

2021–22 Major Projects Report

Department of Defence

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Canberra ACT
9 February 2023

Dear 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 2022, as presented by the Department of Defence. The report is titled *2021–22 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



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.

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Report snapshot

Auditor-General Report No.12 2022–23

2021–22 Major Projects Report (MPR)



What is the purpose of the MPR?

The MPR is an annual review of the Department of Defence's (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 as at 30 June 2022.

This year, it includes 21 major projects. This is the fifteenth MPR since its commencement in 2007–08.



What did we find?

The Auditor-General concluded that:

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 21 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 2021–22 Major Projects Report Guidelines, as endorsed by the JCPAA.

I have made an Emphasis of Matter drawing attention to disclosures within the Statement by the Secretary of Defence that some information in the PDSSs is not for publication after a Defence security classification review conducted in November 2022. My conclusion is not modified in respect of this matter.



What is reviewed?

Defence prepares Project Data Summary Sheets (PDSS) on selected major defence equipment acquisition projects in accordance with guidelines endorsed by the JCPAA. The PDSSs cover:

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

The ANAO reviews the information in Defence's PDSSs in accordance with the ANAO Auditing Standards specified by the Auditor-General under the *Auditor-General Act 1997*. This year Defence decided that key schedule information was not for publication in four PDSSs, on security grounds. The ANAO has reviewed the information not published by Defence.

\$59.0bn

was the value of the 21 Defence Major Projects as at 30 June 2022.

4 of 21

Defence PDSSs indicated that key schedule information is not for publication.

87%

was the expected delivery against agreed scope across the Major Projects at 30 June 2022 — with 10 projects reporting that some elements of capability/scope delivery are under threat or unlikely to be met.

Part 1. ANAO Review and Analysis

Summary

Background

1. The Department of Defence's (Defence) Capability Acquisition and Sustainment Group (CASG) manages the process of bringing most new specialist military equipment into service for the Australian Defence Force (ADF). On 4 October 2022, a new Naval Shipbuilding and Sustainment Group (NSSG) came into effect, with responsibility for building and sustaining maritime capabilities.¹ As at 30 June 2022, CASG was managing 168 active major and minor capital equipment projects worth \$130.5 billion with an in-year budget of \$11.2 billion.² Defence capitalised some \$8.2 billion from these projects in 2021–22.³
2. The Major Projects Report (MPR) contains Defence information and commentary on a selection of its major projects (the Major Projects) and assurance and analysis of that information by the Australian National Audit Office (ANAO). This report is the fifteenth annual MPR.
3. Major Projects are selected for inclusion in the MPR based on criteria endorsed by the Parliament's Joint Committee of Public Accounts and Audit (JCPAA).⁴ The projects represent a selection of the most significant major projects managed by CASG and the new NSSG.
4. The total approved budget for the 21 Major Projects in this report is approximately \$59.0 billion, which is 45 per cent of the \$130.5 billion budget for active major and minor capital equipment projects.

Selected projects

5. The 21 Major Projects selected for review comprise seven AIR projects, eight SEA projects, five LAND projects and one joint (JNT) project. These projects and their government approved budgets as at 30 June 2022 are listed in Table 1, on p. 4.

1 The new group is discussed at paragraph 1.63.

2 Department of Defence, *Defence Annual Report 2021–22*, Defence, Canberra, 2022, p. ii; and Department of Defence, *Defence Portfolio Budget Statements 2021–22*, Defence, Canberra, 2021, p. 16.

3 Department of Defence, *Defence Annual Report 2021–22*, Defence, Canberra, 2022, Appendix A Financial Statements, Note 3.2A, p. 209.

4 The 2021–22 *Major Projects Report Guidelines* were endorsed by the JCPAA in November 2021 and are included in **Part 4** of this report.

Table 1: 2021–22 MPR — selected projects and approved budgets at 30 June 2022

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	Joint Strike Fighter ²	15,795.7
SEA 5000 Phase 1	Hunter Class Frigate Design and Construction	Hunter Class Frigate ²	6055.7
LAND 400 Phase 2	Combat Reconnaissance Vehicles	Combat Reconnaissance Vehicles ²	5606.3
SEA 1000 Phase 1B	Future Submarines Design Acquisition	Future Subs ²	4816.2
AIR 9000 Phase 2/4/6	Multi-Role Helicopter	MRH90 Helicopters ²	3770.7
SEA 1180 Phase 1	Offshore Patrol Vessel	Offshore Patrol Vessel ²	3648.6
LAND 121 Phase 3B	Medium Heavy Capability, Field Vehicles, Modules and Trailers	Overlander Medium/Heavy ²	3399.6
AIR 555 Phase 1	Airborne Intelligence, Surveillance, Reconnaissance and Electronic Warfare (ISREW) Capability	Peregrine ¹	2233.6
AIR 7000 Phase 1B	MQ-4C Triton Remotely Piloted Aircraft System	MQ-4C Triton	1999.5
LAND 121 Phase 4	Protected Mobility Vehicle – Light (PMV-L)	Hawkei ²	1962.9
AIR 8000 Phase 2	Battlefield Airlift – Caribou Replacement	Light Tactical Fixed Wing ²	1421.6
LAND 19 Phase 7B	Short Range Ground Based Air Defence	SRGB Air Defence	1216.3
AIR 2025 Phase 6	Jindalee Operational Radar Network	JORN Mid-Life Upgrade ²	1146.2
SEA 1654 Phase 3	Maritime Operational Support Capability	Repl Replenishment Ships	1077.9
AIR 5431 Phase 3	Civil Military Air Management System	CMATS ²	1010.8
LAND 200 Tranche 2	Battlefield Command System	Battlefield Command System ²	966.2
JNT 2072 Phase 2B	Battlespace Communications System Phase 2B	Battle Comm. Sys. (Land) 2B	942.9
SEA 1439 Phase 5B2	Collins Class Communications and Electronic Warfare Improvement Program	Collins Comms and EW ²	610.1
SEA 3036 Phase 1	Pacific Patrol Boat Replacement	Pacific Patrol Boat Repl	502.3
SEA 1442 Phase 4	Maritime Communications Modernisation	Maritime Comms ²	434.8
SEA 1448 Phase 4B	ANZAC Air Search Radar Replacement	ANZAC Air Search Radar Repl ²	429.2
Total	21		59,047.1

Note 1: AIR 555 Phase 1 Airborne Intelligence, Surveillance, Reconnaissance and Electronic Warfare (ISREW) Capability is included in the MPR Program for the first time in 2021–22.

Note 2: These projects have been the subject of individual performance audits. See Appendix 2, on p. 76, for more information.

Source: Defence's Project Data Summary Sheets (PDSSs) in **Part 3** of this report.

Rationale for undertaking the review

6. The MPR is prepared at the request of the Parliament. The JCPAA has stated that the objective of the MPR is ‘to improve the accountability and transparency of Defence acquisitions for the benefit of Parliament and other stakeholders.’⁵ The JCPAA commissions the MPR in the public interest, for the benefit of users of the report inside and outside the Parliament. The MPR informs parliamentary scrutiny and the national conversation on major Defence acquisitions, and is intended to assist users by adopting a consistent reporting format over time and through the inclusion of summary and longitudinal analysis prepared by the ANAO.

7. Defence’s major defence equipment acquisition projects remain the subject of parliamentary and public interest due to their: high cost and contribution to national security in a changing strategic environment; 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.

Conduct of the review

8. The MPR is prepared by Defence and the ANAO. Defence prepares information for ANAO review in accordance with the *2021–22 Major Projects Report Guidelines* (Guidelines) endorsed annually by the JCPAA (included in **Part 4** of this report).⁶ The status of the Major Projects selected for review is reported in the *Statement by the Secretary of Defence* (included in **Part 3** of this report) and a Project Data Summary Sheet (PDSS) prepared by Defence for each of the Major Projects (included in **Part 3** of this report).

9. The ANAO has reviewed each of the PDSSs prepared by Defence as a ‘priority assurance review’ under subsection 19A(5) of the *Auditor-General Act 1997* (the Act), which allows the ANAO full access to the information gathering powers under the Act.

10. The ANAO’s review provides limited assurance⁷ and was undertaken in accordance with the applicable auditing standards. The ANAO’s review 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 confirmation from Defence senior management and industry (through Defence) on the status of the selected Major Projects.

11. The objective of this ANAO assurance engagement and the ANAO review procedures is to allow the Auditor-General to provide independent assurance over the status of the Major Projects selected for review. The Auditor-General’s summary conclusion is set out in paragraph 22. The full conclusion is found in the Auditor-General’s *Independent Assurance Report* in **Part 3** of this report.

5 Joint Committee of Public Accounts and Audit, Parliament of the Commonwealth of Australia, *Report 483: Inquiry into the 2018–19 Defence Major Projects Report and the Future Submarine Project – Transition to Design* (Auditor-General’s Reports 19 and 22 (2019–20)), (2020), Objective of the Major Projects Report, p. 6.

6 The JCPAA has taken an active role in the development and review of the MPR program. The main changes to the MPR Guidelines have tended to follow on from the JCPAA’s recommendations.

7 In a limited assurance engagement, the assurance practitioner (in this case the ANAO) 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 performed are detailed in paragraphs 1.7 to 1.9 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 (an ANAO performance audit is typically 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.

12. Certain forecast information found in the PDSSs is excluded from the scope of the ANAO's review, such as forecast dates, expected capability/scope delivery performance and future risks.⁸ 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 considered in forming the Auditor-General's conclusion. These exclusions to the scope of the review are due to a lack of Defence systems from which to provide complete and/or accurate evidence⁹ in a sufficiently timely manner to facilitate the review. This has been an area of focus of the JCPAA over a number of years¹⁰, and it is intended that all components of the PDSSs will eventually be included within the scope of the ANAO's review.

13. In addition to the formal assurance review, the ANAO has undertaken an analysis of key elements of the PDSSs, including longitudinal analysis.¹¹

14. Defence provides additional insights and context in its commentary and analysis contained in **Part 2** of the MPR. This commentary and analysis is not included in the scope of the ANAO's assurance review. Information on significant events occurring post 30 June 2022 is outlined in the *Statement by the Secretary of Defence* contained in **Part 3** of the MPR, and is included in the scope of the ANAO's assurance review.

Treatment of classified information

15. The Guidelines approved by the JCPAA set out the information to be included by Defence in its Project Data Summary Sheets (PDSSs) for each MPR project, including key forecast dates. The Guidelines also provide (at paragraph 1.20 of **Part 4**) that:

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 must 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.

16. Defence has advised the ANAO of its decision that key schedule information for four projects (Offshore Patrol Vessel, Peregrine, SRGB Air Defence, and JORN Mid-Life Upgrade) is not for publication, and has not been published in the relevant PDSSs.

17. The Secretary of Defence advised the ANAO on 29 November 2022 that:

It is assessed that some details, both in independent projects and in the aggregate, would or could reasonably be expected to cause damage to the security, defence or international relations of the Commonwealth without sanitisation of the data.

8 Section 1.2 Current Status—Materiel Capability/Scope Delivery Performance; Section 1.3 Project Context—Major Risks and Issues; Section 4.1—Measures of Materiel Capability/Scope Delivery Performance; Section 5—Major Risks and Issues; and forecast dates included in a PDSS.

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. See Table 6 for projects' use of risk management systems.

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.

11 A longitudinal study involves repeated observations of the same variables over time. A summary of the ANAO's longitudinal analysis of the Major Projects, and the key variables observed as part of the analysis, is found in Table 5 on p. 17. The detailed analysis is found in Chapter 2.

18. As required by the Guidelines, the classified information was provided to the ANAO for review. The ANAO obtained assurance over the information provided.

19. The Auditor-General has included an Emphasis of Matter, in the *Independent Assurance Report* (see **Part 3**), relating to the PDSSs for these four projects. This is the first time that information of this type has been excluded from a PDSS. The exclusion of key forecast dates and variance information means that this information is not available to users of the MPR.

20. Due to the non-publication of this key information by Defence, the ANAO was not in a position to publish a complete analysis of schedule performance for the suite of MPR projects, as in the past. The ANAO analysis involves both in-year analysis (across the current MPR projects) and longitudinal analysis (across all projects included in the MPR over time). As a consequence, this year's MPR does not provide the user with the same level of information, reducing the level of transparency and accountability over the MPR projects as a whole. Impacts on the ANAO's analysis are discussed further in paragraph 35 and highlighted in the relevant text in **Part 1**.

Overall outcomes

Auditor-General's summary conclusion

21. The Auditor-General has concluded in the *Independent Assurance Report* for 2021–22 that 'nothing has come to my attention that causes me to believe that the information in the 21 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 *2021–22 Major Projects Report Guidelines* (the Guidelines), as endorsed by the Joint Committee of Public Accounts and Audit.'

22. The Auditor-General has made an Emphasis of Matter drawing attention to disclosures within the *Statement by the Secretary of Defence* that some information in the PDSSs¹² is not for publication after a Defence security classification review conducted in November 2022. The Auditor-General's conclusion is not modified in respect of this matter.

Statement by the Secretary of Defence

23. The *Statement by the Secretary of Defence* was signed on 20 January 2023. The Secretary's statement provides his opinion that the PDSSs for the 21 selected projects 'comply in all material respects with the Guidelines and reflect the status of the projects as at 30 June 2022'. The Secretary has also included a statement on the non-publication of information by Defence in certain PDSSs:

A security classification review of the Capability Acquisition and Sustainment Group and sponsor information contained within the Project Data Summary Sheets for release in the 2021-22 Major Projects Report has been completed.

The purpose of the security review is to ensure that each individual Project Data Summary Sheet is presenting data at an 'unclassified' level and to confirm the aggregated information is not a risk to national security, and is suitable for public release by tabling in parliament.

12 The PDSSs affected are: Offshore Patrol Vessel, Peregrine, SRGB Air Defence, and JORN Mid-Life Upgrade.

It is assessed that some details, both in independent projects and in the aggregate, would or could reasonably be expected to cause damage to the security, defence or international relations of the Commonwealth without sanitisation of the data.

24. The *Statement by the Secretary of Defence* (Statement) also details significant events occurring post 30 June 2022, which materially impact the projects included in the report and should be read in conjunction with the individual PDSSs. The Statement includes information on: Hunter Class Frigates, Hawkei, Repl Replenishment Ships, and CMATS.¹³

Key observations

25. The ANAO's review (found in **Part 1** of this report) includes Defence's project management and reporting arrangements contributing to the overall governance of the Major Projects. A summary of key observations is provided below.

Non-publication of information by Defence and more limited data and analysis in this year's MPR

- As noted at paragraph 16 above, Defence has not published key schedule information in four PDSSs (Offshore Patrol Vessel, Peregrine, SRGB Air Defence, and JORN Mid-Life Upgrade).¹⁴
- The ANAO was not in a position to publish a complete analysis of schedule performance, as in the past.
- This year's MPR does not provide the user with the same level of information, reducing the level of transparency and accountability over the MPR projects as a whole.

Status of JCPAA recommendations and requests

- Following JCPAA recommendations made in May 2014, May 2016 and October 2017, Defence has yet to implement a consistent measure of capability performance with a robust methodology applicable to materiel acquisition (see paragraph 2.50 to 2.60).¹⁵
- Following a JCPAA recommendation made in September 2018, Defence advised the Committee in May 2020 that 'Predict!' was CASG's risk management system.¹⁶ Defence mandated the use of 'Predict!' to record all CASG project risks in August 2021. Following JCPAA Recommendation 3 made in March 2022, Defence updated the JCPAA on 'Predict!'

13 The 2021–22 MPR Guidelines also 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/scope or milestones to be delivered. Defence has reported updates for: P-8A Poseidon, Growler, MH-60R Seahawk, LHD Ships, Night Fighting Equip Repl, Collins R&S and UHF SATCOM.

14 Defence published FOC information for SRGB Air Defence. For this project, the not for publication information related to earlier milestones.

15 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; and Joint Committee of Public Accounts and Audit, Parliament of the Commonwealth of Australia, *Report 468: Defence Major Projects Report (2015–16)*, (2017), pp. 7–9.

16 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; and 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.

and CASG projects that have yet to fully transition to it.¹⁷ This update is consistent with the findings of the ANAO (see paragraphs 1.90 to 1.95).

- Following a JCPAA request made to the ANAO in 2018 ‘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 still unable to provide project staffing costs as its systems cannot track the movement of staff costs across projects over time (see paragraphs 1.79 to 1.81).¹⁸
- Following a JCPAA recommendation made in March 2022, Defence is revisiting the criteria for Projects of Concern. Defence has advised the committee that this body of work is anticipated for completion by June 2023 (see paragraph 1.32 and 1.33).
- Following a JCPAA recommendation made in March 2022 that Defence define terms used in the Major Projects Report associated with a delta or deviation from a project milestone achievement¹⁹, Defence definitions were published in late 2022 as part of the normal cycle for updating capability guidance. This is consistent with the understanding of the ANAO (see paragraphs 1.106).
- Following a JCPAA recommendation made in March 2022, Defence responded to the committee on the outcome of the Smart Buyer review of the MPR^{20, 21} (see paragraph 1.57).

Status of Auditor-General report recommendations

- Auditor-General Report No.34 2020–21 *Implementation of ANAO and Parliamentary Committee Recommendations — Department of Defence* was tabled in April 2021 and included an assessment of four recommendations relevant to the MPR.²² ANAO assessed one of these recommendations as implemented, one as largely implemented, and two as not implemented.
- In July 2020 Defence closed two recommendations from Auditor-General Report No.31 2018–19 *Defence’s Management of its Projects of Concern*. The ANAO assessed these

17 Joint Committee of Public Accounts and Audit, Parliament of the Commonwealth of Australia, *Report 489: Defence Major Projects Report (2019–20)*, (2022), p. xi; and Department of Defence, written response to the Joint Committee of Public Accounts and Audit, *Defence Major Projects Report (2019–20)*. See [25 OCT 2022: HILL, JOINT COMMITTEE OF PUBLIC ACCOUNTS & AUDIT: Combined responses to JCPAA Reports by departments and organizations - Paper \(capitalmonitor.com.au\)](#), p. 19.

18 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.

19 Joint Committee of Public Accounts and Audit, Parliament of the Commonwealth of Australia, *Report 489: Defence Major Projects Report (2019–20)*, (2022), p. xi; and Department of Defence, written response to the Joint Committee of Public Accounts and Audit, *Defence Major Projects Report (2019–20)*. See [25 OCT 2022: HILL, JOINT COMMITTEE OF PUBLIC ACCOUNTS & AUDIT: Combined responses to JCPAA Reports by departments and organizations - Paper \(capitalmonitor.com.au\)](#), p. 19.

20 Joint Committee of Public Accounts and Audit, Parliament of the Commonwealth of Australia, *Report 489: Defence Major Projects Report (2019–20)*, (2022), p. xi; and Department of Defence, written response to the Joint Committee of Public Accounts and Audit, *Defence Major Projects Report (2019–20)*. See [25 OCT 2022: HILL, JOINT COMMITTEE OF PUBLIC ACCOUNTS & AUDIT: Combined responses to JCPAA Reports by departments and organizations - Paper \(capitalmonitor.com.au\)](#), p. 20.

21 Auditor-General letter to the JCPAA, Joint Committee of Public Accounts and Audit Report 489, *Inquiry into the Defence Major Projects Report 2019–20*, of 8 September 2022.

22 Auditor-General Report No.34 2020–21, *Implementation of ANAO and Parliamentary Committee Recommendations — Department of Defence*, (2021), Table 3.3.

recommendations as not implemented (see paragraphs 1.26 to 1.30).²³ This is being addressed by Defence and the recommendations are anticipated to be implemented by June 2023.

- Auditor-General Report No.18 2020–21 *Defence's Procurement of Combat Reconnaissance Vehicles (LAND 400 Phase 2)* included a recommendation for improvement in Defence's Independent Assurance Review processes. Reporting on the recommendation was provided to the Defence Audit and Risk Committee in February 2022, noting that the recommendation had been closed with an agreed closure date of April 2021.
- Auditor-General Report No.15 2021–22 *Department of Defence's Procurement of Six Evolved Cape Class Patrol Boats* included a recommendation on probity management for unsolicited procurement proposals received from industry. Actions for implementation were tabled and closed at the February 2022 Defence Audit and Risk Committee, with a planned implementation date of March 2022.

Defence acquisition governance

26. When reviewing Defence's Project Data Summary Sheets (PDSSs), the ANAO considered the following items.

- Defence's use of the Independent Assurance Review (IAR) process to report on the status of acquisition projects. In 2021–22, Defence completed an IAR on 14 of the 21 projects in this report (see paragraphs 1.13 to 1.18).²⁴
- Defence's approach to entry and exit from the Projects of Interest and Projects of Concern lists (see paragraphs 1.19 to 1.34).
- Defence's reporting to senior department leadership and government stakeholders on the delivery of capability to the ADF. The ANAO observed a gap in reporting activity (see paragraphs 1.35 to 1.47).
- The importance of capturing government decisions in internal Defence documentation and ensuring that Materiel Acquisition Agreements are appropriately aligned with these decisions (see paragraphs 1.48 to 1.54).
- Defence's implementation of the Smart Buyer Framework to support strategic decision making in the acquisition of major projects. The framework was not used at the Second Pass government approval stage for projects in the current MPR (see paragraphs 1.55 to 1.58).
- Defence's implementation of new business systems to report on the status of acquisition projects (see paragraphs 1.59 to 1.62).

23 Auditor-General Report No.34 2020–21, *Implementation of ANAO and Parliamentary Committee Recommendations – Department of Defence*, (2021). Table 3.3 contained information on the implementation of Recommendations 1 and 2 of Auditor-General Report No.31 2018–19 *Defence's Management of its Projects of Concern*.

