Approval (or key Government pre-Second Pass Approval). This figure should match the Budget at 2nd Pass Approval (or key Government pre-Second Pass Approval) in the Header section.
	Price Indexation	Variations to the Original Approved project cost due to price indexation and out-turning adjustments, to take account of variations in labour and materiel indices over time. This is disclosed where applicable, i.e. not for projects approved post-July 2010 in out-turned prices.
	Exchange Variation	Variations to the Original Approved project cost due to foreign exchange adjustments brought about by changes in foreign exchange rates for payments in foreign currency.
	Total Budget	<p>The sum of the above.</p> <p>This should reconcile with the FMIS as at 30 June. The Total Approved Budget in the Project Header should equal this figure.</p> <p>Note: For the pre 30 June PDSS, this amount and its components noted above should reconcile to the current Financial Management Information System (FMIS) Project Approvals extract.</p>
	Notes	For additional information as required, e.g. explanation for the reason for each Real Variation.

Project Expenditure	
Prior to Jul 19	<p>This item comprises all amounts incurred in all <u>periods prior</u> to the current reporting period (i.e. expenditure up to 30 June 2019). All expenditure is to be presented in brackets to indicate a negative figure.</p> <p>Reporting of expenditure is to be split into the following:</p> <p><b><u>“Contract Expenditure”</u></b> against each of the top 5 contracts as listed in Section 2.3 Details of Project Major Contracts, restricted to contracts valued at greater than or equal to \$10m. Contract expenditure should be listed from highest to lowest value. Contracts with nil value should not be disclosed.</p> <p><b><u>“Other Contract Payments / Internal Expenses”</u></b> which comprises operating expenditure, contractors, consultants, other capital expenditure not attributable to the aforementioned contracts and minor contract expenditure. It is generally expected that ‘other’ expenditure will not exceed 10% of total prior period expenditure. However, in the event that ‘other’ expenditure exceeds this threshold, additional explanation will be required within the Notes section outlining the key aspects of the expenditure including amounts to bring the amount of unexplained ‘other’ below 10%.</p> <p>The two expenditure elements above are to be subtotaled to give a single amount for all prior period expenditure.</p>
FY to Jun 20	<p>This item comprises all amounts incurred in the <u>current reporting period</u> (i.e. contract level expenditure from 1 July 2019 to 30 June 2020). All expenditure is to be presented in brackets to indicate a negative figure.</p> <p>Reporting of expenditure is to be split into the following:</p> <p><b><u>“Contract Expenditure”</u></b> against each of the top 5 contracts as listed in Section 2.3 Details of Project Major Contracts, restricted to contracts valued at greater than or equal to \$10m. Contract expenditure should be listed from highest to lowest value. Contracts with nil value should not be disclosed.</p> <p><b><u>“Other Contract Payments / Internal Expenses”</u></b> which comprises operating expenditure, contractors, consultants, other capital expenditure not attributable to the aforementioned contracts and minor contract expenditure. It is generally expected that ‘other’ expenditure will not exceed 10% of total expenditure in the current reporting period. However, in the event that ‘other’ expenditure exceeds this threshold, additional explanation will be required within the Notes section outlining the key aspects of the expenditure including amounts to bring the amount of unexplained ‘other’ below 10%.</p> <p>The two expenditure elements above are to be subtotaled to give a single amount for Financial Year (FY) expenditure.</p> <p>Note: For the pre 30 June PDSS, this amount should reconcile to the year to date expenditure in the FMIS and be equal to the Actual in Section 2.2B In-year Budget/Expenditure Variance.</p> <p>In addition, any stop payments or liquidated damages should be referred to in the Notes (disclosure of amounts is not required).</p>