24 An IAR was considered completed when all parties had signed the Outcomes of the review. IARs were not completed during 2021–22 for: Joint Strike Fighter, Combat Reconnaissance Vehicles, Future Subs, CMATS, Battle Comm. Sys. (Land) 2B, Collins Comms and EW, and ANZAC Air Search Radar Repl. As at 30 June 2022, four of these projects had IARs underway that were not yet signed.

- Defence's use of project contingency funds (see paragraphs 1.71 to 1.75). Four MPR projects committed contingency funds in 2021–22. These were: MRH90 Helicopters (to manage supportability and performance risks), Offshore Patrol Vessel (to address risk relating to delivery of the third vessel), SRGB Air Defence (for treatment of COVID related impacts), and Battle Comm. Sys. (Land) 2B (to address COVID related delays).
- The status of Capability Acquisition and Sustainment Group's (CASG) Risk Management Reform Program and the establishment of the CASG Risk Management Framework (see paragraphs 1.82 to 1.89).
- Projects that had not fully met the requirements of CASG's Risk Management Manual Version 1 and Financial Policy (titled *Management Of Defence Capability Project Contingency*) for contingency allocation (see paragraph 1.73) and risk management (see paragraph 1.90 to 1.94).
- The status of CASG's Lessons Learned policy. The policy was updated in February 2022 and Defence is yet to fully implement it, including the compliance monitoring arrangements (see paragraphs 1.97 to 1.98).
- The recent inclusion of definitions, in Defence's internal policies, of terms relating to the declaration of significant capability milestones, including 'caveat' and 'deficiency'.²⁵ The ANAO has continued to observe the use of these and other terms by Defence to represent exceptions to the achievement of significant milestones (see paragraphs 1.101 to 1.108).

27. The ANAO did not review Defence's governance and co-ordination arrangements for the new Naval Shipbuilding and Sustainment Group (NSSG), which took effect on 4 October 2022. Defence provides more information about the NSSG in its contribution (**Part 2**). Defence internal communications indicate that the NSSG:

will be the dedicated entity, in partnership with the Royal Australian Navy, to deliver the Naval Shipbuilding and Sustainment Enterprise, building and sustaining maritime capabilities.

Project performance analysis

28. In addition to its limited assurance review, the ANAO has undertaken an analysis of key elements of the Defence PDSSs, including in-year analysis across the 21 current Major Projects, and longitudinal analysis across all projects included in the MPR over time. As discussed in paragraph 20 above, Defence's decision to not publish key schedule information in four PDSSs means that the ANAO was not in a position to publish a complete analysis of schedule performance, as in the past. Consequently, this year's MPR does not provide the user with the same level of information, reducing the level of transparency and accountability over the MPR projects as a whole.

29. A summary of the ANAO's analysis is found in Table 5, p. 17. The detailed analysis is found in Chapter 2.

Cost

30. Cost management is an ongoing process in Defence's administration of the Major Projects. Defence has reported that all 21 projects could continue to operate within the total approved

25 Department of Defence, *Product Life Cycle Guidance*, Version 3.3, Canberra, October 2022, p. 100 and p. 101.

budget of \$59.0 billion. The MRH90 Helicopters, Offshore Patrol Vessel, SRGB Air Defence and Battle Comm. Sys. (Land) 2B projects drew upon contingency funds to complete project activities.

31. The total approved budget for the 21 Major Projects has increased by \$17.5 billion (30 per cent) since initial Second Pass Approval by government.

32. Budget variations greater than \$500 million are detailed in Table 2, on p. 13.²⁶

33. As the MPR focuses on the approved capital budget for Defence acquisition, the ongoing costs of project offices, training, replacement capability, etc., are not reported here.²⁷

34. Cost information was not affected by Defence's decision to not publish certain information in four PDSSs this year.

26 Defence's individual PDSSs also report on budget variations.

27 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 1.76 to 1.81 for the outcomes of this consideration.

Table 2: Budget variations over \$500 million — post initial Second Pass approval by variation type^{1,2}

Project	Variation	Explanation	Year	Amount \$bn
Scope Increases				14.2
MRH90 Helicopters		34 additional aircraft at Phase 4/6 Second Pass Approval	2005–06	2.6 ³
Joint Strike Fighter		58 additional aircraft at Stage 2 Second Pass Approval	2013–14	10.5
MQ-4C Triton		Second Pass Approval – Tranche 2 (one additional aircraft), Tranche 3 (one additional aircraft) and Tranche 4 (sustainment funding for first 7 years)	2019–20 2020–21	1.1
Real Cost Increases				0.7
Overlander Medium/Heavy		Project supplementation ⁴ (\$684.2m) and additional vehicles, trailers and equipment (\$28.0m) at Revised Second Pass Approval	2013–14	0.7
Real Cost Decreases				(1.0)
Future Subs		Government decisions to transfer funding to other submarine and shipbuilding projects following cancellation of the Future Subs project	2021–22	(1.0)
Other budget movements				0.5
Other	Scope increase/budget transfers (net)	Other scope changes and transfers	Various	0.5
Price Indexation – materials and labour (net) (to July 2010) ⁵				1.0
Exchange Variation – foreign exchange (net) (to 30 June 2022)				2.1
Total				17.5

Note 1: For the variations related to all projects and their value, refer to Table 9 on pp. 48–49 of this report. For the breakdown of in-year variation, refer to Table 10 on pp. 50–51 of this report.

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

Note 3: Since 2017–18 a variation of \$2.3b has been reported in this Table under 'Scope Increases' for MRH 90 Helicopters. An additional \$0.3b was included in this table under 'Other budget movements'. This year an amount of \$2.6b has been reported under 'Scope increases' for MRH 90 Helicopters, and the 'Other budget movements' item has been reduced accordingly by \$0.3b.

Note 4: 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 5: Before 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.

Source: ANAO analysis of Defence's 2021–22 PDSSs.

Schedule

35. As discussed in paragraph 20 above, this year the ANAO was not in a position to publish a complete analysis of schedule performance, as in the past. This is due to seven projects either not disclosing their Final Operational Capability (FOC) forecast date, or not having a settled FOC date.²⁸ Therefore the figures for total schedule slippage and in-year schedule slippage in 2021–22 are not reported in this year's MPR analysis.

- Defence has decided to not publish FOC forecast dates in three PDSSs (Offshore Patrol Vessel, Peregrine, and JORN Mid-Life Upgrade).²⁹ This represents 14 per cent of all PDSSs.³⁰
- Four (19 per cent) of the 21 PDSSs did not have FOC forecast dates at 30 June 2022.³¹
- The combined effect of Defence's non-publication of the three FOC forecast dates, and the four FOC dates not settled, is that seven (33 per cent) of the 21 PDSSs do not include FOC dates this year. Any aggregated analysis of the remaining 14 projects (which have included FOC dates in their PDSS) would be incomplete.
- The inclusion of incomplete schedule performance analysis would misinform users of the MPR, as the 14 projects that have included FOC dates in their PDSS are not representative of all the Major Projects.

36. Delivering Major Projects on schedule continues to present challenges for Defence. Schedule slippage can affect when the capability is made available for operational release and deployment by the ADF, as well as the cost of delivery.

37. Defence's management of platform availability has contributed to slippage in some projects.³² For example, Maritime Comms and Collins Comms and EW have been impacted by changes to docking schedules of the ANZAC Class frigates and Collins Class submarines respectively.

38. Projects with developmental content have also experienced significant delays. These projects are MRH90 Helicopters, MQ-4C Triton, CMATS, and Battle Comm. Sys. (Land) 2B.

39. Table 3, p. 15, details the slippage for projects that have exited the MPR. The 34 projects which have exited the MPR have accumulated slippage of 1363 months as at their respective exit dates.³³

28 FOC is the key milestone that forms the basis for the majority of the ANAO's schedule analysis, including calculation of project slippage. Defence defines FOC as: 'The capability state relating to the in-service realisation of the final subset of a capability system that can be employed operationally'.

29 Defence has published FOC information for SRGB Air Defence in this year's PDSS. For this project, the not for publication information related to earlier milestones.

30 As discussed in paragraph 18, the not for publication information was provided to the ANAO for review.

31 The Hunter Class Frigate and Future Subs projects did not have FOC milestones approved by government at 30 June 2022. The Overlander Medium/Heavy and Pacific Patrol Boat Repl projects expect to experience delays to FOC, but were unable to prepare specific forecast dates for FOC as at 30 June 2022.

32 Defence advised that platform management may be done in response to operations and the strategic environment, and in certain circumstances platform unavailability may be unavoidable.

33 Hornet Refurb and BMS are excluded from the 1363-month slippage as they did not have FOC milestones approved by government.

Table 3: Schedule slippage for projects which have exited the MPR¹

Project	Total (months)	Project	Total (months)
AWD Ships	37	Additional Chinook	6
P-8A Poseidon	29	HF Modernisation	136
Wedgetail	77	Armadales	43
Super Hornet	0	HATS	0
Growler	1	Collins RCS	107
MH-60R Seahawk	0	Night Fighting Equip Repl	0
LHD Ships	37	Collins R&S	108
Hornet Upgrade	39	Battle Comm. Sys. (Land) 2A	39
ARH Tiger Helicopter	82	Hw Torpedo	61
C-17 Heavy Airlift	0	UHF SATCOM	42
Air to Air Refuel	64	SM-2 Missile	26
FFG Upgrade	132	ANZAC ASMD 2A	80
Bushmaster Vehicles	1	155mm Howitzer	7
Overlander Light	4	Stand Off Weapon	37
Additional MRTT	21	Battle Comm. Sys.	24
Next Gen Satellite ²	0	C-RAM	2
ANZAC ASMD 2B	75	LHD Landing Craft	46
Total			1363

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

Note 2: Next Gen Satellite shows slippage in Figure 8a, on p. 63, 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: Defence PDSSs in Major Projects Reports and ANAO analysis.

40. ANAO analysis has been included in relation to the Acquisition Categorisation (ACAT) level.³⁴ Reporting against the ACAT level has identified that there has been an increase in projects at the ACAT I³⁵ and ACAT II³⁶ levels. ACAT I projects carry a higher level of technical risk.

Capability/scope

41. The third principal component of project performance examined in this report is progress towards the delivery of capability as approved by government. While the assessment of expected capability/scope delivery by Defence is outside the scope of the Auditor-General's formal review conclusion, it is included in the ANAO analysis to provide an overall perspective of the three principal components of project performance. The Hunter Class Frigate and Future Subs PDSSs do not report quantified capability/scope information as these projects did not have approved

34 Defence projects are graded into one of four acquisition categories (ACATs) on the basis of project complexity. The complexity of a project may vary over its life cycle. See paragraph 2.21.

35 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.

36 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.

materiel capability/scope to be delivered at 30 June 2022. These two projects report narratives describing their current project activities.

42. The Defence PDSSs report that 11 projects in this year's report will deliver all key capability/scope requirements. Four projects — Future Subs, MRH90 Helicopters, Hawkei, and Battlefield Command System — report that they are unable to deliver all of the required capability/scope by FOC (this is indicated in red in the PDSS traffic light diagram). Table 12, on pp. 69–71, outlines the reasons for each project's 'red' assessment.

43. Defence's assessment indicates that some elements of capability/scope to be delivered by projects may be 'under threat', but the risk is assessed as 'manageable' ('amber'). The eight projects experiencing challenges with expected capability/scope delivery (2020–21: four) are Joint Strike Fighter, Hunter Class Frigate, MRH90 Helicopters, Offshore Patrol Vessel, Overlander Medium/Heavy, Battlefield Command System, Battle Comm. Sys. (Land) 2B and Pacific Patrol Boat Repl.

44. For the first time in 2021–22, PDSSs also quantified increases to projects' materiel capability/scope delivery ('blue'). Two projects, Hunter Class Frigates and Pacific Patrol Boat Repl, reported an increase in project materiel capability/scope delivery. Hunter Class Frigates will construct additional prototyping blocks, and Pacific Patrol Boat Repl will acquire an additional boat to replace one damaged and decommissioned from service.

45. Table 4, below, summarises expected capability/scope delivery as at 30 June 2022, as reported by Defence and analysed by the ANAO.

Table 4: Capability/scope delivery

Expected Capability/Scope (Defence Reporting)	2019–20 MPR (%)	2020–21 MPR (%)	2021–22 MPR (%)
High confidence (Green)	98	97	87
Under threat, considered manageable (Amber)	2	2	10
Unlikely or removed from scope (Red)	0 ¹	1	3
Added to scope (Blue)	– ²	– ²	0 ³
Total	100⁴	100⁴	100⁴

Note 1: Defence advised in this year that AWD Ships would not deliver one element of capability/scope at FOC (which equated to approximately one per cent). However, across all the Major Projects this percentage rounded to zero per cent.

Note 2: The Blue reporting metric representing additional capability/scope was not used in these years.

Note 3: Defence advised in this year that Pacific Patrol Boat Repl would deliver an additional element of capability/scope at FOC (which equated to approximately five per cent). However, across all the Major Projects this percentage rounded to zero per cent.

Note 4: The Hunter Class Frigate and Future Subs projects are excluded from this analysis, as their capability/scope delivery was not quantified in these years.

Source: Defence PDSSs in Major Projects Reports and ANAO analysis.

46. In addition to reporting on expected capability/scope delivery, Defence has continued the practice of including in the PDSSs declassified information on contractual remedies for projects, including stop payments and liquidated damages.

47. In 2021–22, Battlefield Command System negotiated contractual remedies involving stop payments and Hawkei negotiated contractual remedies involving additional goods and services in lieu of liquidated damages.

48. Capability/scope information was not affected by Defence's decision to not publish certain information in four PDSSs this year.

Summary longitudinal analysis

Summary analysis — 2019–20 to 2021–22

49. Table 5, below, summarises published PDSS data on Defence's progress toward delivering the capabilities for the Major Projects covered in this year's report (2021–22), and compares current data with that reported in the two most recent editions of the MPR (2019–20 and 2020–21).

50. As noted in paragraphs 20 and 35, aggregate schedule data for 2021–22 is not reported by the ANAO in Table 5 this year. This is due to the combined effect of Defence's decision to not publish Final Operational Capability (FOC) forecast dates in three PDSSs this year, and the fact that four projects do not have settled FOC dates. Information that is not reported as part of the ANAO's analysis is clearly identified in Table 5.

Table 5: Summary longitudinal analysis 2019–20 to 2021–22¹

	2019–20 MPR	2020–21 MPR	2021–22 MPR
Number of Projects	25	21	21
Total Approved Budget at 30 June	\$78.7 bn	\$58.0 bn	\$59.0 bn
Total Approved Budget at final Second Pass Approval	\$68.9 bn	\$54.2 bn	\$56.8 bn
Total Expenditure Against Total Approved Budget	\$38.9 bn (49.4%)	\$28.1 bn (48.4%)	\$34.6 bn (58.7%)
Total In-year Expenditure Against In-year Budget	\$5.7 bn (92.5%)	\$6.1 bn (98.4%)	\$5.7 bn (96.2%)
Total Budget Variation since initial Second Pass Approval ²	\$24.2 bn (30.7%)	\$18.3 bn (31.5%)	\$17.5 bn (29.7%)
Total Budget Variation since final Second Pass Approval ³	\$9.8 bn (12.5%)	\$3.8 bn (6.7%)	\$2.2 bn (3.9%)
In-year Approved Budget Variation	\$0.1 bn (0.1%)	-\$1.0 bn (-1.7%)	-\$0.7 bn (-1.2%)
Total Schedule Slippage ⁴	507 months (21%)	405 months (22%)	● ⁵
Average Schedule Slippage across Projects	22 months	23 months	● ⁵
In-year Schedule Slippage	68 months (3%)	73 months (4%)	● ⁵
Total Reported Risks and Issues ^{6, 7}	142	119	114
Expected Capability/scope (Defence Reporting) ^{8, 9}			
• High level of confidence of delivery (Green)	98%	97%	87%
• Under threat, considered manageable (Amber)	2%	2%	10%
• Unlikely to be met or removed from scope (Red)	0% ¹⁰	1%	3%
• Added to scope (Blue)	— ¹¹	— ¹¹	0 ¹²

Refer to paragraphs 24 to 44 in **Part 1** of this report.

Note 1: The data for the 21 Major Projects in the 2021–22 MPR compares the data from projects in the 2020–21 MPR and 2019–20 MPR. The Major Projects included in each MPR are based on entry and exit criteria in the Guidelines endorsed by the JCPAA, which are in **Part 4** of this report. The entry and exit of projects should be considered when comparing data across years.

Note 2: See Table 2 on p. 13 for a breakdown of the major components of this variance and Table 10 on pp. 50–51 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 in 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 with 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.

Note 5: As discussed in paragraph 35 above, the ANAO was unable to publish this analysis due to the non-publication by Defence of FOC information in three PDSSs and because four projects do not have approved FOC dates.

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/scope delivery across the Major Projects. This method reduces the effect of an individual project's size on the aggregate figure.

Note 9: The Hunter Class Frigate and Future Subs projects are excluded from this analysis, as their capability/scope delivery was not quantified in these years.

Note 10: Defence advised in this year that AWD Ships would not deliver one element of capability/scope at FOC (which equated to approximately one per cent). However, across all the Major Projects this percentage rounded to zero per cent.

Note 11: The Blue reporting metric representing additional scope was not used in these years.

Note 12: Defence advised in this year that Pacific Patrol Boat Repl would deliver an additional element of capability/scope at FOC (which equated to approximately five per cent). However, across all the Major Projects this percentage rounded to zero per cent.

Source: Defence PDSSs in Major Projects Reports and ANAO Analysis.

COVID-19 impacts

51. In March 2022, the JCPAA recommended that Defence update the committee on the latest impacts of COVID-19 on the Major Projects.³⁷

52. Fifteen Major Projects reported disruptions to project delivery in 2021–22 caused by the COVID-19 pandemic.³⁸ All of these projects reported delays to their schedules, with five of these projects reporting additional impacts on project budgets.

Cost

53. One project (SRGB Air Defence) reported an application for contingency funds while four projects reported budget underspends. Each project reporting cost impacts indicated that the COVID-19 pandemic impacted one or more of the following factors: supply chain, workforce (including contractors) and travel.

37 Joint Committee of Public Accounts and Audit, Parliament of the Commonwealth of Australia, *Report 489: Defence Major Projects Report (2019–20)*, (2022), pp. 24–25.

38 Information on COVID-19 impacts was not reported in the 2021–22 *Statement by the Secretary of Defence*.

Schedule

54. All 15 of the Major Projects that reported an impact on scheduling resulting from the COVID-19 pandemic cited additional impacts on supply chains, workforce (including contractors) and travel. This was disclosed as:

- six projects reported an impact on supply chains;
- eight projects reported an impact on workforce (including contractors); and
- nine projects reported an impact on travel.

Capability/scope

55. No projects reported an impact to capability/scope delivery caused by the COVID-19 pandemic.

1. The Major Projects Review

1.1 The Major Projects Report (MPR) contains Department of Defence (Defence) information and commentary on a selection of its major projects (the Major Projects) and independent assurance and analysis of that information by the Australian National Audit Office (ANAO). This chapter provides the ANAO's overview of the scope and approach adopted for its limited assurance review of the 21 Project Data Summary Sheets (PDSSs) prepared by Defence for this year's MPR. 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 PDSSs, which are included in **Part 3** of the MPR, was conducted in accordance with the auditing standards set by the Auditor-General under section 24 of the Act through the 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 provided by Defence is excluded from the scope of the ANAO's review: capability/scope delivery; risks and issues; and forecast dates. These exclusions are due to the lack of Defence systems from which to provide complete and/or accurate evidence³⁹, 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 Auditor-General's 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*. Review of individual PDSSs is based on a limited assurance approach and is not as extensive as individual performance audits 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 21 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 In addition to the assurance review, the ANAO considers developments in Defence's acquisition governance processes (information and commentary on governance issues appears in this chapter) and undertakes analysis of key elements of Defence's PDSSs (information and

39 For example, 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 has mandated the risk management tool Predict! for all projects in this report, the implementation of which is discussed at paragraph 1.87.

commentary on systemic issues, and in-year and longitudinal analysis for the Major Projects, appears in the next chapter).

1.6 The ANAO's review was conducted in accordance with the *ANAO Auditing Standards* at a cost to the ANAO of approximately \$1.8 million.

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 management⁴⁰;
- 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;
- meetings with personnel 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 Defence 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 1.12 to 1.62, below);
- the financial framework, particularly as it applies to the project financial assurance and contingency statements (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);

40 As discussed in paragraph 27, the ANAO did not review Defence's governance and co-ordination arrangements for the new Naval Shipbuilding and Sustainment Group (NSSG), which took effect on 4 October 2022.

- 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); 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 activity informed the ANAO's understanding of the systems and processes supporting the PDSSs for the 2021–22 review period. It also highlighted issues in those systems and processes that warrant attention.

Quality and timeliness of PDSS preparation

1.10 A quality PDSS preparation process by Defence will reduce the risk of untimely and/or inaccurate reporting and will reduce the incidence of multiple reviews for the same project. The ANAO noted ongoing issues relating to processes supporting the preparation and delivery of draft PDSSs for ANAO review. The MPR Engagement Letter provided by the ANAO to Defence requires Defence to prepare quality assured evidence packs, which include a complete and accurate PDSS, in addition to copies of relevant supporting evidence, and sets the expectation that there will be no more than three versions of each project's PDSS submitted to the ANAO for review.

1.11 Efficiency can be gained through Defence process standardisation, a project management approach and continued engagement and review by Defence leaders.

Acquisition governance

1.12 Consistent with previous years, the ANAO considered Defence's Major Project acquisition governance processes when planning and conducting the review for the 2021–22 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

1.13 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.⁴¹

1.14 IARs are intended to commence at project initiation and are conducted through to FOC; for higher-complexity projects, ideally on an annual basis. They are an important input to key acquisition and sustainment decision points or milestones.⁴²

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

42 Department of Defence, *Independent Assurance Reviews for Programs, Projects and Products*, Defence, Canberra, 2020.

1.15 Fourteen of the 21 Major Projects had an IAR completed during 2021–22⁴³, which formed key evidence for the ANAO’s review.

1.16 The ANAO has published three performance audit reports which recommended improvements in Defence IAR processes:

- Auditor-General Report No.12 2020–21 *Defence’s Procurement of Offshore Patrol Vessels — SEA 1180 Phase 1*;
- Auditor-General Report No.18 2020–21 *Defence’s Procurement of Combat Reconnaissance Vehicles (LAND 400 Phase 2)*; and
- Auditor-General Report No.15 2021–22 *Department of Defence’s Procurement of Six Evolved Cape Class Patrol Boats*.

1.17 The assessment of whether these recommendations have been implemented by Defence is outside the scope of this review. The Defence Audit and Risk Committee has accepted closure of the two recommendations from Auditor-General Report No.12 of 2020–21 *Defence’s Procurement of Offshore Patrol Vessels — SEA 1180 Phase 1* and the recommendation in Auditor-General Report No.18 of 2020–21 *Defence’s Procurement of Combat Reconnaissance Vehicles (LAND 400 Phase 2)*.

1.18 Auditor-General Report No.15 2021–22 *Department of Defence’s Procurement of Six Evolved Cape Class Patrol Boats* identified that no independent assurance reviews of this project had been conducted to date. Therefore, Defence and its senior leaders had not had the benefit of the full suite of inputs which contribute to providing assurance that capability requirements are being successfully delivered by an acquisition project.⁴⁴

Projects of Concern

1.19 The Projects of Concern process is intended to focus the attention of the highest levels of government, Defence and industry on remediating problem projects.⁴⁵ As at 30 June 2022, two MPR projects, MRH90 Helicopters and CMATS, were continuing Projects of Concern.

MRH90 Helicopters project

1.20 The MRH90 Helicopters 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.⁴⁶ The project has progressed the materiel capability/scope delivery relating to the Taipan Gun Mount, Aero-Medical Evacuation Equipment and the Common Mission Management System.⁴⁷ FOC is scheduled for March 2023, nine months later than stated last year, with a total of 104 months slippage over the life of the project.

43 An IAR was considered completed when all parties had signed the Outcomes of the review. IARs were not completed during 2021–22 for: Joint Strike Fighter, Combat Reconnaissance Vehicles, Future Subs, CMATS, Battle Comm. Sys. (Land) 2B, Collins Comms and EW, and ANZAC Air Search Radar Repl. As at 30 June 2022, four of these projects had IARs underway that were not yet signed.

44 Auditor-General Report No.15 2021–22 *Department of Defence’s Procurement of Six Evolved Cape Class Patrol Boats*, p. 8.

45 Department of Defence, *Defence Annual Report 2020–21*, Chapter 7, Asset Management, Defence, Canberra, 2021, p. 153.

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

47 See the MRH90 Helicopters PDSS in **Part 3** of this report.

1.21 In December 2021, the government announced plans to investigate other aircraft types to immediately replace the MRH90 helicopter fleets. Following this decision, Navy has commenced project SEA 9100 Phase 1 Improved Embarked Logistics Support Helicopter Capability to replace its fleet of six MRH90 helicopters with thirteen MH-60R Seahawk helicopters. In May 2022, Navy ceased operation of its MRH90 fleet. In January 2023, government announced the acquisition of 40 UH-60M Black Hawk helicopters to replace the Army MRH90 fleet. This is expected to result in the withdrawal from service of the Army MRH90 fleet 13 years earlier than planned.⁴⁸

CMATS project

1.22 The CMATS project was a Project of Concern between August 2017 and May 2018 due to protracted negotiations leading to a delay in entering the contract. Following contract signature, CMATS was managed as a Project of Interest.

1.23 In September 2021, the Minister for Defence made a written direction that CMATS return to the Projects of Concern list. Defence did not update internal reporting, such as the Acquisition and Sustainment Update and its Projects of Concern list, in response to the Minister's direction. In September 2022 Defence advised the ANAO that 'the decision to declare this project a Project of Concern required extensive consultation with Airservices⁴⁹ and with the Department of Infrastructure, Transport, Regional Development and Communications, which needed to occur post the Ministers 25 August 2021 decision'. Defence guidance states that 'entry to ... the Projects of Concern list is decided by the Minister for Defence and the Minister for Defence Industry'.⁵⁰ Defence was unable to provide the ANAO with evidence of any limitation on the Minister's decision-making authority, or evidence of an updated policy or guidance.

1.24 CMATS has continued to experience schedule delays to its IOC and FOC dates and the contractor has been unable to provide authoritative forecast dates for system acceptance milestones.

1.25 CMATS was publicly announced as a Project of Concern by the Minister for Defence Industry on 27 October 2022.

Governance

1.26 Auditor-General Report No.31 2018–19 *Defence's Management of its Projects of Concern* assessed whether 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 had declined in recent years. The ANAO 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

48 R Marles, (Minister for Defence), 'Interview with Jess Naunton, ABC North Queensland', media release, Parliament House, Canberra, 2 November 2022.

49 ANAO comment: Airservices Australia is the lead procurement agency for the CMATS project and delivers to Defence via an On-Supply Agreement.

50 Defence intranet, viewed 24 October 2022.

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.⁵¹

1.27 In July 2020, Defence closed both these recommendations, advising that the Capability Acquisition and Sustainment Group (CASG) had developed a consistent approach to entry and exit from the Projects of Interest and Projects of Concern lists; that the Projects of Concern list was publicly available; and that CASG had evaluated the Projects of Concern regime and had effective assurance mechanisms in place, underpinned by IARs.⁵²

1.28 Auditor-General Report No.34 2020–21 *Implementation of ANAO and Parliamentary Committee Recommendations — Department of Defence* concluded that the two ANAO recommendations relating to the management of Projects of Concern had not been implemented. The ANAO reported that there was no evidence that Defence established a clear basis or criteria to ensure a consistent approach to entry to and exit from the Projects of Concern or Projects of Interest lists, and that no evidence of an evaluation was provided to the ANAO.⁵³

1.29 At the JCPAA's September 2021 hearings on the 2019–20 Major Projects Report, the Deputy Secretary CASG stated that:

We are working to improve the way in which we're able to measure the underperforming projects. Invariably, it's data driven quite easily on cost and schedule against the documented milestones and loaded milestones and then the capability a little more to that. As we develop up the program report or the project and sustainment report that we're doing to supplement the sequencing in between portfolio budget statements, portfolio additional estimates statements and from this major projects report itself, we will continue to mature that by feeding in capability manager assessments and information. That's important because, ultimately, they are the first principles responsible for the capability delivery and we are the delivery agency but the operational effect is through the capability manager.⁵⁴

1.30 In July 2022, CASG advised the ANAO that Project of Concern/Interest reporting will be provided through a bi-annual information product that is not to be used for decision-making, or to vary approved project parameters or budget plans and is for information purposes only. Defence records indicate that 'Reporting data is not to be considered as a request for a decision to vary approved project parameters or budget plans. Advice on these matters will be requested through submissions specific to the project and issue as necessary.'⁵⁵

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

52 This advice was reported in Auditor-General Report No.19 2020–21 *2019–20 Major Projects Report*, paragraph 1.16.

53 Auditor-General Report No.34 2020–21 *Implementation of ANAO and Parliamentary Committee Recommendations — Department of Defence*, Table 3.7, p. 50.

54 Committee Hansard, JCPAA inquiry into Auditor-General's report No.19 (2020–21) Defence Major Projects Report 2019 - 20, [internet] p. 13. Available from: https://www.aph.gov.au/Parliamentary_Business/Committees/Joint/Public_Accounts_and_Audit/MPR2019-20/Public_Hearings [accessed 5 October 2022].

55 Department of Defence, *Project and Products of Concern and Interest*, Capability Acquisition and Sustainment Group, March 2022.

1.31 Recommendation 2 of JCPAA Report 489⁵⁶ was that Defence revisit its effort to provide criteria for projects to enter and exit the Projects of Concern and Projects of Interest categories and create processes for their consistent application, enabling these to be reviewed as part of the next MPR, and that the ANAO give further consideration to these issues in the next MPR. In its September 2022 response to the recommendation, Defence advised the JCPAA that the body of work to address this recommendation was under development, with completion anticipated by June 2023. Defence also stated that a Project of Concern/Interest report is presented to the Defence Investment Committee to increase oversight of performance issues.

1.32 On 10 October 2022 Defence Ministers announced⁵⁷ that the Government would 'strengthen and revitalise Defence's projects of concern process', by doing the following.

- Establishing an independent projects and portfolio management office within Defence.
- Requiring monthly reports on Projects of Concern and Projects of Interest to the Minister for Defence and Minister for Defence Industry.
- Establishing formal processes and 'early warning' criteria for placing projects on the Projects of Concern and Projects of Interest lists.
- Fostering a culture in Defence of raising attention to emerging problems and encouraging and enabling early response.
- Providing troubled projects with extra resources and skills.
- Convening regular Ministerial summits to discuss remediation plans.⁵⁸

1.33 The ANAO will monitor implementation of the changes announced in October 2022 and include relevant commentary in the next MPR.

Longitudinal analysis

1.34 ANAO longitudinal analysis of all MPR projects on the Projects of Concern (POC) List indicates that 11 MPR projects have been included, with an average of four years on the POC list (Figure 1, p. 28).

56 Joint Committee of Public Accounts and Audit, Parliament of the Commonwealth of Australia, Report 489: Defence Major Projects Report (2019—20), (2022), List of recommendations, p. xi

57 Joint media release, Minister for Defence and Minister for Defence Industry, Quality of Defence spending top priority for Albanese Government, 10 October 2022, available at <https://www.minister.defence.gov.au/media-releases/2022-10-10/quality-defence-spending-top-priority-albanese-government> [accessed 10 October 2022].

58 In their media release, the Ministers for Defence and Defence Industry also highlighted delays in a number of Defence projects, including four which are included in this year's MPR. For these four projects, the Ministers stated that:

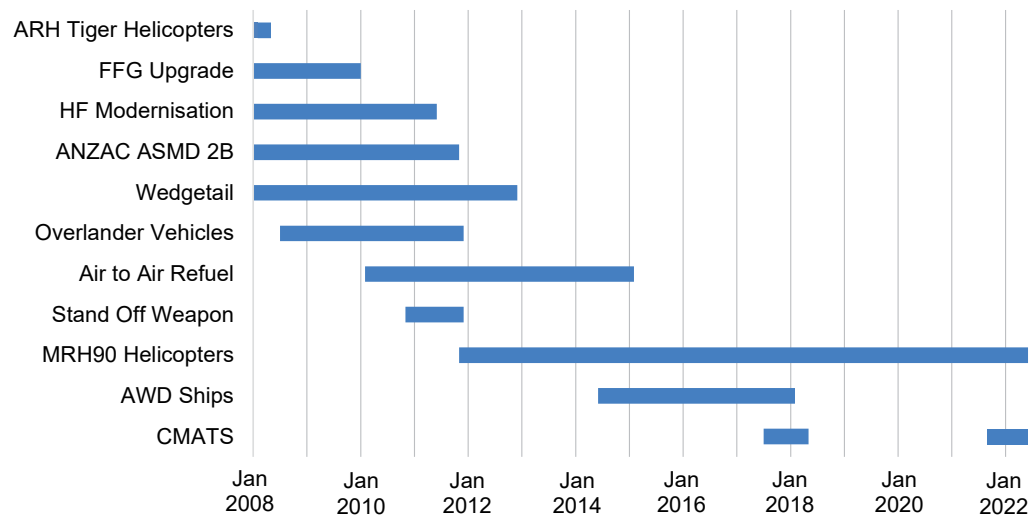
\$44 billion Hunter Class Frigate program – start of construction delayed by four years and a \$15 billion increase in expected costs, hidden from the public by the Coalition government.

\$1.4 billion C-27J Spartan Battlefield Airlifters – which were delivered four and a half years behind schedule and are unable to fly into battlefields.

\$3.7 billion Offshore Patrol Vessel project – running one year behind schedule.

\$970 million Battlefield Command System – three years behind schedule.

Figure 1: MPR projects identified as Projects of Concern



Source: ANAO review of previous MPRs and Ministerial direction in September 2021 in relation to CMATS.

Acquisition and Sustainment Update (formerly Quarterly Performance Report and Project and Sustainment Report)

1.35 The aim of the Capability Acquisition and Sustainment Quarterly Performance Report (QPR) was to provide senior stakeholders within government and Defence with insight into the delivery of capability to the ADF.⁵⁹ The report was provided to the Minister for Defence and the Minister for Defence Industry on a quarterly basis.⁶⁰

1.36 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 of projects 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.⁶¹ 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 (IAR) or which are under active consideration by senior management.⁶²

1.37 During 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. Additionally, the ANAO observed that Defence’s June 2019 QPR

59 Department of Defence, *Quarterly Performance Report June 2020*, Defence, Canberra, 2020, p. 5.
60 Auditor-General Report No.3 2019–20 *Defence’s Quarterly Performance Report on Acquisition and Sustainment*, p. 7.
61 *ibid*, pp. 7–8.
62 *ibid*, p. 7.

reported the emerging candidates for the Projects/Products of Concern list and Projects/Products 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.⁶³ Defence closed this recommendation in March 2020.⁶⁴

1.38 CASG ceased producing QPRs after June 2020, with the report superseded in February 2021 by the Project and Sustainment Report (PSR).

1.39 During Budget Estimates hearings held on 1 June 2021, the Deputy Secretary CASG stated that the PSR was anticipated to be issued on a six-monthly basis. A six-month gap in reporting activity introduces a risk of diminished information being available for decision making by senior leaders. Further, compared to the QPR, the PSR contained less information on acquisition projects and sustainment products that are not classified as a Project/Product of Concern or Project/Product of Interest.

1.40 Defence advised the ANAO in September 2021 that it has 'management processes that ensure Capability Managers and Delivery groups are informing the Secretary of Defence and the Chief of Defence Force through weekly roundtable discussions and the Ministers are ... informed on pertinent issues as they arise'. Defence also advised the ANAO that the next PSR was still in development and a draft would not be ready prior to the completion of the 2020–21 MPR.

1.41 In October 2021, Defence further advised the ANAO that the PSR was only an interim report, and that a new 'Capability Report' originally intended to replace the QPR was not sufficiently mature to be implemented.

1.42 The new report, the Acquisition and Sustainment Update (ASU) was trialled in September 2021 and accepted as the CASG replacement report for the PSR by the Deputy Secretary CASG in October 2021.

1.43 The ASU provides CASG leadership with significantly less detail of project/product performance, at a lower security classification. CASG has stated that it plans to migrate the ASU to a dynamic dashboard presentation. The ASU provides high level quarterly reporting on the following areas.

- Capability and Finance Overview.
- Delivery Group Updates.
- Planned Investment.
- Key Numbers.
- Portfolio Budget Statements.
- CASG – Top 30 Project/Product Performance Dashboard.
- CASG – Projects/Products of Concern/Interest.
- CASG – Independent Assurance Reviews.
- An explanation of CASG Performance Measures.

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

64 In Auditor-General Report No.34 2020–21 *Implementation of ANAO and Parliamentary Committee Recommendations — Department of Defence*, Recommendation 1 relating to the use of the QPR was assessed as: implementation was completed in line with the intent of the recommendation.

1.44 Defence advised the ANAO that: decision makers can seek additional information, including at a higher security classification through a project-specific brief; and that project-specific briefings are provided where issues need to be escalated or decisions are required.

1.45 Defence's March 2022 ASU included developments of note for two MPR Projects of Interest⁶⁵, CMATS and Battlefield Command System, and MRH90 Helicopters as a Project of Concern. The March 2022 ASU did not include developments of note for other Projects of Concern or Projects of Interest included in the MPR.⁶⁶

- In respect to MRH90 Helicopters, the ASU reported that Defence continues to seek improved performance around supply chain and confidence in industry's ability to support the capability and its planned withdrawal date.
- In respect to CMATS, the ASU reported that the schedule review had been completed and re-baselining activities were in progress; however, Defence remained concerned at the quality and timeliness of the re-baselining activities. The ASU also reported that a number of significant design artefacts had not been delivered until later than expected, putting at risk the contractor's ability to complete the outstanding actions in time to prevent further project delay.⁶⁷
- In respect to the Battlefield Command System, the ASU reported that the combination of vehicle integration, contractor software development delays, and test and evaluation difficulties continued to impact the schedule.

1.46 This reporting aligns with the results of the ANAO's review of the relevant PDSSs.

1.47 As at October 2022, the most recent finalised ASU was the March 2022 version. This report was received by Defence leaders in August 2022. This indicates a risk that the information in the ASU will be outdated by the time it reaches decision-makers. The ANAO will continue to monitor implementation of the ASU.

Project Directives and Materiel Acquisition Agreements

1.48 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.⁶⁸ Project Directives have historically been used to inform internal Defence documentation such as Materiel Acquisition Agreements (MAAs) between CASG and the Service Chiefs.^{69,70} Project Directives had previously been described as a key

65 The ASU does not define the term 'Project of Interest'. CASG's internal Standard Operating Procedure for performance reporting quarterly analysis states that the Projects or Products of Interest list is where underperformance, including for reasons within Defence internal management, warrants heightened oversight and monitoring.

66 These are: Joint Strike Fighter, Hunter Class Frigate, MQ-4C Triton, Light Tactical Fixed Wing, and JORN Upgrade. For these projects the ASU listed no developments of note since the December 2021 update.

67 Notwithstanding the Minister for Defence's direction in September 2021 that CMATS be listed as a Project of Concern, the March 2022 ASU reported CMATS as a Project of Interest. In September 2022 the Minister for Defence Industry approved a Defence recommendation to elevate the CMATS project to a Project of Concern. See paragraphs 1.22–1.25.

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

69 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.

70 The *Defence Capability Manual* (Version 1.0) does not describe MAAs and instead refers to Product Delivery Agreements (PDAs) (see paragraph 1.49). Projects in this MPR have an approved MAA.

governance document under the Capability Life Cycle⁷¹, intended to ensure that all parties in Defence are informed of government decisions.

1.49 Defence updated the Capability Life Cycle Manual in June 2020, no longer referring to Project Directives as a key governance document. The Capability Life Cycle Manual was superseded by the Defence Capability Manual in December 2020. The Defence Capability Manual also does not refer to Project Directives. Defence has advised the ANAO that government decisions are recorded in CapabilityOne, which records government decisions in relation to a project. In some cases, the Joint Force Authority^{72,73} 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.⁷⁴

1.50 Last year, the SRGB Air Defence project advised that it did not have direct access to government approval documentation. The new project entering the 2021–22 MPR, Peregrine, advised that it has access to relevant approval documentation via CapabilityOne.

1.51 There has been no change to the advice provided in November 2020, 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.’

1.52 The risk of misalignment or error is reduced if Defence has appropriate access to government records, such as that previously provided by Project Directives. If projects can access original Cabinet documentation, there is no residual impact.

1.53 The ANAO requires access to original approval documents to validate the requirements of projects. Validation based on internal Defence documentation is not always possible or may not meet evidentiary standards.

1.54 First advised by Defence in July 2016⁷⁵, Product Delivery Agreements (PDAs)⁷⁶ were to be developed to replace the existing MAAs and Materiel Sustainment Agreements (MSAs). In October 2021, Defence advised the ANAO that in the absence of the PDA framework, Capability Managers and Delivery Groups continue to use the Materiel Acquisition Agreement and Materiel Sustainment Agreement Framework. The ANAO has not observed any progress on the PDA initiative during preparation of the 2021–22 MPR.

Smart Buyer Framework

1.55 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

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

72 Department of Defence, *Defence Capability Manual*, Defence, Canberra, 2022, p. 64.

73 Defence has delegated the Vice Chief of the Defence Force (VCDF) as the Joint Force Authority.

74 Auditor-General Report No.6 2013–14 *Capability Development Reform*, paragraph 11.54.

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

76 A PDA is an agreement between the Project 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, *Product Life Cycle Guidance*, Defence, Canberra, 2022, p. 20.

appropriate procurement and contracting methodologies'. None of the projects currently in the Major Projects portfolio have been approved under the Smart Buyer processes.

Application to MPR projects

1.56 The one project entering the MPR in 2021–22, Peregrine, was not approved under the Smart Buyer process. The consequence is that ten projects in the MPR were approved after the Smart Buyer framework was introduced in 2016 but were not subject to its processes. Defence advised the ANAO that three MPR projects were involved in Smart Buyer activities during 2021–22, separate to the approvals process of these projects.⁷⁷

1.57 A Defence internal audit in March 2022 found that 'the design of the Smart Buyer Program's activities [was] considered effective in assisting Defence achieve expected outcomes in alignment with the 2020 Force Structure Plan, however ... the overall effectiveness of the Smart Buyer Program is currently measured in a basic manner'. The audit identified that 'the outcomes are not adequately monitored or reported on to Defence's senior management, including its key sponsor – the [Vice Chief of the Defence Force]'.

Application to MPR process

1.58 In 2020 Defence conducted a management-initiated review of the MPR process, applying its Smart Buyer methodology. The Defence review did not request JCPAA or ANAO input. Following a JCPAA recommendation made in March 2022 for a joint briefing on the review⁷⁸, the ANAO and Defence responded to the committee's recommendation on 8 and 13 September 2022 respectively. Both Defence and the ANAO agreed to the recommendation. The ANAO also advised that as the Smart Buyer review was a Defence initiative, it would be appropriate for Defence to provide the review report and a briefing to the Committee. The ANAO would be available to attend the briefing.

Business systems

1.59 Defence continues to review its business systems with the aim of consolidating them to provide a more manageable ICT environment. Project reporting occurs via the Monthly Reporting Module (MRM). A second system, the Project Performance Review Information Platform (PPRIP), delivers a platform for projects to also conduct monthly reviews of their project and enable the raising of risks and actions with line management.