	Total Expenditure	This item discloses total project expenditure as at the reporting date (i.e. 30 June 2020) and is the sum of prior period and current period expenditure reported above. All expenditure is to be presented in brackets to indicate a negative figure.  Note: For the pre 30 June PDSS, this amount should reconcile to the life to date expenditure in the FMIS.
	Remaining Budget	The subtraction of total expenditure from total budget, thus showing the unspent portion of the approved budget, as at 30 June.
	Notes	For additional information as required, e.g. the breakdown of 'Other Contract Payments/Internal Expenses'.
<b>Section 2.2A In-year Budget Estimate Variance</b>	Estimate PBS \$m	The initial budget estimate for 2019–20, as published in the PBS.
	Estimate PAES \$m	The mid-year revised budget estimate for 2019–20, as published in the PAES.  The variance, as an amount and percentage, should be calculated between the Estimate PAES and Estimate PBS.
	Estimate Final Plan \$m	The final revised budget estimate for 2019–20.  The variance, as an amount and percentage, should be calculated between the Estimate Final Plan and Estimate PAES.  This amount should be equal to the 2019–20 Budget figure in the Project Header and the Estimate Final Plan in Section 2.2B In-year Budget/Expenditure Variance.
	Total Variance	Budget estimate variances, and corresponding variance percentages, are to be disaggregated and disclosed separately.  The variance, as an amount and percentage, should be calculated between the Estimate Final Plan and Estimate PBS.
	Explanation of Material Movements	The explanations for the material variance/s noted above, as published in appropriate supporting documentation, e.g. the PAES.
<b>Section 2.2B In-year Budget/ Expenditure Variance</b>	Estimate Final Plan \$m	The estimated project expenditure for 2019–20.  The data needs to present the project's 'Year to Date' performance in financial terms. It must explain the difference between the 'Latest Plan' in the MRS Majors Budget Performance Total report and/or the FMIS and the End of Financial Year Actual Expenditure.  This amount should be equal to the 2019–20 Budget figure in the Project Header and the Estimate Final Plan in Section 2.2A In-year Budget Estimate Variance.  Note: For the pre 30 June PDSS, projects should use the part-year result.
	Actual \$m	The actual project expenditure incurred in the current reporting period (i.e. 2019–20).  This amount should be equal to the FY to Jun 20 Total Expenditure in Section 2.1 Project Budget (out-turned) and Expenditure History.  Note: For the pre 30 June PDSS, projects should use the part-year result (i.e. 'Actual Total' in the MRS Majors Budget Performance Total report, or the FMIS.

	Variance \$m	<p>Budget expenditure variances are to be disaggregated and disclosed separately as per the variance factors described below.</p> <p>The sum of these should give a total variance equal to the difference between the Estimate and Actual expenditure.</p> <p>The variance percentage should also be calculated between the Estimate and Actual expenditure.</p>
	Variance Factor	<p>This section provides a range of factors attributable to the cause of the variances between the Budget Estimate and Actual expenditure. These are expressed as the standard variance factors of:</p> <ul style="list-style-type: none"> <li>• Australian Industry;</li> <li>• Foreign Industry;</li> <li>• Early Processes;</li> <li>• Defence Processes;</li> <li>• Foreign Government Negotiations/Payments;</li> <li>• Cost Saving;</li> <li>• Effort in Support of Operations; and</li> <li>• Additional Government Approvals.</li> </ul>
	Explanation	<p>Explanations must address all of the variance factors noted above, where relevant.</p> <p>Material changes following the publication of the PAES may require an explanation.</p> <p>This explanation should be equal to the In-year Cost Performance statement in Section 1.2.</p>
<b>Section 2.3 Details of Project Major Contracts</b>	Contractor <sup>14</sup>	<p>List the contractors for the top 5 contracts valued at greater than or equal to \$10m. Contractors should be listed in order of signature date (in ascending order).</p> <p>The top five contracts listed should be the same as the contracts listed in Section 2.1 Project Budget (out-turned) and Expenditure History.</p>
	Signature Date	The date the contract was signed.
	Price at Signature \$m and 30 Jun 20 \$m	<p><u>Signature \$m</u> The value of the contract at signature.</p> <p><u>30 Jun 2020 \$m</u> The value of the contract at 30 June 2020 (i.e. value spent as per Section 2.1 Project Budget (out-turned) and Expenditure History plus remaining commitment as at the spot exchange rates as recorded in the FMIS at 30 June 2020).</p> <p>All values are exclusive of GST.</p> <p>Note: For the pre 30 June PDSS, projects should use the life to date expenditure per Section 2.1 plus remaining commitment in the FMIS as above.</p>
	Type (Price Basis)	<p>Choices for this include:</p> <ul style="list-style-type: none"> <li>• Firm (or Fixed);</li> <li>• Variable;</li> <li>• Cost Ceiling (capped); or</li> <li>• Reimbursement (for FMS).</li> </ul>