1.60 Errors in MRM were identified by the ANAO in the 2020–21 MPR and Defence advised the ANAO in November 2021 that:

In relation to the internal processes to assess accuracy and completeness, the process has been: data checking and reconciliation work with DFG [Defence Finance Group] to ensure BORIS [the Budget and Output Reporting Information System, Defence's corporate budget development and reporting system] file uploads reflect the accrual accounting position (complete Oct 20); daily automated system checks to ensure that data flows are maintained and messages are provided to users when data is not up to date; prior to each MRM [Monthly Reporting Module] lockdown period reminders on data requirements are sent to reduce human error; after each lockdown

77 Offshore Patrol Vessel conducted a Smart Buyer review for a procurement of a Small Calibre Gun System. Peregrine and MQ-4C Triton contributed to a Smart Buyer workshop for provision of certain sustainment services across a number of platforms.

78 Joint Committee of Public Accounts and Audit, Parliament of the Commonwealth of Australia, *Report 489: Defence Major Projects Report (2019–20)*, (2022), p. xii and paragraphs 1.105–1.106.

period system statistics are used to drive lessons on sign off and identify areas of improvement; and to assure that in each reporting round if the data was accurate trend information over time is used to identify anomalies and drive improvements.

1.61 As the MRM is not entirely system generated, issues remain regarding its reliability as a source of evidence for the ANAO's review of Defence PDSSs. The ANAO has continued to identify errors within MRM reports and they are not sufficiently reliable as supporting evidence for review purposes. Additional evidence was therefore sourced to support the ANAO's review. The ANAO will continue to monitor the completeness and accuracy of data in MRM.

1.62 Defence advised the ANAO that these business systems will be replaced by the Enterprise Resource Planning program. Timing for the replacement of these business systems, MRM and PPRIP, has not been confirmed.

New Naval Shipbuilding and Sustainment Group

1.63 The Secretary of Defence and Chief of the Defence Force announced on 4 October 2022 that a new Naval Shipbuilding and Sustainment Group (NSSG) took effect from that date. The announcement included the following information.

- The Minister for Defence agreed to establish the new group in 'recognition of the scale and complexity of Australia's naval enterprise.' It would 'focus on naval acquisition and sustainment, as well as developing a competitive shipbuilding and sovereign sustainment industry.'
- The group would 'be the dedicated entity, in partnership with the Royal Australian Navy, to deliver the Naval Shipbuilding and Sustainment Enterprise, building and sustaining maritime capabilities' and would 'drive, inform and influence decision-making related to the acquisition and sustainment of Navy's current and future fleet.'⁷⁹
- The Deputy Secretary, Naval Shipbuilding and Sustainment, would head the group. The group's leadership would include the First Assistant Secretary (FAS) Submarines, the FAS National Shipbuilding and Sustainment Enterprise Headquarters, the FAS Major Surface Combatants and Combat Systems, the Head of Patrol Boats and Specialist Ships, and the Head of Maritime Sustainment Division.

1.64 As the changes were announced in October 2022, the ANAO did not review acquisition governance arrangements for the new group, or its co-ordination arrangements with the existing Capability Acquisition and Sustainment Group (CASG). The ANAO will monitor implementation and include relevant commentary in the next MPR.

Results of the ANAO's review

1.65 The following sections outline the results of the ANAO's review. The results inform the overall conclusion in the *Independent Assurance Report* by the Auditor-General for 2021–22.

79 ANAO comment: information on the 'National Naval Shipbuilding Enterprise' is available from <https://www.defence.gov.au/business-industry/naval-shipbuilding> [accessed 9 October 2022].

Financial framework

1.66 The project financial assurance statements were introduced in the 2011–12 MPR 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 MPR and describe the use of contingency funding to mitigate project risks. Together, they are aimed at providing greater transparency over projects' financial status.

1.67 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.⁸⁰

1.68 In 2021–22, 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

1.69 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/scope) and whether there is 'sufficient remaining budget for the project to be completed'.⁸¹ 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 2022.

1.70 The Chief Finance Officer's representation letter to the Secretary of Defence on the 2021–22 MPR's project financial assurance statements was unqualified.

Contingency statements and contingency management

1.71 Defence policy states that the purpose of a project's contingency is to provide funding for cost, schedule and technical uncertainties that may materialise over the life of a project. The policy requires that the project manager maintain a project contingency log, which is intended to support management's control of project contingency and facilitate reporting on its use. The use of contingency funding is dependent on the occurrence of a contingency risk event and contingency cannot be used to pay for activities which will increase the scope of the capability project.

1.72 Contingency provisions are approved by government as part of the total project budget, though are not programmed or funded in cash terms 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 — the Approved Major Capital Investment Program (AMCIP), Facilities and Infrastructure Program (FIP) or ICT Capital Program. In this case, the project must make an application to access

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

81 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.

the project's contingency to the First Assistant Secretary, Financial Performance and Management (FASFP) within Defence Finance Group. 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.⁸² Defence 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.

1.73 In 2021–22, four projects applied contingency to manage project risks: MRH90 Helicopters (to manage supportability and performance risks), Offshore Patrol Vessel (to address risk relating to delivery of the third vessel), SRGB Air Defence (for treatment of COVID related impacts) and Battle Comm. Sys. (Land) 2B (to address COVID related delays). The ANAO observed two instances of projects not complying with Defence's financial policy relating to contingency funding.

- The Future Subs project office advised that it ceased maintaining a contingency log when its risks were formally closed following the cancellation of the program. Subsequently, Defence advised that risks, including those that may require contingency funding, were managed throughout the transition out process. This process was ongoing as at 19 January 2023. This means that the project's contingency budget is not managed in a formal log while multiple open risks and issues remain, including some that may require contingency funding.
- The MRH90 Helicopters project uses significant contingency funds to address its capability issues. As at 30 June 2022, the project had ceased maintaining a complete log meeting all requirements of Defence policy. Following ANAO requests for a complete log, the project prepared and provided an updated log addressing the requirements of Defence policy.

1.74 The ANAO's examination of project contingency logs as at 30 June 2022 highlighted that the clarity of the relationship between contingency allocation and identified risks continues to be an issue. Three projects (Joint Strike Fighter, Hunter Class Frigate, MRH90 Helicopters) did not explicitly align their contingency log with their risk log to ensure that the expected cost impact of risks is maintained effectively, as required by the *Capability Acquisition and Sustainment Risk Management Manual* (CAS RMM) V1.0.

1.75 The ANAO will continue to monitor non-compliance with CAS RMM V1.0 and the release of specific guidance following the implementation of the CASG Risk Management Framework (which is discussed from paragraph 1.82).

Reporting on cost variations, project personnel numbers and costs

1.76 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.'⁸³

82 Contingency calls below \$100 million endorsed by FASFP will be reported to the Investment Committee by Defence Finance Group and calls above \$100 million will need to be approved by the Investment Committee. *Management of Defence Capability Project Contingency*, Defence, 2022.

83 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.

Cost variations since Second Pass Approval

1.77 Table 9, at pp. 48–49, shows all budget variations post initial Second Pass Approval for projects.

Project personnel numbers and costs

1.78 In December 2021, the ANAO's audit of Defence's financial statements found that 'Defence does not capture employee-related costs as part of its asset under construction projects. There are currently no systems or processes to identify the time spent by officers on specific projects.' The ANAO recommended that Defence consider implementing a time recording system to capture employee costs associated with each project. Defence agreed to this recommendation.

1.79 In April 2022 Defence advised the ANAO that:

Defence does not currently have systems or processes that capture the employee (APS or ADF) workforce costs directly attributable to the development and acquisition of non-financial assets in a systemic, repeatable or efficient manner.

1.80 In the context of the 2021–22 financial statements audit, Defence estimated its in-year employee costs (for Australian Public Service and Australian Defence Force employees only) in all CASG projects, not just those in the MPR, to be \$62.7 million.

1.81 The ANAO will continue to monitor Defence's progress in recording project personnel numbers.

Enterprise Risk Management Framework

1.82 While major risks and issues data in the Defence PDSSs remains excluded from the formal scope of the Auditor-General's *Independent Assurance Report*⁸⁴, 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.

1.83 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, to conduct its review of the PDSSs. 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 within Defence's risk management framework.

1.84 The JCPAA recommended in September 2018 that Defence plan and report a methodology to the JCPAA showing how acquisition projects can transition from the use of spreadsheet risk registers to tools with better version control.⁸⁵ In response, Defence advised the JCPAA in May 2020 that Predict! would be mandated as the risk management system.

84 See paragraph 1.3 for more information.

85 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.

1.85 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. The 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.

1.86 The reform was initially planned to be concluded in June 2019. Defence concluded the contract with its industry partner in May 2020. Defence advised the ANAO in November 2020 that it had delivered all three phases of the reform, including the development of risk management policies and toolsets for use by projects. However, Risk Profiles for some CASG Domains remained in draft, and Risk Management Implementation Plans were still being updated.

1.87 Defence advised the ANAO in October 2021 that it had released tools to standardise risk practices across CASG, and that this includes the roll-out of Predict! across CASG. The rollout of these tools and risk practices was endorsed as complete by the CASG Group Business Manager in March 2022, which concluded the third and final phase of the CASG Risk Reform as initially planned in the CASG Deputy Secretary's Directive of 2017.

1.88 The JCPAA recommended in March 2022 that Defence provide an update on the implementation of its new risk management system and which, if any, projects had not fully transitioned. In response to JCPAA Report 489, Defence advised the committee that two of the projects included in the 2021–22 MPR, Future Subs and MRH90 Helicopters, were granted exemptions. This is consistent with ANAO analysis in Table 6, p. 38.

1.89 Defence has advised the JCPAA that the implementation of the CASG Risk Reform Program and Predict! is expected to improve the efficiency of Defence's risk management and standardise reporting. The ANAO will continue to monitor implementation of the Risk Reform Program, with a view to commence providing assurance over project risks and issues in the next MPR.

Roll-out status at 30 June 2022

1.90 As discussed, Defence has undertaken a roll-out of the Predict! Risk Management System tool across CASG.

1.91 The ANAO's review of risk management documentation relating to CASG's 21 project offices indicates that as at 30 June 2022:

- nineteen utilised Predict!;
- two utilised MS Excel spreadsheets as their primary risk management tool;
- one (Hunter Class Frigate) used Predict! and Defence's CapabilityOne;
- one (CMATS) used Predict! and a bespoke SharePoint based tool (managed jointly with Airservices Australia, as Airservices Australia does not use Predict!); and
- one (Light Tactical Fixed Wing) used Predict! and MS Excel.

1.92 Table 6, p. 38, lists the MPR projects' use of the Predict! Risk Management System tool as at 30 June 2022.

Table 6: MPR projects' use of Predict! Risk Management System as at 30 June 2022

Project	Predict! Use	Other Risk System in Use
Joint Strike Fighter	Yes	
Hunter Class Frigate	Yes	CapabilityOne
Combat Reconnaissance Vehicles	Yes	
Future Subs	No	MS Excel
MRH90 Helicopters	No	MS Excel
Offshore Patrol Vessel	Yes	
Overlander Medium/Heavy	Yes	
Peregrine	Yes	
MQ-4C Triton	Yes	
Hawkei	Yes	
Light Tactical Fixed Wing	Yes	MS Excel for issues management only
SRGB Air Defence	Yes	
JORN Mid-Life Upgrade	Yes	
Repl Replenishment Ships	Yes	
CMATS	Yes	MS SharePoint
Battlefield Command System	Yes	
Battle Comm. Sys. (Land) 2B	Yes	
Collins Comms and EW	Yes	
Pacific Patrol Boat Repl	Yes	
Maritime Comms	Yes	
ANZAC Air Search Radar Repl	Yes	

Source: ANAO

Issues identified

1.93 In 2021–22, the ANAO again examined project offices' risk and issue logs at the Group and Service level, which are predominantly created and maintained utilising Predict! software.

1.94 The key issues with risk management, as observed by the ANAO, related to the following.

- Variable compliance with corporate guidance. While most of the 21 MPR projects had an approved Risk Management Plan, only the Joint Strike Fighter, Hunter Class Frigate, Combat Recon. Vehicles, Overlander Medium/Heavy, Hawkei, Light Tactical Fixed Wing,

SRGB Air Defence, JORN Mid-Life Upgrade, and Battle Comm. Sys. (Land) 2B, projects have updated their risk management plan within six months as required by CAS RMM V1.0.⁸⁶

- The visibility of risks and issues when a project is transitioning to sustainment.
- 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.
- Lack of quality control resulting in inconsistent approaches in the recording of issues within Predict!.
- Lack of a clear link between allocations against risk in the contingency log and risk log (as discussed at paragraph 1.74).
- Risk management logs and supporting documentation of variable quality, particularly where spreadsheets⁸⁷ are being used in conjunction with Predict!.

1.95 Defence's Independent Assurance Review (IAR) for the Hunter Class Frigate (June 2022) identified that risk ratings were different in the CASG Risk Management Manual compared to those used by the Capability Manager's Steering Group (CMSG). The CASG Manual has 'very high' as the top rating for risks, while the top CMSG risk rating is 'extreme'. This resulted in some changes to the final IAR report to enable a consistent understanding of the risk assessment.

Lessons learned arrangements

1.96 In February 2022, CASG released a revised version of its Lessons Program Policy. The Policy is underpinned by a Defence Joint Directive which directs all 'Groups and Services, as required, to establish and lead a whole-of-Defence Joint Lessons that provides centralised Lessons management and coordination'.

1.97 Version 3.0 of the CASG Lessons Program Policy states that the:

Deputy Secretary CASG expects leadership at all levels to actively participate in the CASG Lessons Program through the identification, analysis and documenting of observations, insights and lessons across the One Defence Capability System.⁸⁸

1.98 Defence is yet to fully implement the lessons learned framework and compliance monitoring process. The ANAO has observed that nine projects' lessons are not available within the Defence Lessons Repository and seven projects do not maintain a lessons learned log, described in Table 7, p. 40. Full implementation is expected to enable projects to review and apply lessons learned that are applicable to enable more consistent and improved project outcomes. The ANAO will continue to monitor Defence's progress in implementing the lessons learned process for projects' use.

86 The *Capability Acquisition and Sustainment Risk Management Manual* (CAS RMM V1.0) requires the project manager to validate the currency and efficacy of the Risk Management Plan (RMP) when transitioning from one stage of the Capability Life Cycle to the next and every six months, should a stage extend beyond six months. The project manager should submit periodic reports (at every stage or every six months should a stage extend beyond six months) to assure the efficacy of the risk controls and management processes in the RMP.

87 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. See for example *Major Projects Report 2020–21*, December 2021, paragraph 1.75.

88 Department of Defence, *PM 006 – Lessons – CASG Lessons Program*, Version 3.0, Defence, Canberra, 2022.

Table 7: MPR projects' application of the Defence Lessons Learned Policy as at 30 June 2022

Project	Established a Lessons Learned Log	Accepted into CASG/Defence Lessons Repository
Joint Strike Fighter	Yes	No
Hunter Class Frigate	Yes	No
Combat Reconnaissance Vehicles	Yes	Yes
Future Subs	Yes	No
MRH90 Helicopters	No	No
Offshore Patrol Vessel	No	No
Overlander Medium/Heavy	Yes	Yes
Peregrine	Yes	No
MQ-4C Triton	No	No
Hawkei	Yes	Yes
Light Tactical Fixed Wing	Yes	Yes
SRGB Air Defence	No	Yes
JORN Mid-Life Upgrade	Yes	Yes
Repl Replenishment Ships	Yes	Yes
CMATS	Yes	Yes
Battlefield Command System	No	Yes
Battle Comm. Sys. (Land) 2B	No	Yes
Collins Comms and EW	Yes	Yes
Pacific Patrol Boat Repl	Yes	No
Maritime Comms	Yes	Yes
ANZAC Air Search Radar Repl	No	No

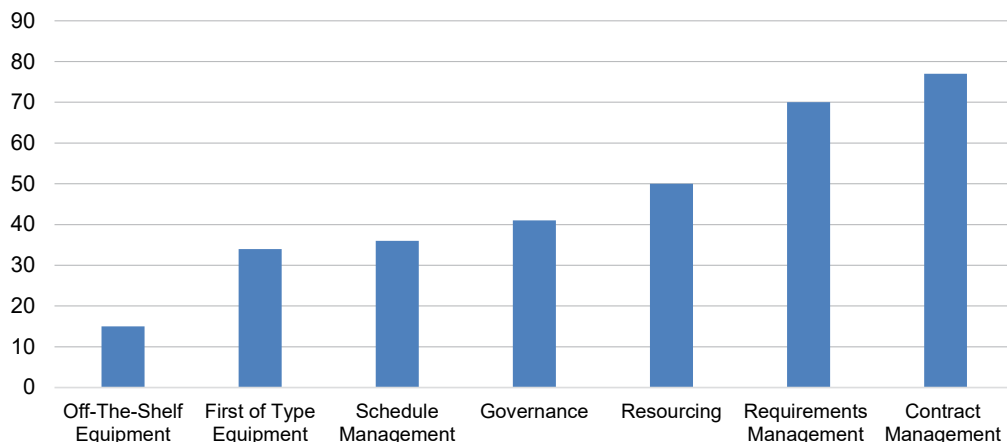
Source: ANAO analysis

Longitudinal analysis

1.99 The MPR Guidelines provide for Defence PDSSs to include information on 'systemic lessons' where they are applicable to the project. The seven categories are: requirements management, first of type equipment, off the shelf equipment, contract management, schedule management, resourcing, and/or governance.

1.100 Figure 2, p. 41, shows the spread across the seven categories reported in Defence PDSSs 2007–08 to 2021–22. Contract management (77) and requirements management (70) had the highest number of reported lessons.

Figure 2: MPR projects — lessons learned as reported in PDSSs — (2007–08 to 2021–22)



Source: ANAO analysis of Defence PDSSs.

Caveats and deficiencies

1.101 Defence has defined in its internal policies and procedures, the terms ‘caveat’ and ‘deficiency’ as they relate to the declaration of significant capability milestones.⁸⁹

1.102 The ANAO first observed the declaration of a major milestone with caveats in 2013–14, and Defence has continued to declare major milestones with caveats since then. In the 2017–18 MPR the ANAO noted advice from Defence that it discourages Independent Assurance Reviewers from recommending caveats at FOC.⁹⁰ In July 2022, Defence advised the ANAO that caveats or deficiencies are used where a key milestone (Initial Materiel Release, Initial Operational Capability, Final Materiel Release, or Final Operational Capability) has been achieved in principle, with outstanding actions to be rectified or mitigated.

1.103 The JCPAA recommended, in March 2022, that:

Defence provide a clear definition of any term used in Project Data Summary Sheets or elsewhere in the Major Projects Report that is associated with a delta or deviation from a project milestone being achieved, to ensure that the use of such a term does not undermine the validity of the milestone having been achieved.⁹¹

1.104 In response, Defence advised the JCPAA on 9 September 2022 that:

Defence, in consultation with the Department of Finance, has developed definitions for the term caveat and deficiency when used in relation to project milestones. These definitions, along with additional guidance on responsibilities for declaring the achievement of key milestones, are due to be published later in 2022 as part of the normal cycle for updating capability guidance.

⁸⁹ Department of Defence, *Product Life Cycle Guidance*, Version 3.3, Canberra, October 2022, pp. 100 and 101.

⁹⁰ Auditor-General Report No.20 2018–19, *2017–18 Major Projects Report*, paragraphs 1.61–1.62, p. 32.

⁹¹ Joint Committee of Public Accounts and Audit, Report 489, *Inquiry into the Defence Major Projects Report 2019–20* (March 2022), recommendation 4, paragraphs 1.103–1.104.

1.105 Implementation of Defence’s response to the JCPAA recommendation will provide clarity in this area. The ANAO has noted the use of a wide range of terms (listed in Table 8 below) over successive MPRs, indicating potential limitations on capability or milestone requirements. As discussed in paragraph 1.108, the term ‘issues’ was also used this year and has been added to the list of terms employed by Defence.

Table 8: Terms used by Defence to describe deficiencies in capability milestones or materiel release milestones

Terms used by Defence
Caveat
Challenge
Concession
Condition
Deficiency
Exception
Impact
Issue
Risk

Source: ANAO analysis

1.106 Two of these terms were clarified in the Product Life Cycle Guidance glossary (October 2022).⁹²

Caveat – In relation to the declaration of Initial or Final Operational Capability or other capability milestone, is a plan, stipulation, condition or limitation to mitigate the capability impact of a Deficiency.

Deficiency – In relation to the declaration of Initial or Final Operational Capability or other capability milestone, is a shortfall between the Government agreed requirements and that which is provided at the milestone.

Declarations in 2021–22

1.107 In 2021–22, Defence declared the following caveats or deficiencies relating to projects in the MPR (prior to the introduction of the Product Life Cycle Guidance glossary in October 2022).

- Repl. Replenishment Ships — Defence declared Initial Operating Capability in October 2021 with one caveat relating to the ships’ communication system.
- Maritime Comms — Defence declared Initial Materiel Release in September 2021 with minor exceptions.

1.108 In addition, the Chief of Army declared Initial Operational Capability (IOC) for the Combat Reconnaissance Vehicles in June 2022, with a number of ‘issues for resolution’ noted in the IOC decision brief. Subsequent advice to the Minister for Defence highlighted these issues and the resulting risk the Chief of Army accepted in the declaration of IOC. Defence advised the ANAO in September 2022 that ‘IOC has been achieved unconditionally, without imposed caveats or issues.’

92 Department of Defence, *Product Life Cycle Guidance*, Version 3.3, Canberra, October 2022, p.100 and p.101.

2. Analysis of Project 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)⁹³, 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).

2.3 This year, Defence advised the ANAO of its decision that key schedule information for four of the 21 Major Projects (Offshore Patrol Vessel, Peregrine, SRGB Air Defence, and JORN Mid-Life Upgrade) is not for publication, and has not been disclosed in the relevant PDSS.

2.4 Due to the non-publication of this key information by Defence, the ANAO was not in a position to publish a complete analysis of schedule performance for the suite of MPR projects, as in the past. The ANAO analysis involves both in-year analysis (across the current MPR projects) and longitudinal analysis (across all projects included in the MPR over time). As a consequence, this year's MPR does not provide the user with the same level of information, reducing the level of transparency and accountability over the MPR projects as a whole.

Project performance analysis by the ANAO

Information not published by Defence and more limited analysis

2.5 As discussed in paragraphs 20 and 35, aggregate schedule data for 2021–22 is not reported by the ANAO in this year's MPR. This is due to the combined effect of Defence's decision to not publish Final Operational Capability (FOC)⁹⁴ forecast dates in three PDSSs this year, and the fact that four projects do not have settled FOC dates.

- Defence has decided to not publish FOC forecast dates in three PDSSs (Offshore Patrol Vessel, Peregrine, and JORN Mid-Life Upgrade).⁹⁵ This represents 14 per cent of all PDSSs.⁹⁶
- Four (19 per cent) of the 21 PDSSs did not have FOC forecast dates at 30 June 2022.⁹⁷
- The combined effect of Defence's non-publication of the three FOC forecast dates, and the four FOC dates not settled, is that seven (33 per cent) of the 21 PDSSs do not include

93 Major Defence reviews since 2000 are discussed in: Auditor-General Report No.6 2013–14 *Capability Development Reform*, pp. 18–21 and Chapter 2; and Auditor-General Report No.34 2017–18 *Defence's Implementation of the First Principles Review*.

94 FOC is the key milestone that forms the basis for the majority of the ANAO's schedule analysis, including calculation of project slippage. Defence defines FOC as: 'The capability state relating to the in-service realisation of the final subset of a capability system that can be employed operationally.'

95 Defence has published FOC information for SRGB Air Defence in this year's PDSS. For this project, the not for publication information related to earlier milestones.

96 As discussed in paragraph 18, the not for publication information was provided to the ANAO for review.

97 The Hunter Class Frigate and Future Subs projects did not have FOC milestones approved by government at 30 June 2022. The Overlander Medium/Heavy and Pacific Patrol Boat Repl projects expect to experience delays to FOC, but were unable to prepare specific forecast dates for FOC as at 30 June 2022.

FOC dates this year. Any aggregated analysis of the remaining 14 projects (which have included FOC dates in their PDSS) would be incomplete.

- The inclusion of incomplete schedule performance analysis would misinform users of the MPR, as the 14 projects that have included FOC dates in their PDSS are not representative of all the Major Projects.

Guide to the ANAO analysis

2.6 The major dimensions of project performance are:

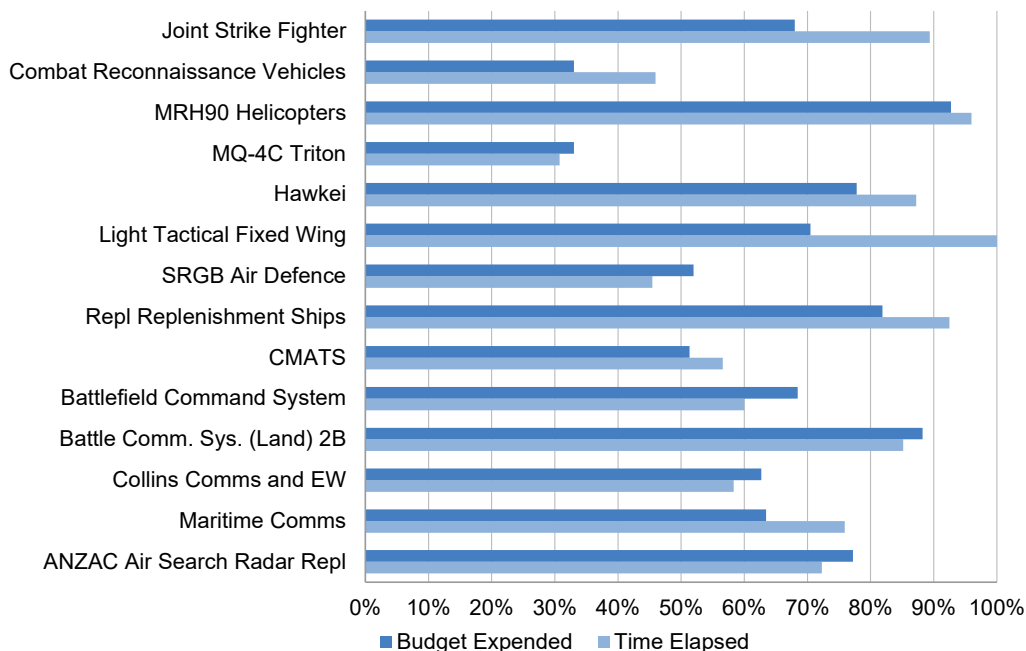
- Cost performance (discussed at paragraphs 2.10 to 2.18) — the ANAO analysis includes the percentage of budget expended (Budget Expended), changes in budget since Second Pass Approval, in-year changes to budget, and in-year expenditure.
- Schedule performance (discussed at paragraphs 2.19 to 2.42) — this year the ANAO analysis only includes historical data (as reported in previous MPRs) and limited analysis based on published Defence information from this year's PDSSs.
- Capability/scope performance (discussed at paragraphs 2.43 to 2.63) — the ANAO analysis includes reporting on the key challenges faced by Defence in the delivery of materiel capability/scope.

2.7 This chapter provides ANAO analysis relating to the three principal dimensions of project performance noted above, drawing on Defence's PDSSs for the 21 Major Projects.

2.8 Figure 3a, below, directly compares cost performance with schedule performance through two metrics, Budget Expended and Time Elapsed.⁹⁸ As noted in paragraph 2.5, seven projects have not included FOC dates in their PDSSs and a Time Elapsed metric is not available for these projects. Figure 3b reports on Budget Expended only for these projects. As a result of the missing data, the ANAO has not prepared analysis of trends across the Major Projects.

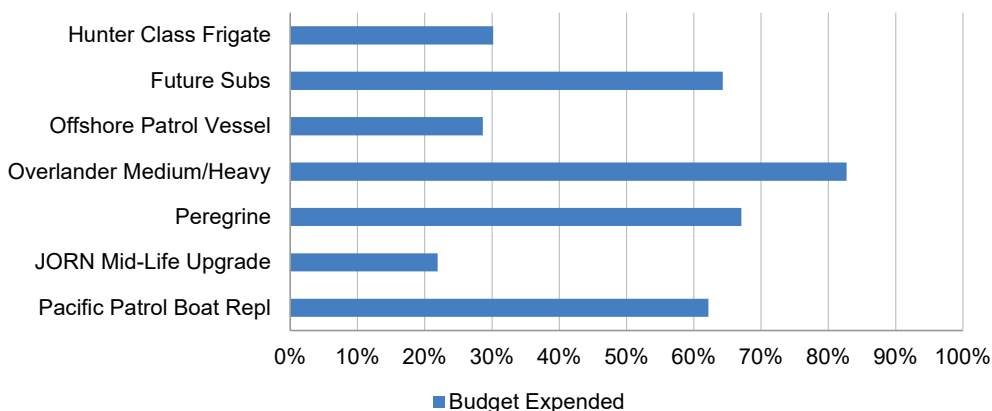
⁹⁸ A project's budgeted cost and schedule data is presented as at 30 June 2022, and may differ from originally approved budgets and schedules.

Figure 3a: Budget Expended and Time Elapsed at 30 June 2022 (for projects that have included FOC forecast date in their PDSS)



Source: ANAO analysis of Defence's 2021–22 PDSSs.

Figure 3b: Budget Expended at 30 June 2022 (for projects that have not included FOC forecast date in their PDSS)



Note 1: As at 30 June 2022, Hunter Class Frigate and Future Subs did not have Final Operational Capability (FOC) milestones approved by government.

Note 2: As at 30 June 2022, Overlander Medium/Heavy and Pacific Patrol Boat Repl did not have FOC forecasts estimated in their PDSSs.

Note 3: Defence advised the ANAO that FOC dates for Offshore Patrol Vessel, Peregrine, and JORN Mid-Life Upgrade are classified and have not been published in the PDSSs by Defence.

Source: ANAO analysis of Defence's 2021–22 PDSSs.

2.9 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. Where Budget Expended leads Time Elapsed, the project budget may be at risk — i.e. expenditure increases may indicate real cost increases. 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.

Cost performance analysis

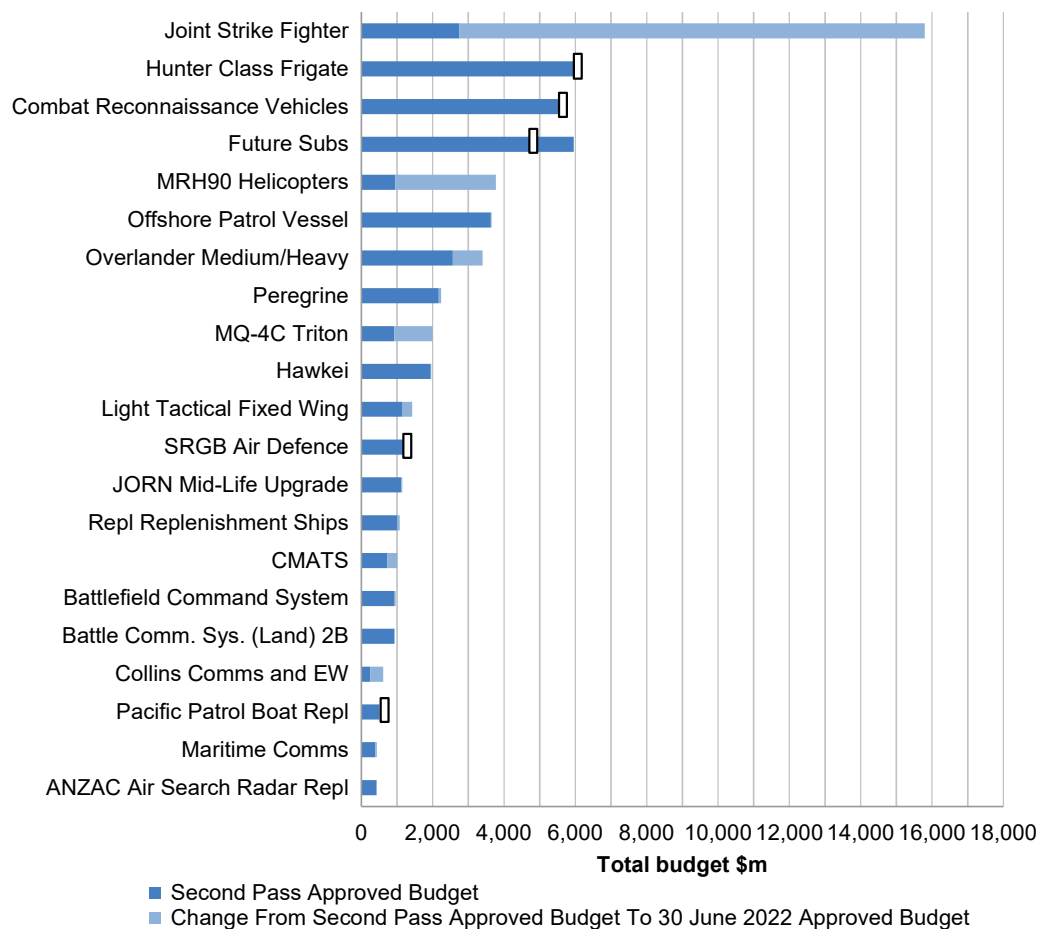
2.10 Cost information was not affected by Defence's decision to not publish certain information in four PDSSs this year.

Approved budget at initial Second Pass Approval and at 30 June 2022

2.11 Figure 4, on p. 47, compares each project's approved budget at initial Second Pass Approval and its approved budget at 30 June 2022. Five projects had variations of \$500 million or more, with the following components:

- Joint Strike Fighter — net increase of \$13.0 billion, comprising \$10.5 billion for 58 additional aircraft in 2013–14, \$2.2 billion for exchange rate variation and \$0.4 billion for price indexation (figures do not add precisely due to rounding).
- Future Subs — net decrease of \$1.1 billion, comprising \$1.0 billion in Real Cost Decreases associated with the termination of the project by government and a \$0.1 billion decrease 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.
- 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.
- MQ-4C Triton — net increase of \$1.1 billion, comprising \$0.3 billion for an additional air vehicle in 2019–20, \$0.8 billion for an additional air vehicle and interim support services for the first seven years in 2020–21, offset by a \$0.1 billion decrease in exchange rate variation (figures do not add precisely due to rounding).

Figure 4: Approved project budgets at initial Second Pass Approval and at 30 June 2022 (\$ million)



Note 1: □ symbol indicates that the budget for the project at 30 June 2022 is less than the original budgeted cost.

Source: ANAO analysis of Defence's 2021–22 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 indexation⁹⁹ and foreign exchange variation.

2.12 The total budget for the 21 MPR projects at 30 June 2022 was \$59.0 billion, a net increase of \$17.5 billion when compared with the approved budget at initial Second Pass Approval of \$41.5 billion. A summary of budget variations is at Table 2, on p. 13, and a more detailed analysis of these budget variations is included in Table 9, on p. 48.

⁹⁹ 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 9: Budget variations post initial Second Pass Approval by variation type as at 30 June 2022

Project	Budget at initial Second Pass Approval (\$m)	Variation type	Explanation of variation	Year/s of variation	Variation amount (\$m)
Joint Strike Fighter	2,751.6 (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
Hunter Class Frigate	6183.9	Budget transfer	Funding transfer between CASG and Security and Estate Group to address funding shortfall with the Naval Capability Infrastructure Subprogram	2019–20	3.3
Future Subs	5952.5	Budget transfer/Real Cost Decrease	Transfer to the Chief Information Officer Group component of SEA1000 Phase 1B for the Defence Secret Environment – International, Public Debt Interest and out-turning, and Real Cost Decreases associated with government decision to cancel the program and transfer funding to other submarine and shipbuilding projects	2019–20 2020–21 2021–22	(1037.1)
MRH90 Helicopters	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 2021–22	2,270.5
Overlander Medium/Heavy	2549.2	Real Cost Increase ³ /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
Peregrine	2166.3	Budgetary adjustment	Minor transfers and corrections	2018–19 2021–22	(0.5)

Project	Budget at initial Second Pass Approval (\$m)	Variation type	Explanation of variation	Year/s of variation	Variation amount (\$m)
MQ-4C Triton	923.6	Scope increase/Budget Transfer/Real cost decrease/Budgetary adjustment	1 additional aircraft at Second Pass Approval – Tranche 2, minor transfers from DSTG offset by a Force Structure Plan amendment, Second Pass Approval Tranche 3 (1 Additional aircraft), Tranche 4 (sustainment funding for first 7 years) and minor budgetary adjustment	2017–18 2018–19 2019–20 2020–21 2021–22	1161.9
Light Tactical Fixed Wing	1156.5	Budget transfer	Transfer to Defence Science and Technology Group	2019–20 2021–22	(3.3)
JORN Mid-Life Upgrade	1117.9	Scope increase/Budget Transfer/Budgetary adjustment	Transfer for replacing Radar 3 facility and early access to funding for early planning and de-risking activities, and transfer of Air Force budget to the project	2020–21 2021–22	28.3
Repl. Replenishment Ships	1004.6	Budget Transfers	Transfer for training and additional expected costs and Contract Change Proposals, offset by transfer of funding to sustainment	2015–16 2018–19 2019–20 2021–22	76.5
CMATS	731.4	Real Cost Increase/Budgetary Adjustment/Budget Transfer	Real Cost Increase and transfer of Air Force budget to the project, offset by minor transfers	2017–18 2021–22	275.5
Collins Comms and EW	247.7 (Stage 1)	Scope increase/Budgetary Adjustment	Additional capability (Stage 2 Second Pass Approval) and minor adjustment	2016–17 2020–21	354.0

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 do not appear in this table. They are: Combat Reconnaissance Vehicles, Offshore Patrol Vessel, Hawkei, SRGB Air Defence, Battlefield Command System, Battle Comm. Sys. (Land) 2B, Pacific Patrol Boat Repl., Maritime Comms and ANZAC Air Search Radar Repl.. For a definition of 'Real Variations' see the 2021–22 MPR Guidelines in **Part 4** of this report.

Note 3: Described by Defence as 'project supplementation'. Refer to Note 3 of Table 2.

Budget performance

2.13 The following figures and tables illustrate the budget performance of the 21 selected projects by way of:

- in-year budget variations by project (see Table 10, below); and
- expenditure forecasting performance against actual expenditure for 2021–22 (see Figure 5 on p. 53).

In-year budget variance analysis

2.14 Table 10, below, sets out the in-year budget variations for each project. Overall, the approved budget for the selected projects as at 30 June 2022 decreased by \$732.6 million (a 1.2 per cent decrease) compared with their approved budget as at 30 June 2021. This was driven by exchange rate variation increases of \$253.3 million and net real decreases of \$955.2 million.

2.15 Exchange rate variations result from a project's exposure to foreign currencies, predominantly the United States dollar and the Euro, and movements in exchange rates against the Australian dollar.¹⁰⁰ Budget adjustments aim to maintain the relative buying power of the project budget. Projects with larger movements in foreign exchange in 2021–22 included the following.

- Joint Strike Fighter — increase of \$164.9 million, or 1.1 per cent.
- Combat Reconnaissance Vehicles — decrease of \$49.1 million, or 0.9 per cent.

2.16 Real Variations¹⁰¹ primarily reflect changes in the scope of projects, transfers between projects for approved equipment/capability and budgetary adjustments such as administrative savings decisions.

Table 10: In-year (2021–22) budget variations by project

Project	Approved Budget 2020–21 \$m	Approved Budget 2021–22 \$m	In-year Exchange Variation \$m	In-year Real Variation \$m	Total Variance \$m	Total Variance (per cent)
Joint Strike Fighter ¹	15,630.7	15,795.7	164.9	0.0	165.0	1.1
Hunter Class Frigate	6046.9	6055.7	8.8	0.0	8.8	0.1
Combat Reconnaissance Vehicles	5655.4	5606.3	(49.1)	0.0	(49.1)	(0.9)
Future Subs	5818.2	4816.2	18.5	(1020.5) ²	(1002.0)	(17.2)
MRH90 Helicopters	3770.0	3770.7	0.7	0.0	0.7	0.0

100 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.

101 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 budget (generally without a change in scope); and 'Real Cost Decreases', where funds have been handed back to the Defence portfolio.

Project	Approved Budget 2020–21 \$m	Approved Budget 2021–22 \$m	In-year Exchange Variation \$m	In-year Real Variation \$m	Total Variance \$m	Total Variance (per cent)
Offshore Patrol Vessel	3669.6	3648.6	(21.0)	0.0	(21.0)	(0.6)
Overlander Medium/Heavy ¹	3397.8	3399.6	1.7	0.0	1.8	0.1
Peregrine ³	2194.3	2233.6	36.9	2.4	39.3	1.8
MQ-4C Triton	1953.4	1999.5	28.4	17.7	46.1	2.4
Hawkei ¹	1952.9	1962.9	10.1	0.0	10.0	0.5
Light Tactical Fixed Wing ¹	1426.1	1421.6	(2.1)	(2.3)	(4.5)	(0.3)
SRGB Air Defence	1201.0	1216.3	15.4	0.0	15.4	1.3
JORN Mid-Life Upgrade	1128.6	1146.2	0.0	17.6	17.6	1.5
Repl Replenishment Ships	1082.6	1077.9	0.2	(4.9)	(4.7)	(0.4)
CMATS ¹	974.5	1010.8	1.4	34.8	36.3	3.7
Battlefield Command System ¹	962.3	966.2	3.8	0.0	3.9	0.4
Battle Comm. Sys. (Land) 2B ¹	942.2	942.9	0.6	0.0	0.7	0.1
Collins Comms and EW	608.7	610.1	1.4	0.0	1.4	0.2
Pacific Patrol Boat Repl	501.4	502.3	0.9	0.0	0.9	0.2
Maritime Comms	434.1	434.8	0.7	0.0	0.7	0.2
ANZAC Air Search Radar Repl ¹	429.1	429.2	0.2	0.0	0.1	0.0
Total	59,779.8	59,047.1	222.4	(955.2)	(732.6)	(1.2)

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

Note 2: The negative Real Variation for Future Subs is described in its PDSS as 'Real Cost Decreases'. This relates to project funds handed back to the Defence portfolio.

Note 3: Peregrine was not reported in the MPR for 2020–21.

Source: ANAO analysis of Defence's 2020–21 and 2021–22 PDSSs, and Defence records in relation to 2020–21 data for Peregrine.