14 The definition of 'contractor' in Section 2.3 Details of Major Project Contracts, includes contractors from direct commercial sales, and also foreign government arrangements such as Memoranda of Understanding, FMS or Cooperative Programs.

		For further information including templates refer to the ASDEFCON Suite of Tendering and Contracting Templates on the Defence intranet.
	Form of Contract	This refers to the contract template used, e.g. ASDEFCON (Strategic, Complex etc.). For unique arrangements such as Alliance or Public Private Partnership, they would need to be specially treated (noting the key signatories to the arrangement). Projects should seek the advice of the Defence MPR team. For Foreign Military Sales, declare “FMS”. For Memorandum of Understanding, declare “MoU”.
	Notes	For additional information as required, e.g. description of new contract or contract changes.
	Contractor	List the contractors for the top 5 contracts valued at greater than or equal to \$10m. Contractors should be listed in order of signature date (in ascending order), i.e. same order as above. The top five contracts listed should be the same as the contracts listed in Section 2.1 Project Budget (out-turned) and Expenditure History.
	Contracted Quantities as at Signature and 30 Jun 20	The quantity of major equipment under contract as at the date the contract was signed and also as at 30 June 2020. The quantity of contracted equipment should only be provided at a summary level.
	Scope	Briefly describe the scope of the contract deliverables. Generally only include hardware in this section and restrict it to a platform level summary, disclosing only major prime mission and support system elements, e.g. ‘Upgraded Collins Class Submarines’.
	Notes	For additional information as required.
	Major equipment accepted and quantities to 30 Jun 20	Detail the major equipment and quantities the project has accepted to 30 June 2020.
	Notes	For additional information as required.
<b>SECTION 3 – SCHEDULE PERFORMANCE</b>		
<b>Section 3.1 Design Review Progress</b>	Review	The events to be included are shown below as they are applicable to the project: <ul style="list-style-type: none"> <li>• System Requirements;</li> <li>• Preliminary Design; and</li> <li>• Critical Design.</li> </ul> If some or all of the above events are not applicable, other or alternative reviews, for instance, unique arrangements or redesigns, should be included.
	Major System/ Platform Variant	State the major system that the design review refers to. Significant variants for the major systems should also be included.
	Original Planned	The originally planned achievement dates for the events per the contract at execution.
	Current Contracted	Replanned dates as evidenced by a contract amendment.
	Achieved/Forecast	<u>Achieved</u> : The date the event was achieved as supported by evidence, or