In-year forecast and actual expenditure

2.17 Accurately forecasting and managing budget expenditure is an important element in the management of a portfolio of projects. Figure 5, on p. 53, sets out the expenditure forecasting performance of each project against actual expenditure in 2021–22. In total, actual in-year expenditure for the 21 Major Projects at 30 June 2022 was \$5654.2 million. This is compared against an initial Portfolio Budget Statements (PBS) forecast expenditure of \$6935.0 million, a mid-year

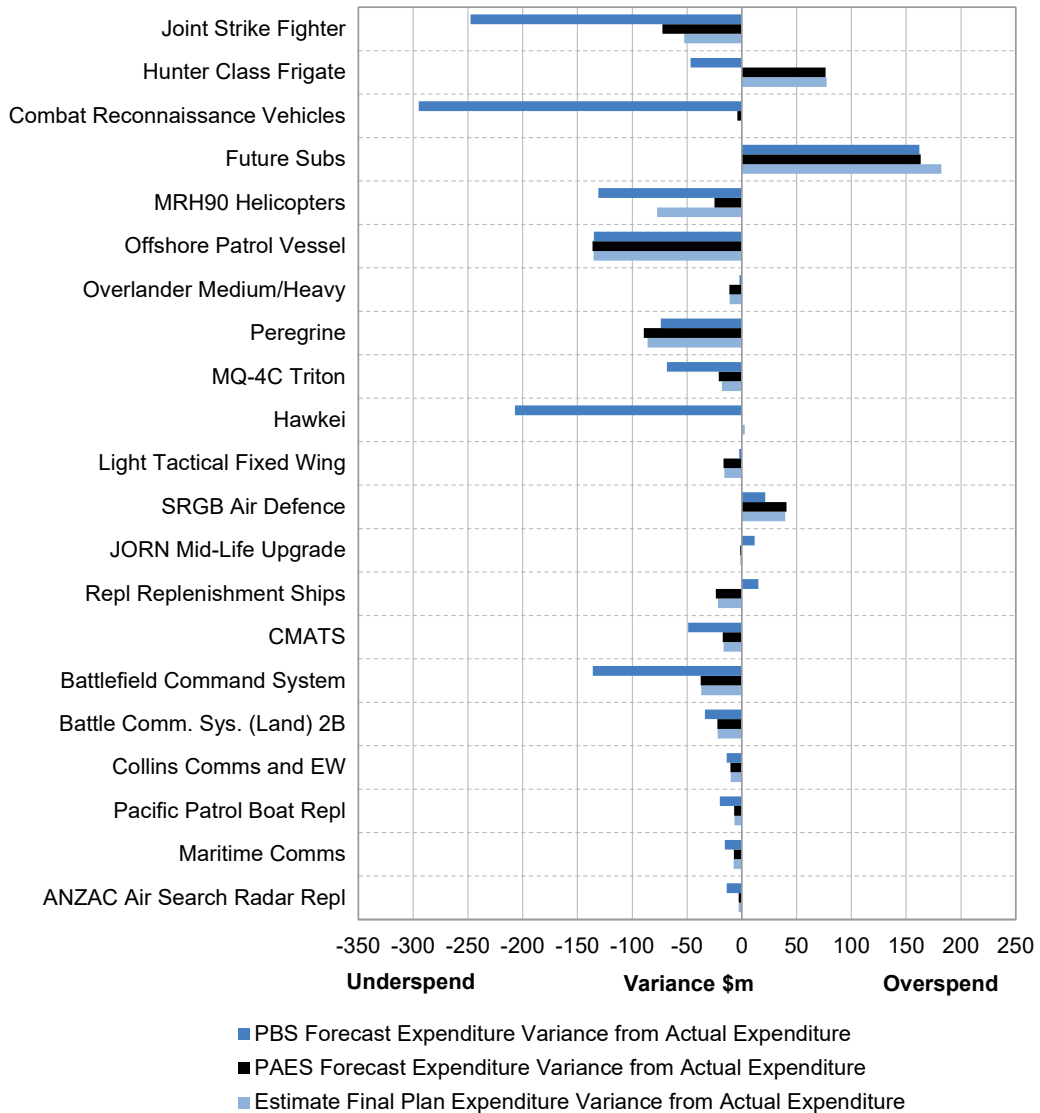
Portfolio Additional Estimates Statements (PAES) forecast of \$5879.9 million, and a final forecast of \$5875.6 million (Final Plan, approved as at June 2022).

2.18 The Defence PDSSs report that the variances illustrated in Figure 5 reflect the following developments.

- Joint Strike Fighter (expenditure of \$1701.7 million compared with \$1949.3 million PBS, \$1774.3 million PAES and \$1754.4 million Final Plan estimates) — the underspend is attributed to the revised aircraft delivery schedule as agreed by the F-35 Joint Program Office due to COVID-19.
- Future Subs (expenditure of \$1143.9 million compared with \$981.8 million PBS, \$980.6 million PAES and \$961.7 million Final Plan estimates) — the overspend is predominantly attributed to the cancellation of the Attack Class submarine program and the resulting settlement payment to Naval Group.¹⁰²
- Combat Reconnaissance Vehicles (expenditure of \$370.1 million compared with \$665.1 million PBS, \$374.1 million PAES and \$370.0 million Final Plan estimates) — the underspend is reported as reflecting later than expected achievement of various milestones in the prime contract.
- MRH90 Helicopters (expenditure of \$35.8 million compared with \$166.7 million PBS, \$60.7m PAES and \$113.2 million Final Plan) — the underspend is due to a delay to the delivery schedule and achievement of prime contract milestones, including the Final Acceptance milestone, and other capability deliverables.
- Offshore Patrol Vessel (expenditure of \$231.4 million compared with \$366.5 million PBS, \$367.8 million PAES and \$366.8 million Final Plan estimates) — the underspend is due to the shift in deliverables including the support system and delay in current build performance. Other causes include shift in milestone deliverables against Offshore Patrol Vessel transition, ADF seaboat program, training systems and government furnished equipment.
- Hawkei (expenditure of \$341.1 million compared with \$548.1 million PBS, \$341.1 million PAES and \$338.5 million Final Plan) — the underspend is primarily due to schedule delays caused by problems with the vehicle braking system.
- Battlefield Command System (expenditure of \$19.8 million compared with \$155.8 million PBS, \$57.3 million PAES and \$57.0 million Final Plan estimates) — the underspend is due to delays to the Battle Management System (BMS) and Tactical Communications Network (TCN) prime contracts.

102 During the 2021–22 financial statement audit of Defence, the ANAO observed that a contract termination payment of \$832 million was made to Naval Group. Further discussion of the payment, its appropriation source and related matters can be found in Auditor-General Report No.8 2022–23 Financial Statements Audit, *Audits of the Financial Statements of Australian Government Entities for the Period Ended 30 June 2022*, paragraphs 7 to 8 and paragraphs 4.3.41 to 4.3.51. Available from: <https://www.anao.gov.au/work/financial-statement-audit/audits-the-financial-statements-australian-government-entities-the-period-ended-30-june-2022>

Figure 5: In-year (2021–22) projects' forecast expenditure performance compared with actual expenditure (\$m)



Sources: ANAO analysis of Defence's 2021–22 PDSSs and Defence Portfolio Budget Statements.

Schedule performance analysis

2.19 As discussed in paragraph 2.5, the combined effect of Defence's non-publication of FOC forecast dates for three of the Major Projects¹⁰³, and the fact that FOC dates have not been settled for four Major Projects¹⁰⁴, is that seven (33 per cent) of the 21 PDSSs do not include FOC dates this year. Any aggregated analysis of the remaining 14 Major Projects (which have included FOC dates in their PDSS) would therefore be incomplete. The inclusion of incomplete schedule performance analysis would misinform users of the MPR, as the 14 projects that have included FOC dates in their PDSS are not representative of all the Major Projects.

2.20 Historical Defence data continues to show that schedule performance is a key issue in delivering and sustaining Defence equipment and capability. 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.¹⁰⁵

Schedule slippage and acquisition category by approval date

2.21 The ANAO compared historical project slippage against the Acquisition Category (ACAT), as these categories are a general indicator of the difficulty associated with the procurement process. Prima facie, the more strategic, complex and technical in nature a project is, the greater the schedule risk and therefore the greater the need for more robust planning by Defence.^{106,107}

2.22 Defence grades projects into one of four (ACAT) acquisition categories.¹⁰⁸

- ACAT I — major capital equipment acquisitions that are normally the Australian Defence Force's (ADF) 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 — 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 — major or minor capital equipment acquisitions that have a moderate strategic significance to the ADF. They are characterised by the application of traditional project

103 Defence has decided that FOC forecast dates are not for publication in the PDSS for Offshore Patrol Vessel, Peregrine, and JORN Mid-Life Upgrade. Defence has included FOC information in the PDSS for SRGB Air Defence (for this project, the not for publication information related to earlier milestones).

104 The Hunter Class Frigate and Future Subs projects did not have FOC milestones approved by government at 30 June 2022. The Overlander Medium/Heavy and Pacific Patrol Boat Repl projects expect to experience delays to FOC, but were unable to prepare specific forecast dates for FOC as at 30 June 2022.

105 Extensions to planned withdrawal dates may involve additional costs relating to the maintenance and servicing of equipment.

106 The *Defence Procurement Review 2003*, also known as the Kinnaid 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. See M Kinnaid, *Defence Procurement Review 2003*, Department of Defence, Canberra, 2003. The Kinnaid Review was examined in Auditor-General Report No.6 2013–14 *Capability Development Reform*.

107 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. See D Peever, *First Principles Review: Creating One Defence*, Department of Defence, Canberra, 2015, p.34 and p.92. Defence's implementation of the First Principles Review was examined in Auditor-General Report No.34 2017–18 *Defence's Implementation of the First Principles Review*.

108 These Defence definitions were included in Auditor-General Report No.19 2020–21 *2019–20 Major Projects Report*, at p.104.

and schedule management techniques and moderate levels of technical difficulty, operating, support arrangements and commercial arrangements.

- ACAT IV — 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.

ANAO analysis based on acquisition category level

2.23 Table 11, below, provides information on the ACAT level of all 57 Major Projects included in the MPR since its inception, and the year of approval (generally Second Pass) for each Major Project. In summary:

- 14 projects (25 per cent) were ACAT I.
- 30 projects (53 per cent) were ACAT II.
- 12 projects (21 per cent) were ACAT III.
- 1 project (2 per cent) was ACAT IV.

Table 11: Project year of approval and acquisition category

Project	Year of Approval	Acquisition Category (ACAT)
HF Modernisation	1996	ACAT II
Hornet Upgrade	1998	ACAT II
Bushmaster Vehicles	1998	ACAT III
ARH Tiger Helicopters	1999	ACAT II
FFG Upgrade	1999	ACAT II
Collins R&S	2000	ACAT III
Wedgetail	2000	ACAT I
Hw Torpedo	2001	ACAT III
Collins RCS	2002	ACAT IV
Armadales	2002	ACAT III
Air to Air Refuel	2003	ACAT II
Hornet Refurb	2003	ACAT II
ANZAC ASMD 2A	2003	ACAT II
SM-2 Missile	2004	ACAT III
MRH90 Helicopters	2004	ACAT I
ANZAC ASMD 2B	2005	ACAT I
Stand Off Weapon	2005	ACAT II
C-17 Heavy Airlift	2006	ACAT III
Super Hornet	2007	ACAT II

Project	Year of Approval	Acquisition Category (ACAT)
AWD Ships	2007	ACAT I
LHD Ships	2007	ACAT I
Overlander Light	2007	ACAT II
Next Gen Satellite	2007	ACAT II
UHF SATCOM	2009	ACAT II
155mm Howitzer	2009	ACAT III
Joint Strike Fighter	2009	ACAT I
Battle Comm. Sys.	2009	ACAT II
Additional Chinook	2010	ACAT III
C-RAM	2010	ACAT III
MH-60R Seahawk	2011	ACAT II
LHD Landing Craft	2011	ACAT III
Battle Comm. Sys. (Land) 2A	2011	ACAT III
Light Tactical Fixed Wing	2012	ACAT II
Growler	2013	ACAT II
Maritime Comms	2013	ACAT II
Overlander Medium/Heavy	2013	ACAT I
BMS	2013	ACAT II
P-8A Poseidon	2014	ACAT II
HATS	2014	ACAT II
CMATS	2014	ACAT I
Battle Comm. Sys. (Land) 2B	2015	ACAT I
Collins Comms and EW	2015	ACAT II
Additional MRTT	2015	ACAT II
Hawkei	2015	ACAT I
Repl Replenishment Ships	2016	ACAT II
Pacific Patrol Boat Repl	2016	ACAT II
Night Fighting Equipment Repl	2016	ACAT III
ANZAC Air Search Radar Repl	2017	ACAT II
Battlefield Command System	2017	ACAT I
Offshore Patrol Vessel	2017	ACAT II
JORN Mid-Life Upgrade	2017	ACAT II
Peregrine	2018	ACAT II

ANAO Review and Analysis

Auditor-General Report No.12 2022–23
2021–22 Major Projects Report

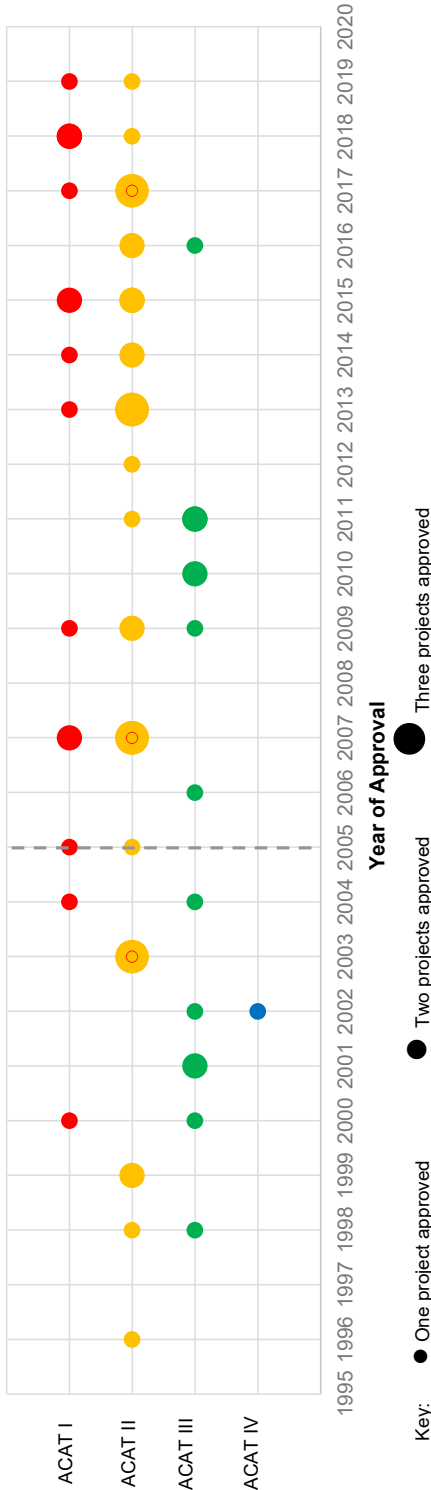
Project	Year of Approval	Acquisition Category (ACAT)
Combat Reconnaissance Vehicles	2018	ACAT I
Hunter Class Frigate	2018	ACAT I
MQ-4C Triton	2018	ACAT II
Future Subs	2019	ACAT I
SRGB Air Defence	2019	ACAT II

2.24 Figure 6, on p. 58, illustrates the proportion of ACAT I to IV projects over time. Figure 6 indicates a continuing trend towards the approval of more complex projects at the ACAT I and II levels since 2013.

2.25 Of the 20 Major Projects which have received government approval since 2013:

- 7 projects (35 per cent) were ACAT I.
- 12 projects (60 per cent) were ACAT II.
- 1 project (5 per cent) was ACAT III.
- no projects were ACAT IV.

Figure 6: Categorisation (ACAT) type and year of approval



Key: ● One project approved ● Two projects approved ● Three projects approved

Note 1: Projects to the left of the dotted line were approved prior to implementation of the Kinnaird reforms in 2005. Projects to the right were approved following the reforms being implemented. As discussed in footnote 106, the 2003 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.

Schedule slippage by acquisition category (historical data)

2.26 As discussed in paragraphs 2.5, this year the ANAO was not in a position to publish a complete analysis of schedule performance, as in the past. As a result, this section focuses on historical information.

2.27 Figure 7a, on p. 61, illustrates total schedule slippage¹⁰⁹ since Second Pass Approval for the 14 Major Projects which have included an FOC date in their PDSS this year (2021–22).¹¹⁰ Figure 7b, on p. 62, includes total schedule slippage up to 2020–21 for the seven projects that have not reported an FOC date this year (2021–22). Figures 7a and 7b also depict the acquisition category and place projects in order of government approval.

2.28 Figures 8a and 8b (on pp. 63–64) illustrate the total schedule slippage for the 34 projects that have exited the MPR.¹¹¹ Twenty-one post-Kinnaird¹¹² projects (Figure 8a) and 13 pre-Kinnaird projects (Figure 8b) have exited the MPR. In summary:

- Total slippage of the 21 post-Kinnaird projects is 40.5 years.
 - Two were ACAT I with an average slippage of 37 months.
 - Twelve were ACAT II with an average slippage of 18 months.
 - Seven were ACAT III with an average slippage of 12 months.
- Total slippage of the 13 pre-Kinnaird projects is 79.6 years.
 - One was ACAT I with slippage of 77 months.¹¹³
 - Six were ACAT II with an average slippage of 89 months.
 - Five were ACAT III with an average slippage of 47 months.
 - One was ACAT IV with slippage of 107 months.¹¹⁴

2.29 Figures 8a and 8b indicate that the inclusion of less complex acquisitions contributed, *prima facie*, to a reduction in schedule slippage in the Major Projects portfolio.

- The less complex ACAT III projects tend to report lower slippage than the more complex ACAT I and ACAT II projects.
- Where ACAT III projects have experienced slippage, or for the significant slippage to the one ACAT IV project in the MPR, this tends to be related to the schedule in which these projects can access platforms for installation, rather than inherent risk in the project itself.

2.30 Decisions on whether to undertake complex developmental projects should be considered on a risk basis. In this context, the consideration of risk should be holistic and weigh up the level of capability to be acquired while having regard to Defence's past experience in managing the delivery of developmental projects.

109 Slippage refers to a delay in the current forecast date compared with the original government approved date of Final Operational Capability (FOC).

110 Hunter Class Frigate and Future Subs are excluded from this analysis as they did not have FOC dates approved by government at 30 June 2022.

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

112 The 2003 Kinnaird Review is discussed in footnote 106. See also Note 1, Figure 6 on p. 58.

113 Wedgetail project.

114 Collins RCS project.

2.31 Figures 8a and 8b also 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.

2.32 Figure 7a shows that three complex (ACAT I or ACAT II) projects with significant development or design activities — Combat Reconnaissance Vehicles, 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 materiel release milestones.

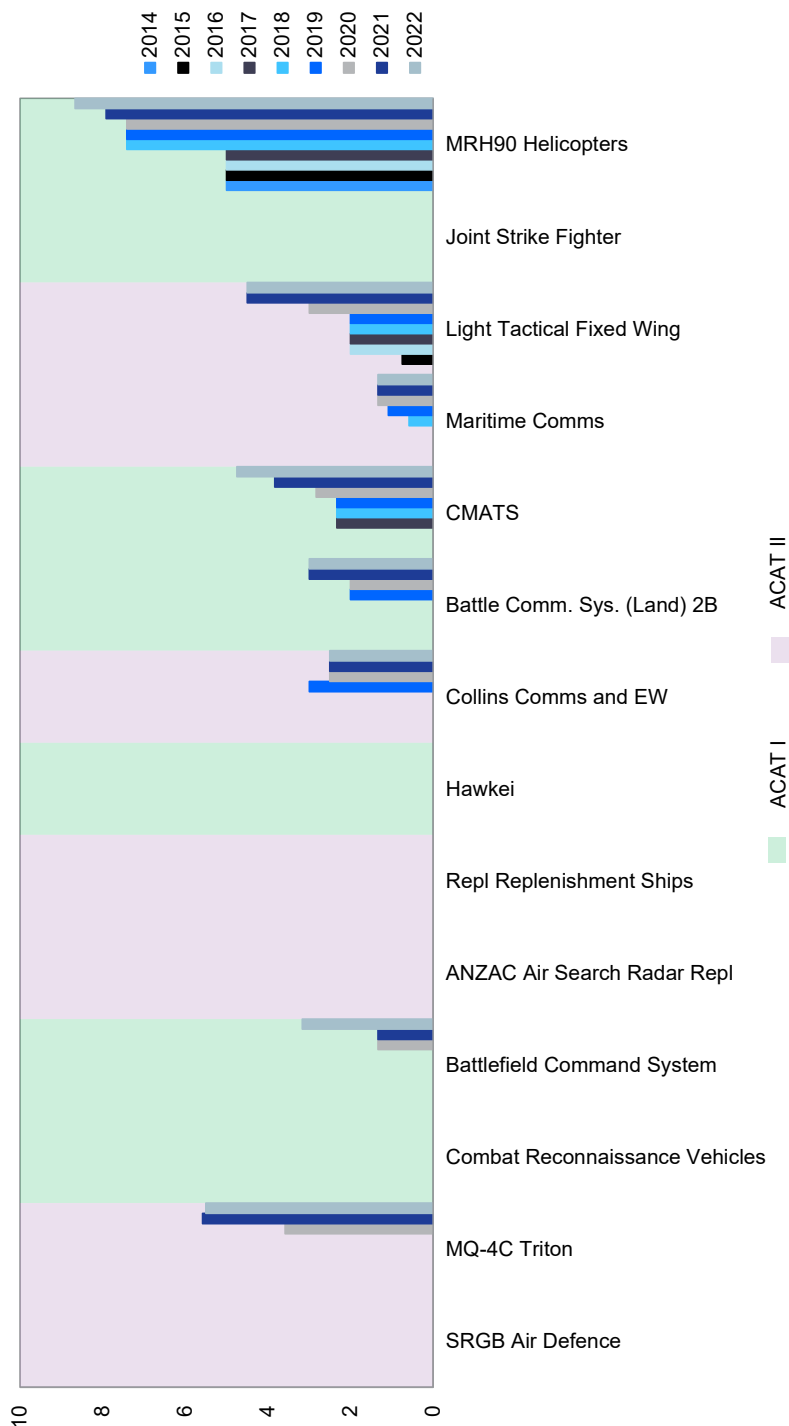
- Combat Reconnaissance Vehicles has experienced persistent slippage to the design milestones for its more complex Block II vehicles (compared to the Block I vehicles with relatively minimal design changes). The Detailed Design Reviews for four of the vehicle variants have slipped by between 24 and 30 months due to a combination of inherent design changes and challenges, as well as delays attributed to the COVID-19 pandemic.
- Hawkei experienced 24 months slippage to the Production Reliability Acceptance Test, leading to 17 months slippage to Initial Materiel Release (IMR) — which was declared in May 2020 with four caveats, which have now been resolved.¹¹⁵ Hawkei experienced an additional six-month slippage to Initial Operational Capability (IOC) pending resolution of a vehicle safety incident. Final Materiel Release (FMR) has slipped by 12 months, due to vehicle integration dependencies, the contractor's Full Rate Production capacity, the requirement to uplift early production vehicles to the contracted product baseline, the vehicle braking safety issue, and COVID-19 global supply chain challenges.
- ANZAC Air Search Radar Repl experienced a total of 18 months of slippage to the original definition of IMR due to delays in receiving Identification Friend or Foe certification, which was impacted by COVID-19 travel restrictions. Early project milestones have also been delayed by manufacturing delays, delays in the contractor obtaining Environmental Qualification for equipment, limited numbers of test facilities and longer than anticipated test durations.

2.33 In contrast, a recent project with less design activity, Repl. Replenishment Ships, has adhered more closely to the design and materiel release schedule with only minor variances, which are attributed to effects of the COVID-19 pandemic rather than inherent design issues or challenges.

2.34 The comparison of causes of slippage set out above indicates that developmental projects carry a higher level of technical risk.

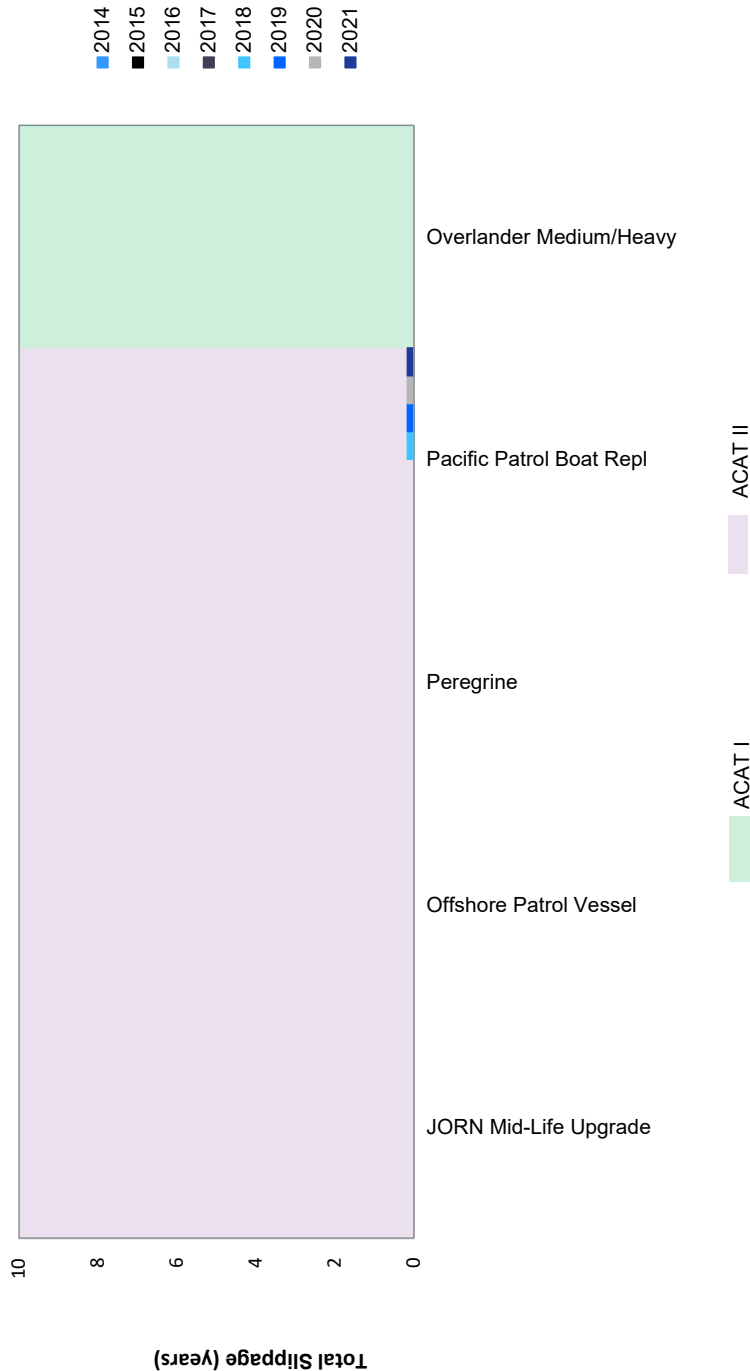
115 See the Hawkei PDSS in **Part 3** of this report.

Figure 7a: Current Major Projects (which have included an FOC date in their PDSS) — total slippage post Second Pass approval and ACAT rating by approval date (years)



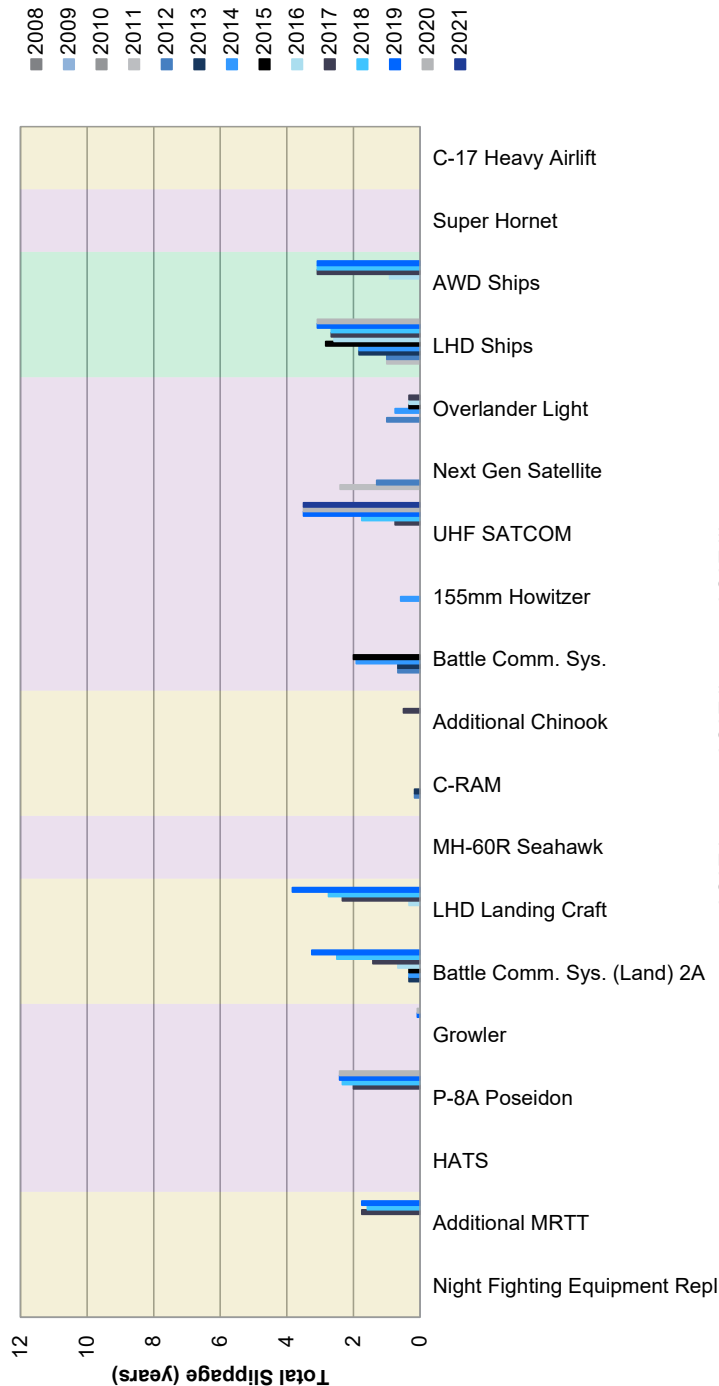
Note 1: The order of the projects is from latest to earliest approved. All project slippage relates to FOC dates.
Source: ANAO analysis of Defence PDSSs in Major Projects Reports.

Figure 7b: Current Major Projects (which have not included an FOC date in their PDSS) — total slippage post Second Pass approval and ACAT rating by approval date (years) to 2020–21



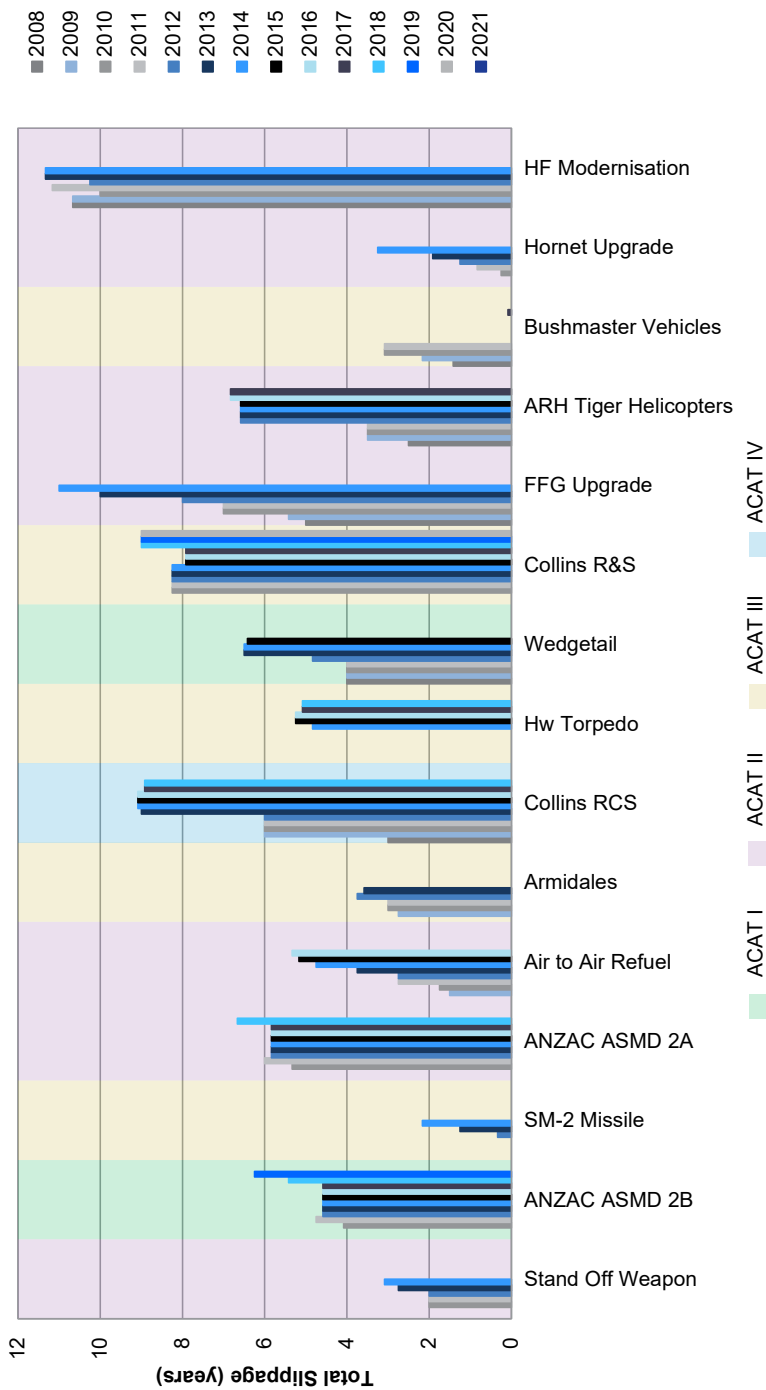
Note 1: The order of the projects is from latest to earliest approved. All project slippage relates to FOC dates.
Note 2: Defence did not publish FOC forecast dates for Offshore Patrol Vessel, Peregrine, and JORN Mid-Life Upgrade in 2021–22.
Note 3: The FOC forecast dates for Overlander Medium/Heavy and Pacific Patrol Boat Repl. were unknown at 30 June 2022.
Note 4: Hunter Class Frigate and Future Subs are excluded from this analysis as their FOC milestones were yet to be approved by Government at 30 June 2022.

Figure 8a: Exited Major Projects (approved post-2005) — total slippage post Second Pass approval and ACAT rating 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: These projects were approved following implementation of the Kinnaid reforms in 2005. The 2003 Kinnaid Review is discussed in footnote 106.
Source: ANAO analysis of the Defence PDSSs in Major Projects Reports.

Figure 8b: Exited Major Projects (approved pre-2005) — total slippage post Second Pass approval and ACAT rating 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: These projects were approved prior to the Kinnaird reforms being implemented. The 2003 Kinnaird Review is discussed in footnote 106.
Source: ANAO analysis of the Defence PDSSs in Major Projects Reports.

Schedule performance

2.35 In this section the ANAO has previously reported on:

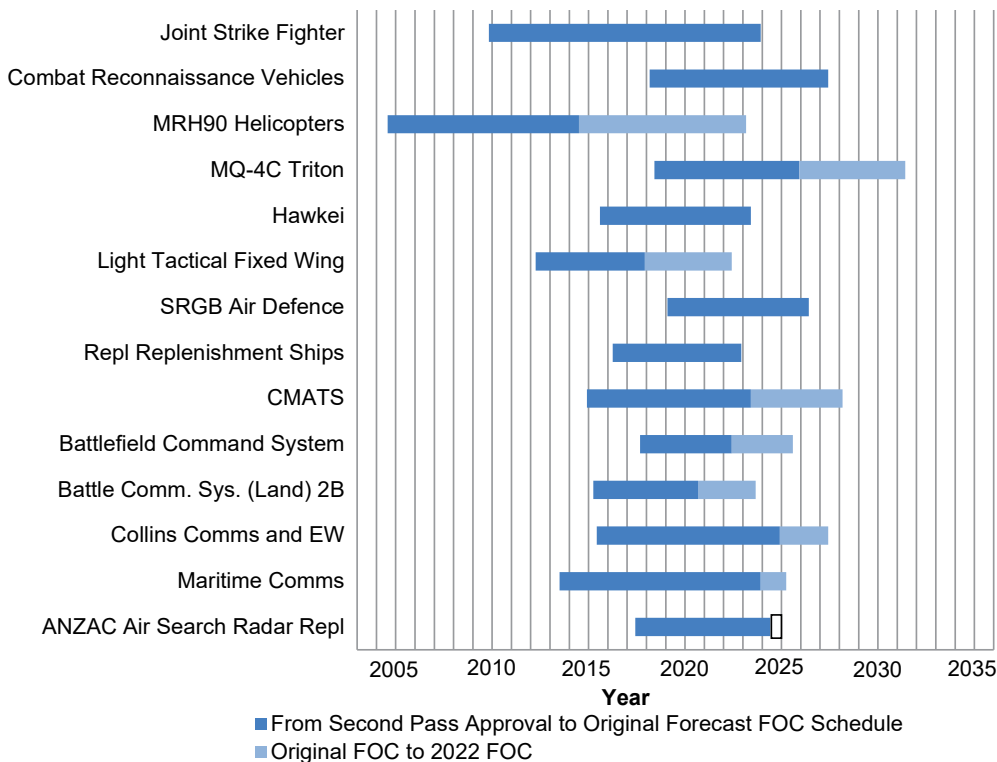
- the original and in-year forecasts for achieving Final Operational Capability (FOC);
- in-year schedule changes to achieving FOC; and
- total schedule slippage across the Major Projects.

2.36 As discussed in paragraph 2.5, this information is not reported this year (2021–22) due to the non-publication of FOC forecast information by Defence in three PDSSs and the fact that four PDSSs did not have settled FOC forecast dates at 30 June 2022.

Original and in-year Final Operational Capability (FOC) forecasts

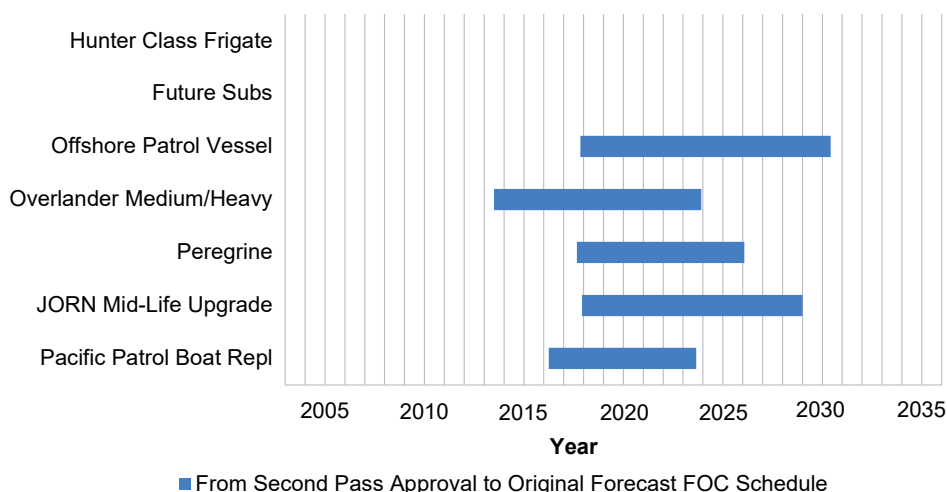
2.37 Figure 9a, below, presents information on the selected Major Projects’ original and 30 June 2022 forecasts for achieving FOC, where 30 June 2022 FOC forecasts are reported. Seven projects did not disclose FOC dates for this year’s MPR. These projects’ original forecasts are shown in Figure 9b.

Figure 9a: Original and 30 June 2022 Final Operational Capability (FOC) forecasts (for projects which have included FOC forecast dates in their PDSS)¹



Note 1: □ symbol indicates that the schedule for the project at 30 June 2022 is earlier than originally planned.
Source: ANAO analysis of the 2021–22 PDSSs.

Figure 9b: Original Final Operational Capability (FOC) forecasts (for projects which have not included FOC forecast dates in their PDSS)¹



Note 1: As at 30 June 2022, Hunter Class Frigates and Future Subs did not have FOC milestones approved by Government.

Source: ANAO analysis of the 2021–22 PDSSs.

2.38 The ANAO has previously observed, in respect to schedule slippage, the importance of initial assessments of project complexity. Experience indicates that a key factor is the overall complexity inherent in the project.¹¹⁶ One project, MRH90 Helicopters, was originally classified by Defence as ACAT II. The project was reclassified by Defence to ACAT I (i.e. more complex) subsequent to Second Pass approval, and a Defence Independent Assurance Review of this project in December 2020 noted that '[MRH-90] was a developmental platform'. This project has continued to experience schedule slippage, with an additional nine months of slippage in 2021–22.¹¹⁷

In-year schedule performance

2.39 As discussed in paragraph 2.5, due to the non-inclusion of key schedule information by Defence in a number of PDSSs, this year the ANAO was not in a position to publish a complete analysis of schedule performance, as in the past. Information regarding schedule performance during 2021–22 is not included in the ANAO's analysis for this MPR.¹¹⁸

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

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

Similarly, government approval for acquisition of the Tiger Armed Reconnaissance Helicopter was on the basis that it was a low-risk off-the-shelf platform. The ANAO conducted a performance audit of the Tiger acquisition in 2005–06 and found that Tiger was more developmental than off-the-shelf and this heightened exposure to schedule, cost and capability risks, both for the acquisition of the aircraft and its sustainment. See: Auditor-General Report No.11 2016–17 *Tiger—Army's Armed Reconnaissance Helicopter*, paragraph 2; and Auditor-General Report No.36 2005–06 *Management of the Tiger Armed Reconnaissance Helicopter Project—AIR 87*. AIR 87 Phase 2 (Armed Reconnaissance Helicopter) exited the MPR in 2017–18.

118 This analysis (for 2020–21) was found at pp. 66–68 of last year's MPR, available at: <https://www.anao.gov.au/work/major-projects-report/2020-21-major-projects-report>.

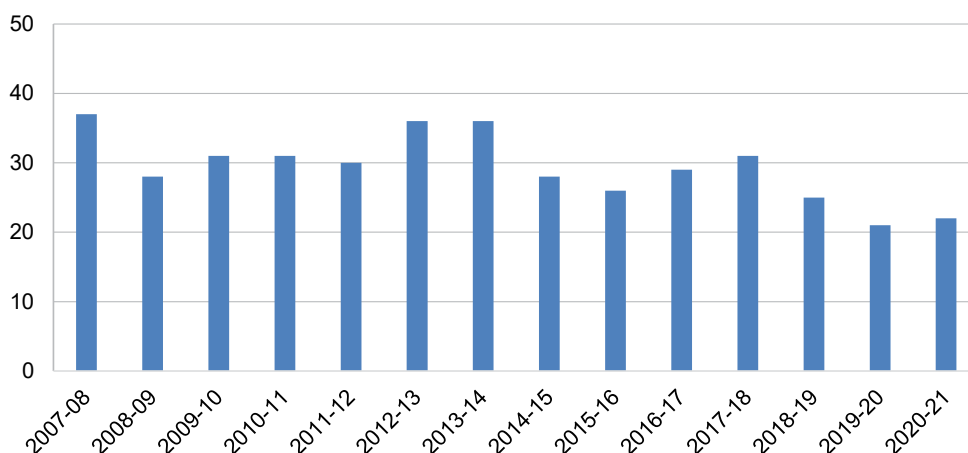
2.40 Project delays may indicate unanticipated problems with project progress or optimism in previous forecasting, regardless of whether the delay makes the project later than originally approved by government. All delays should be monitored to ensure that a project remains on track and any issues can be managed.