		<u>Forecast</u> : The expected date for achievement supported by the project schedule (e.g. as recorded in Open Plan Professional (OPP)).
	Variance (Months)	The difference between 'Original Planned' and 'Achieved/Forecast'.
	Notes	A top level description of the reasons for the variance to Achieved/Forecast dates, and any additional background information as required.
<b>Section 3.2 Contractor Test and Evaluation Progress</b>	Test and Evaluation	The events to be included are shown below as they are applicable to the project: <ul style="list-style-type: none"> <li>• System Integration; and</li> <li>• Acceptance.</li> </ul> If some or all of the above events are not applicable, other or alternative test and evaluation activities, for instance, unique arrangements or activities associated with redesign, should be included.
	Major System/ Platform Variant	State the major system that the Test and Evaluation event refers to. If there are significant variants for the major systems, then state what they are.
	Original Planned	The originally planned achievement dates for the events per the contract at execution.
	Current Contracted	The revised planned achievement dates as evidenced by a contract amendment.
	Achieved/Forecast	<u>Achieved</u> : The date the event was achieved as supported by evidence; or <u>Forecast</u> : The expected date for achievement supported by the project schedule (e.g. as recorded in OPP).
	Variance (Months)	The difference between 'Original Planned' and 'Achieved/Forecast'.
	Notes	A top level description of the reasons for the variance to Achieved/Forecast dates, and any additional background information as required.
<b>Section 3.3 Progress Toward Materiel Release and Operational Capability Milestones</b>	Item	Represented at a whole of capability level, unless key milestones are broken out under individual Mission or Support Systems.
	Original Planned	The original date on which the Materiel Release or Operational Capability milestone was scheduled for achievement.
	Achieved/Forecast	<u>Achieved</u> : The date the event was achieved as supported by evidence; or <u>Forecast</u> : The expected date for achievement supported by the project schedule (e.g. as recorded in OPP).
	Variance (Months)	The difference between 'Original Planned' and 'Achieved/Forecast'.
	Notes	A top level description of the reasons for and implications of the variance to 'Achieved/Forecast' dates. Where the project has achieved a milestone with caveats, a brief description of the caveats should be added.
<b>Schedule Status at 30 June 2020</b>	Graph	The Defence MPR team will use the projects existing detail on: Second Pass Approval, Initial Materiel Release (IMR), Initial Operational Capability, Final Materiel Release (FMR) and Final Operational Capability, to produce the graph.

SECTION 4 – MATERIEL CAPABILITY DELIVERY PERFORMANCE		
Section 4.1 Measures of Materiel Capability Delivery Performance	Pie Chart: Percentage Breakdown of Materiel Capability Delivery Performance	<p>Capability Pie Chart and associated narratives will provide a percentage breakdown of the Materiel Release Milestones and Completion Criteria, as identified in the MAA and/or JPD, at 30 June 2020.</p> <p>The pie chart analysis/narrative (Green, Amber and Red) is to be provided at the <u>strategic</u> level, including:</p> <ul style="list-style-type: none"> <li>• <u>Issues</u> impacting the achievement of Materiel Release Milestones and Completion Criteria; and</li> <li>• <u>Remedial activity</u> to recover performance.</li> </ul> <p>Where there is no data insert 'N/A'.</p> <p>Detailed technical performance of systems is to be avoided, and classified information is not to be disclosed.</p> <p>Where the project has not yet achieved IMR, the statement against the Green traffic light should be written in future tense, i.e. <i>"The project expects to meet capability requirements as expressed in the Materiel Acquisition Agreement..."</i>, as opposed to <i>"The project is currently meeting..."</i>.</p> <p>Note: The analysis and narrative disclosures should align with information in the MRS Majors Capability report. Defence may need to provide alternative evidence to support disclosures which are not able to be supported by MRS.</p>
	Item	Represented at a whole of capability level, i.e. IMR, IOC, FMR and FOC.
Section 4.2 Constitution of Materiel Release and Operational Capability Milestones	Explanation	<p>A top level description of the materiel release and operational capability elements as stipulated in the MAA, at 30 June 2020, including an indication of whether or not these milestones have been achieved.</p> <p>If the milestone has not been met, include a statement to indicate when the milestone is expected to be achieved.</p> <p>The milestones to be included are shown below as they are applicable to the project:</p> <ul style="list-style-type: none"> <li>• Initial Materiel Release;</li> <li>• Initial Operational Capability;</li> <li>• Final Materiel Release; and</li> <li>• Final Operational Capability.</li> </ul> <p>If some or all of the above events are not applicable, other or alternative milestones, for instance operational release milestones, should be included.</p> <p>Note: Where the project has achieved a milestone with caveats, a brief description of the caveats should be added.</p>
	Achievement	Standard text, i.e. Achieved; Not yet achieved; or Achieved with caveats.

SECTION 5 – MAJOR RISKS AND ISSUES		
<b>Section 5.1 Major Project Risks</b>	Identified Risks (risks identified by standard project risk management processes)	<p><u>Description:</u> A major project risk is one that is rated high or extreme pre-mitigation.</p> <p><u>Remedial Action:</u> The risk mitigation/treatment proposed for the risk identified (these must be actionable measures). If the risk has been retired or the pre-mitigation rating has been downgraded to medium, this should be documented along with the reason; the risk can then be removed in the subsequent MPR.</p> <p>Where contingency has been applied to treat a risk the wording should be consistent with Section 1.2 Current Status - Cost Performance - Contingency Statement.</p> <p><u>Note:</u> All high and extreme risks require disclosure. The disclosures may be aggregated to include multiple risks against one common description. In addition, a mapping of all risks from project risk logs to the PDSS is required.</p>
	Emergent Risks (risks not previously identified but have emerged during 2019–20)	<p><u>For repeat projects only.</u></p> <p><u>Description:</u> A major project risk that was not previously identified in the risk log but has emerged this year, rated as high or extreme pre-mitigation. This includes project risks previously rated medium or low pre-mitigation.</p> <p><u>Remedial Action:</u> The risk mitigation/treatment proposed for the risk identified (these must be actionable measures). The risk becomes an Identified Risk in the subsequent MPR.</p> <p>Where contingency has been applied to treat a risk the wording should be consistent with Section 1.2 Current Status - Cost Performance - Contingency Statement.</p> <p><u>Note:</u> All high and extreme emergent risks require disclosure. The disclosures may be aggregated to include multiple risks against one common description. In addition, a mapping of all emergent risks from project risk logs to the PDSS is required.</p>
<b>Section 5.2 Major Project Issues</b>	Description	<p>Issues are high or extreme risks that have been realised or issues that have arisen that require management action to address.</p> <p><u>Note:</u> All high and extreme issues require disclosure. In addition, a mapping of all issues from project issues logs to the PDSS is required.</p> <p>Where the project has achieved a milestone with caveats, caveats should be disclosed as separate issues. On the removal of the caveat, it should also be clear to the reader whether the underlying shortfall/issue has been resolved.</p>
	Remedial Action	<p>The remediation action proposed for the issue identified. If the issue has been resolved or downgraded to medium, this should be documented along with the reason; the issue can then be removed in the subsequent MPR.</p>

SECTION 6 – PROJECT MATURITY		
<b>Section 6.1 Project Maturity Score and Benchmark</b>	Project Stage	The Life Cycle Gate stage applicable to the project according to the Maturity Score procedure. <sup>15</sup> This should be the same as the project stage in the Project Header.
	Benchmark	The Benchmark Maturity Score applicable to the project according to the Maturity Score procedure.
	Project Status	The Project Status applicable to the project according to the Maturity Score procedure. This should be equal to the Maturity Score recorded in the June 2020 MRS Majors Master Data report.
	Explanation	A short explanation is required for each attribute of the Maturity Score (Schedule, Cost, Requirement, Technical Understanding, Technical Difficulty, Commercial, and Operations and Support) where there is a difference between the Project Status and Benchmark scores, explaining the reasons for the variance.
	Graph	The Defence MPR team will use the prior and current year 'Project Status' scores, to produce the graph.
SECTION 7 – LESSONS LEARNED		
<b>Section 7.1 Key Lessons Learned</b>	Description	Describe the project lesson (at the strategic level) that has been learned.
	Categories of Systemic Lessons	Select from the following 'Systemic Lessons' <sup>16</sup> categories where they are applicable to the project: <ul style="list-style-type: none"> <li>• Requirements Management;</li> <li>• First of Type Equipment;</li> <li>• Off-The-Shelf Equipment;</li> <li>• Contract Management;</li> <li>• Schedule Management;</li> <li>• Resourcing; and/or</li> <li>• Governance.</li> </ul>
SECTION 8 – PROJECT LINE MANAGEMENT		
<b>Section 8.1 Project Line Management as at 30 June 2020</b>	Position and names of the Project's Line Management	List the names of the senior management team as appropriate to the project. This should include: <ul style="list-style-type: none"> <li>• Division Head or Program Manager;</li> <li>• Branch Head;</li> <li>• Project Director; and</li> <li>• Project Manager.</li> </ul> This list will contain those persons who occupied their respective position as at 30 June 2020.

15 Refer to the Department of Defence, Defence Materiel Standard Procedure (Project Management), DMSP (PROJ) 11-0-007, *Project Maturity Scores at Life Cycle Gates*, September 2010, for guidance.

16 ANAO Report No.13 2009–10, *2008–09 Major Projects Report*, November 2009, Part 3, paragraph 3.25, p. 122.

## Project Data Summary Sheet Template<sup>17</sup>

Project Number		Project Image.
Project Name		
First Year Reported in the MPR		
Capability Type		
Acquisition Type		
Capability Manager		
Government 1st Pass Approval		
Government 2nd Pass Approval (or key Government pre-Second Pass Approval)		
Budget at 2nd Pass Approval (or key Government pre-Second Pass Approval)		
Total Approved Budget (Current)		
2019–20 Budget		
Project Stage		
Complexity		

### Section 1 – Project Summary

#### 1.1 Project Description

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#### 1.2 Current Status

<b>Cost Performance</b> <u>In-year</u>  <u>Project Financial Assurance Statement</u>  <u>Contingency Statement</u>
<b>Schedule Performance</b>
<b>Materiel Capability Delivery Performance</b>
<b>Note</b> Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.

#### 1.3 Project Context

<b>Background</b>
<b>Uniqueness</b>
<b>Major Risks and Issues</b>
<b>Other Current Related Projects/Phases</b>

#### 17 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 Assurance Report* by the Auditor-General in **Part 3** of this report.

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
	<b>Project Budget</b>		
	Original Approved (Government First/Interim/Second Pass Approval)		
	Real Variation – Scope		
	Real Variation – Transfer		
	<b>Total at Second Pass Approval</b> (or key Government pre-Second Pass Approval)		
	Real Variation – Budgetary Adjustment		
	Real Variation – Real Cost Increase / Decrease		
Jul 10	Price Indexation*		
Jun 20	Exchange Variation		
Jun 20	<b>Total Budget</b>		
	<b>Project Expenditure</b>		
Prior to Jul 19	Contract Expenditure – Contractor 1		
	Contract Expenditure – Contractor 2		
	Contract Expenditure – Contractor 3		
	Contract Expenditure – Contractor 4		
	Contract Expenditure – Contractor 5		
	Other Contract Payments / Internal Expenses		
FY to Jun 20	Contract Expenditure – Contractor 1		
	Contract Expenditure – Contractor 2		
	Contract Expenditure – Contractor 3		
	Contract Expenditure – Contractor 4		
	Contract Expenditure – Contractor 5		
	Other Contract Payments / Internal Expenses		
Jun 20	<b>Total Expenditure</b>		
Jun 20	<b>Remaining Budget</b>		
<b>Notes</b>			
1			
2			
3			
4			

\*Note – Those projects approved in 'out- turned' dollars will not contain an entry for 'Price Indexation'. In these instances this line can be removed.

### 2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
Variance \$m			Total Variance (\$m): XXX
Variance %			Total Variance (%): XXX

### 2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
			Australian Industry	
			Foreign Industry	
			Early Processes	
			Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	

			<b>Total Variance</b>	
			<b>% Variance</b>	

### 2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 20 \$m			
Contractor 1						
Contractor 2						
Contractor 3						
Contractor 4						
Contractor 5						
<b>Notes</b>						
1						
Contractor	Contracted Quantities as at		Scope			Notes
	Signature	30 Jun 20				
Contractor 1						
Contractor 2						
Contractor 3						
Contractor 4						
Contractor 5						
<b>Major equipment accepted and quantities to 30 Jun 20</b>						
<b>Notes</b>						
1						

## 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						
Preliminary Design						
Critical Design						
<b>Notes</b>						
1						
2						
3						
4						

### 3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
System Integration						
Acceptance						
<b>Notes</b>						
1						
2						
3						
4						

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

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)				
Initial Operational Capability (IOC)				
Final Materiel Release (FMR)				
Final Operational Capability (FOC)				
<b>Notes</b>				
1				
2				
3				

4	
Schedule Status at 30 June 2020	
<b>Defence MPR Team to insert graph</b>	

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

## Section 4 – Materiel Capability Delivery Performance

### 4.1 Measures of Materiel Capability Delivery Performance

Pie Chart: Percentage Breakdown of Materiel Capability Delivery Performance	
<b>Defence MPR Team to insert Pie Chart</b>	<u>Green:</u>
	<u>Amber:</u>
	<u>Red:</u>
<b>Note</b>	
This Pie Chart represents Defence's expected capability delivery. Capability assessments and forecast dates are excluded from the scope of the Auditor-General's Independent Assurance Report.	

### 4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)		
Initial Operational Capability (IOC)		
Final Materiel Release (FMR)		
Final Operational Capability (FOC)		

## Section 5 – Major Risks and Issues

### 5.1 Major Project Risks

Identified Risks (risk identified by standard project risk management processes)	
Description	Remedial Action
Emergent Risks (risk not previously identified but has emerged during 2019–20)	
Description	Remedial Action

### 5.2 Major Project Issues

Description	Remedial Action

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



## Section 6 – Project Maturity

### 6.1 Project Maturity Score and Benchmark

Maturity Score		Attributes							Total
		Schedule	Cost	Requirement	Technical Understanding	Technical Difficulty	Commercial	Operations and Support	
Project Stage	Benchmark								
	Project Status								
	Explanation	<ul style="list-style-type: none"><li></li></ul>							
Defence MPR Team to insert graph									

## Section 7 – Lessons Learned

### 7.1 Key Lessons Learned

Description	Categories of Systemic Lessons

## Section 8 – Project Line Management

### 8.1 Project Line Management as at 30 June 2020

Position	Name
Division Head	
Branch Head	
Project Director	
Project Manager	

## Indicative 2019–20 MPR Program Schedule

Event	Start Date	End Date
Planning for the 2019–20 MPR (including review of outcomes of the 2018–19 program)	Dec 19	Jan 20
Defence and ANAO finalise preparations for the 2019–20 MPR program in time for the JCPAA Hearing	Jan 20	Mar 20
ANAO provide the Engagement Letter and Review Strategy to the Secretary of Defence <sup>18</sup>	Feb 20	Jun 20
Defence MPR provide program advice to the project offices	Feb 20	Feb 20
Defence MPR management finalise preparation with the project offices	Feb 20	Feb 20
Project site visits conducted by the ANAO	Mar 20	Jun 20
End Of Financial Year advice to project offices	Jul 20	Jul 20
Post 30 June PDSS reviews	Jul 20	Sep 20
ANAO submits 2019–20 MPR Guidelines and Project Selection to the JCPAA	Aug 20	Aug 20
Development of the Defence 2019–20 MPR	Aug 20	Oct 20
ANAO develops its Assurance, Review and Analysis for provision to the Secretary	Aug 20	Oct 20
Defence provides advice to the ANAO regarding the security classification of the aggregated PDSS suite	Oct 20	Oct 20
Secretary submits formal draft Defence section of the 2019–20 MPR to the Auditor-General	Oct 20	Oct 20
Defence response to the ANAO Assurance, Review and Analysis for provision to the Auditor-General	Oct 20	Oct 20
ANAO response to the Defence 2019–20 MPR to Defence	Oct 20	Oct 20
ANAO internal clearance of the 2019–20 MPR (Publication and Tabling)	November 2020	

<sup>18</sup> Timing will depend on the JCPAA hearing to ensure key priorities of the JCPAA are considered.