Longitudinal analysis of slippage

2.41 Figures 10, below, and 11, on p. 68, show the historical percentage change in FOC forecast, compared with the FOC date at Second Pass Approval, for all MPR projects. Figure 10 shows the total percentage change in FOC forecast since Second Pass Approval. Figure 11 shows the in-year change in FOC forecast.

2.42 As discussed in paragraph 2.5, data for this year (2021–22) is not included in Figures 10 and 11, as aggregated analysis covering only 14 of the 21 Major Projects (i.e. those which have included FOC forecast dates in their PDSSs) would be incomplete and would misinform users of the MPR.

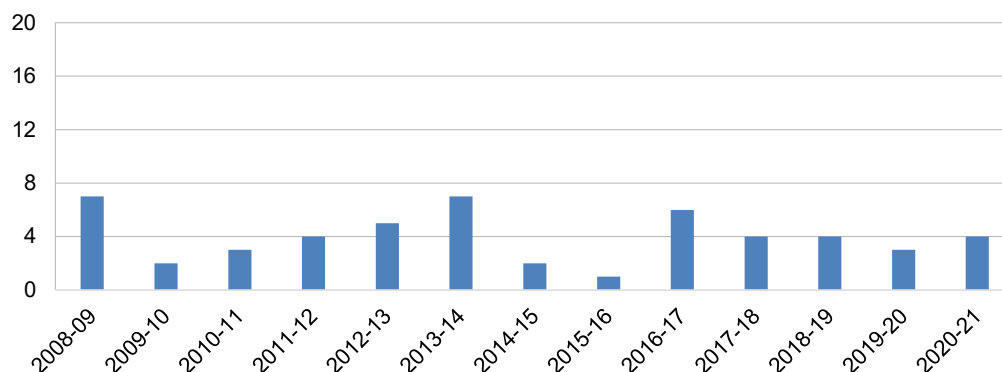
Figure 10: Total percentage change in FOC forecast across all MPR projects, by reporting year (excluding 2021–22) ¹



Note 1: Data for 2021–22 is not included, as the ANAO was unable to publish a complete analysis of schedule slippage due to the combined effect of: Defence's non-publication of FOC forecast dates in three PDSSs; and the fact that four projects did not have settled FOC dates at 30 June 2022.

Source: ANAO analysis of MPRs.

Figure 11: In-year percentage change in FOC forecast across all MPR projects, by reporting year (excluding 2021–22)¹



Note 1: Data for 2021–22 was not included, as the ANAO was unable to publish a complete analysis of schedule slippage due to the combined effect of: Defence non-publication of FOC forecast dates in three PDSSs; and the fact that four projects did not have settled FOC dates at 30 June 2022.

Note 2: There is no data for 2007–08. As this was the first year of the MPR, there was no prior year to compare with in identifying in-year FOC forecast change.

Source: ANAO analysis of MPRs.

Capability/scope performance analysis

2.43 Capability/scope information was not affected by Defence’s decision to not publish certain information in four PDSSs this year.

2.44 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.¹¹⁹ 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 — and undertaking designated operations.¹²⁰

2.45 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.

Capability/scope delivery

2.46 The Defence PDSSs report that 11 projects in this year’s MPR will deliver all their key capability/scope requirements without elevated levels of risk to the achievement of requirements.

2.47 Defence’s assessment indicates that some elements of the capability/scope required may be ‘under threat’, but the risk is assessed as ‘manageable’.

¹¹⁹ Department of Defence, *Defence Capability Manual*, Defence, Canberra, 2021, p. A-2.

¹²⁰ *ibid.*, pp. A-5–6.

2.48 The 10 project offices experiencing challenges with expected capability/scope delivery (2020–21: six) were: Joint Strike Fighter, Hunter Class Frigate, Future Subs, MRH90 Helicopters, Offshore Patrol Vessel, Overlander Medium/Heavy, Hawkei, Battlefield Command System, Battle Comms. Sys. Land (2B), and Pacific Patrol Boat Repl.

- Four of these projects, Future Subs, MRH90 Helicopters, Hawkei and Battlefield Command System, report that they are unable to deliver all the required capability/scope.

2.49 Table 12, below, summarises the issues reported by Defence in its PDSSs as impacting the achievement of the expected capability/scope.

Table 12: Issues impacting expected materiel capability/scope delivery performance in 2021–22

Project	Amber ¹ %	Red ² %	Explanation in PDSS	Delays or impacts on milestone achievement
Joint Strike Fighter	1	0	AIR6000 Phase 2A/2B has options to deliver Maritime Strike capabilities in a timeframe closely following that of the United States Navy.	None identified in PDSS.
Hunter Class Frigate ³	* ⁴	N/A	The Project is currently managing a variety of technical risks related to the achievement of Navy materiel capability requirements. These risks are primarily related to the integration of the combat system into the UK Type 26 reference ship design, and constraints arising from design margin and fundamental naval architecture limits being reached.	Ship 1 build commencement forecast date has been delayed by 18 months to June 2024.
Future Subs ³	N/A	* ⁴	The Australian Government cancelled the Attack Class Submarine Program on 16 September 2021.	The Australian government will pursue acquisition of nuclear-powered submarines through AUKUS.
MRH90 Helicopters	45	35	Supportability and capability assurance costs to life-of-type present future capability risk. Rate of Effort achievement continues to impact capability outcomes. The forecast cost of ownership out to the current life-of-type is unacceptably high.	The capability outcomes required of the MRH system at FOC are unlikely to be fully met. As a consequence, Army is developing an option for rapid replacement under LAND4507-1.

Project	Amber ¹ %	Red ² %	Explanation in PDSS	Delays or impacts on milestone achievement
Offshore Patrol Vessel	0.4	0	The primary weapon system of the OPV to conduct Constabulary Operations is the seaboots. The other weapon systems onboard are the main gun and two 50 calibre machine guns. A temporary change to the main gun size has had an operational impact.	The interim main gun for the Arafura OPVs will be the existing Navy, 25mm Typhoon Mod 0 from Armidale Class Patrol Boats until a replacement gun is identified, which will account for a revised threat assessment and a requirement for commonality.
Overlander Medium/Heavy	11	0	IOC was achieved with caveats due to delay in achievement of air certification. Achieving air certification by FOC remains a medium risk post mitigation.	The impact on the current forecasted dates for FMR and FOC is being assessed in line with the ongoing work required to achieve air certification.
Hawkei	0	0.2	In October 2021, Government approved the reduction to project scope of two Hawkei vehicles to support an export opportunity.	The reduction in the total quantity of vehicles to be delivered to the Commonwealth from 1100 to 1098 will be formalised through a change in the acquisition contract.
Battlefield Command System	36	16	<p>There are acceptance issues associated with the Battle Management System (BMS). Following a Demonstration of BMS Release 1.1 performance, the Commonwealth and Elbit were unable to agree whether or not the issues were resolved by the Demonstration.</p> <p>Based on direction from the Army program sponsor, the project does not expect to deliver the WINBMS capability within the M1A1 and the Hawkei GSV node. The project will also now only deliver 19 PMV-M Gate-Way vehicles.</p>	<p>Acceptance of BMS Release 1.1 has been delayed by 31 months.</p> <p>The remaining 38 PMV-M Gate-Way vehicles originally within the Project's scope will now be delivered by the Land 4111 Project (this approach is expected to be confirmed following Government consideration).</p>
Battle Comm. Sys. (Land) 2B	2.5	0	The Project is managing schedule risks associated with the Terrestrial Range Extension System (TRES) scope of work.	The Commonwealth has entered into contract with Boeing Defence Australia for an activity to risk reduce the aerial component of TRES.

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Project	Amber ¹ %	Red ² %	Explanation in PDSS	Delays or impacts on milestone achievement
				This activity will inform the duration of a subsequent equipment development and procurement process.
Pacific Patrol Boat Repl	95	0	15 ships have been delivered and are currently operating in a very limited capacity. 6 additional ships are potentially facing delays due to the imperative to rectify defects and enhance safety.	The emergence of a latent defect and imperative to increase the performance of safety systems are expected to delay the delivery of Boat 16.

Note 1: Amber indicates that the capability/scope is under threat but considered manageable.

Note 2: Red indicates that the capability/scope is unlikely to be met.

Note 3: These projects do not report quantified capability/scope information as they did not have approved materiel capability/scope to be delivered at 30 June 2022; these projects report narratives describing their current project activities.

Note 4: The relevant PDSS does not report a percentage of capability/scope at risk. However commentary on risk is provided by Defence in the PDSS.

Source: Defence Project Data Summary Sheets.

Capability reporting

2.50 Since the 2009–10 MPR, capability reporting¹²¹ has been based on Defence’s prediction of the final capability that would be achieved on the basis of deliverables and/or activities completed.

2.51 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.

2.52 As the ANAO has previously noted, this data involves making certain assumptions in forecasting achievements and is therefore subjective in approach.¹²²

- For example, the Light Tactical Fixed Wing 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 United States Government divesting from the program, with Australia no longer able to rely on United States Air Force processes. These risks have continued to affect the project, with a mature training system and a number of baseline capability requirements not expected to be delivered until after FOC. These capability issues were reported in Section 4.1 of the PDSS (Measures of Materiel Capability Delivery Performance) for the first time in 2018–19, indicating that the earlier level of confidence in the project’s ability to achieve the required capability may have been overly optimistic.

¹²¹ As per the 2021–22 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 2021–22 MPR Guidelines also note that the MPR may report on associated sustainment activities (where applicable).

¹²² Auditor-General Report No.17 2010–11 *2009–10 Major Projects Report*, p. 35.

- In 2020, the Australian Government approved an operational capability ‘pivot’ for this project, from ‘Battlefield Airlifter’ to ‘Light Tactical Fixed Wing’. This involved re-scoping and re-scheduling activities, resulting in an updated Materiel Acquisition Agreement (MAA). The revised FOC was achieved in June 2022. Notwithstanding the ‘pivot’ for this project, which represents a substantive change in capability delivery, the Materiel Capability Delivery Performance in the 2020–21 PDSS included a three per cent reduction in capability delivery.

2.53 Defence does not have a standard methodology for the assessment of capability delivery performance. A combination of methods is used, including an assessment based on the proportion of overall cost for each milestone, or the percentage the milestone represents with respect to the overall capability. Defence’s approach to assessment does not include weighting of the elements of capability, which affects the effectiveness of its reporting.

2.54 Over time, the JCPAA has sought the use of a more robust measure of capability performance.¹²³

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.’¹²⁴

2.56 Defence made a submission to the JCPAA in March 2018 regarding the JCPAA 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
- 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.¹²⁵

123 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; and 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.

124 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.

125 Department of Defence, Submission 1 to the Joint Committee of Public Accounts and Audit, Inquiry into the 2016–17 Defence Major Projects Report, pp. 1–2.

2.57 In September 2018, the JCPAA noted that ‘Materiel Capability Delivery Performance charts continue to be ambiguous in displaying actual current capability levels.’¹²⁶

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 of Defence’s Capability Acquisition and Sustainment Group (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.¹²⁷

2.60 As reported in last year’s MPR, as at November 2021 Defence had not updated the method of capability forecasting in the MPR.

Transfers of project scope

2.61 As part of Second Pass Approval, government directs Defence projects to deliver certain defined capabilities within the scope of the project. During a project, Defence may change the scope to be delivered, which can be approved through a revised government approval. A project’s scope may be expanded or reduced and may include a budget increase or decrease for the project to deliver its revised requirements.

2.62 The 2021–22 MPR Guidelines require information on all scope transfers that have occurred across the current Major Projects to be reported in Section 1.3 of the relevant Defence PDSS. These transfers are described in Table 13, on p. 74.

2.63 A variety of transfers were also reported by Defence in Section 2.1 of some PDSSs, either as ‘Real Variation – Transfer’ or ‘Real Variation – Scope’. Explanatory notes relating to Section 2.1 indicated that project deliverables, and associated funding, had been transferred into or out of the relevant project.¹²⁸ These transfers are also described in Table 13.

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

127 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.

128 This approach is not strictly consistent with the intent of MPR Guidelines, which focus on the reporting of transferred scope out of a project without a commensurate transfer of budget. The ANAO will work with Defence to improve clarity of reporting in relation to transfers of scope in the next MPR.

Table 13: Examples of transfers of scope occurring in the Major Projects as at 30 June 2022

Project	Year of transfer	Description
Joint Strike Fighter ¹	2018	Project scope worth \$1.5bn was transferred to future (unapproved) phases of the AIR6000 program, with no corresponding transfer of funds out of the project budget.
Future Subs	2020	Project scope worth \$10.3m was transferred to the CIOG [Chief Information Officer Group] component of SEA1000 Phase 1B for the Defence Secret Environment – International and equity provided to Australian Naval Infrastructure for the Submarine Construction Yard.
	2021	Project scope worth \$6.4m was transferred to the CIOG component of SEA1000 Phase 1B for the Defence Secret Environment – International.
MRH90 Helicopters	2018	Transfer to DE&IG [Defence Estate and Infrastructure Group] for Facilities Infrastructure (\$20.0m), temporary amenities at 6 Aviation Regiment (\$0.2m) and for facility remediation at 5 Aviation Regiment (\$0.05m).
	2020	Project scope was expanded by \$31.5m for Full Flight Mission Simulator.
Light Tactical Fixed Wing	2019	Project scope worth \$1.0m was transferred to Defence Science and Technology Group for the provision of ongoing contractor technical support for the Structural Substantiation Program.
JORN Mid-Life Upgrade	2020	Project scope worth \$2.5m was transferred in from Estate and Infrastructure Group (E&IG) to support AIR2025 Phase 6, which included replacing a facility at the Radar 3 Transmit site which is best delivered by the JORN Prime Contractor, as it involves specialist fit-out and coordinated delivery within JORN operational constraints.

Note 1: The transfer for Joint Strike Fighter was reported in Auditor-General Report No.19 2019–20 *2018–19 Major Projects Report*, paragraphs 1.38–1.39.

Source: 2021–22 Defence PDSSs.

Appendix 1 Improvements observed by the ANAO

1. During the conduct of the ANAO's priority assurance review, the following matters were identified in respect of specific aspects of the review. These matters were addressed in the context of the assurance review as a whole. The Auditor-General, in forming the conclusion found in the *Independent Assurance Report* in **Part 3** of this report, does not provide a separate conclusion on these matters.
2. The existence of independent external audit and review, and the accompanying potential for scrutiny, improves performance. Improvements in administrative and management practices usually occur: in anticipation of ANAO audit or review activity; during the engagement as interim findings are made; and/or after the audit or review has been completed and formal findings are communicated.
3. The Joint Committee of Public Accounts and Audit (JCPAA) has encouraged the ANAO to consider ways in which the ANAO could capture and describe some of these impacts. The ANAO's Corporate Plan states that the ANAO's annual performance statements will provide a narrative that will consider, amongst other matters, analysis of key improvements made by entities during an audit process based on information included in tabled reports.
4. The MPR review involves close engagement between the ANAO and the entity, in this instance Defence, as well as other stakeholders involved in the limited assurance review. Throughout the review, the ANAO engages with Defence on governance and the implementation of policy, procedures and guidelines. The Auditor-General may also provide commentary in relation to the ANAO review and analysis of the information obtained during the review. Remedial actions Defence may take during the review include:
 - strengthening governance arrangements;
 - introducing or revising policies, strategies, guidelines or administrative processes; and
 - initiating reviews or investigations.
5. In this context, the below actions or intended actions were observed by the ANAO during the MPR review. The ANAO has not sought to obtain assurance over the source of these actions or whether they have been appropriately implemented.

Table 14: Actions observed during the course of the review

Report paragraphs	Actions observed during the course of the review
1.85 to 1.89	Risk reform activities have moved from manual spreadsheets to a standardised application; common risk language and risk planning and analysis tools have been implemented; and dashboard reporting on the status of risk developed.
1.26 to 1.30	The management and reporting of Projects of Concern and Interest was escalated to the Minister for Defence Industry for direction in September 2022. This included the elevation of CMATS to the Project of Concern list following a direction from the former Minister of Defence in September 2021.
1.32	Announcement that Defence will establish formal processes and early warning criteria for placing projects on the Projects of Concern and Projects of Interest list.

Report paragraphs	Actions observed during the course of the review
1.32	Announcement that Defence will establish an independent projects and portfolio management office within Defence.
1.101 to 1.106	Development of definitions for the terms 'caveat' and 'deficiency' when used in relation to project milestones, and additional guidance on responsibilities for declaring the achievement of key milestones, was published in late 2022.

Appendix 2 ANAO performance audits related to the Major Projects

- [Auditor-General Report No. 28 1995–96: Jindalee Operational Radar Network](#)
- [Auditor-General Report No. 24 2005–06: Acceptance, Maintenance and Support Management of the JORN System](#)
- [Auditor-General Report No.23 2008–09: Management of the Collins-class Operations Sustainment](#)
- [Auditor-General Report No.57 2010–11: Acceptance into Service of Navy Capability](#)
- [Auditor-General Report No.6 2012–13: Management of Australia’s Air Combat Capability – F-35A Joint Strike Fighter Acquisition](#)
- [Auditor-General Report No.3 2013–14: AIR 8000 Phase 2 – C- 27J Spartan Battlefield Airlift Aircraft](#)
- [Auditor-General Report No.52 2013–14: Multi-Role Helicopter Program](#)
- [Auditor-General Report No.52 2014–15: Australian Defence Force’s Medium and Heavy Vehicle Fleet Replacement \(LAND 121 Phase 3B\)](#)
- [Auditor-General Report No.9 2015–16: Test and Evaluation of Major Defence Equipment Acquisitions \(paragraph 4.54\)](#)
- [Auditor-General Report No.1 2016–17: Procurement of the International Centre for Complex Project Management to Assist on the OneSKY Australia Program](#)
- [Auditor-General Report No.46 2016–17: Conduct of the OneSKY Tender](#)
- [Auditor-General Report No.48 2016–17: Future Submarine – Competitive Evaluation Process](#)
- [Auditor-General Report No.39 2017–18: Naval Construction Programs – Mobilisation](#)
- [Auditor-General Report No. 6 2018–19: Army’s Protected Mobility Vehicle – Light](#)
- [Auditor-General Report No.14 2018–19: Joint Strike Fighter — introduction into service and sustainment planning](#)
- [Auditor-General Report No.30 2018–19: ANZAC Class Frigates - Sustainment](#)
- [Auditor-General Report No.40 2018–19: Modernising Army Command and Control – the Land 200 Program](#)
- [Auditor-General Report No.4 2019–20: OneSky: Contractual Arrangements](#)
- [Auditor-General Report No.22 2019–20: Future Submarine Program – Transition to Design](#)
- [Auditor-General Report No.12 2020–21: Defence’s Procurement of Offshore Patrol Vessels – SEA 1180 Phase 1](#)
- [Auditor-General Report No.18 2020–21: Defence’s Procurement of Combat Reconnaissance Vehicles \(LAND 400 Phase 2\)](#)

Part 2. Defence Major Projects Report

Secretary's Foreword

I am pleased to provide the 2021-22 Major Projects Report, in conjunction with the Australian National Audit Office, on 21 Defence major capability acquisition projects, delivered by the Capability Acquisition and Sustainment Group.

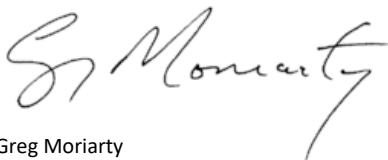
The 15th annual Major Projects Report provides transparency on the progress of Defence's most complex acquisition projects. The Major Projects Report is a valuable tool to inform the Parliament and Australian public on Defence capability and related expenditure.

As at 30 June 2022, Defence was managing 158 major and 10 minor acquisition projects in support of the Australian Defence Force with a total acquisition value of \$130.5 billion.

The 21 projects within the 2021-22 Major Projects Report have a combined total approved budget of \$59 billion and total in year budget of \$5.9 billion. Of note are the following project achievements during 2021-22 which support delivery of important capability for the Australian Defence Force and wider Indo-Pacific region:

- Battlespace Communications System (JP 2072 Phase 2B) delivered three medium SATCOM terminals on 28 July 2021, that arrived in Australia from the United States (Boeing Defence Australia Testing and Integration Facility) on 23 August 2021.
- On 26 October 2021, Maritime Operational Support Capability (SEA 1654 Phase 3) declared Initial Operational Capability for the first Supply-class replenishment ship, HMAS Supply, and commissioned the second ship HMAS *Stalwart* in the Royal Australian Navy. HMAS *Stalwart* achieved operational capability in June 2022.
- HMAS *Sheean*, the fifth of the Collins Class Submarines to enter service in the Royal Australian Navy, entered dock to begin its two-year full-cycle docking on 4 June 2022.
- The first Arafura Class Offshore Patrol Vessel (OPV) NUSHIP Arafura was launched on 16 December 2021, marking a major milestone for the Offshore Patrol Vessel (SEA 1180 Phase 1).
- As at 30 June 2022, New Air Combat Capability (AIR 6000 Phase 2A/B) have accepted 53 aircraft.
- Two Guardian Class Patrol Boats (SEA 3036 Phase 1) were gifted to the Pacific Island Countries of the Federated States of Micronesia on 11 March 2022 and the Cook Islands on 27 May 2022. To date, 15 Guardian Class Patrol Boats have been delivered to their respective recipient nations.
- Battlefield Airlift – Caribou Replacement (AIR 8000 Phase 2) achieved the Final Materiel Release (FMR) and Final Operating Capability (FOC) milestones in June 2022.
- ANZAC Air Search Radar Replacement (SEA 1448 Phase 4B) achieved the Initial Operational Capability (IOC) milestone in July 2021.
- Combat Reconnaissance Vehicles (LAND 400 Phase 2) achieved the IOC milestone in June 2022.

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



Greg Moriarty
Secretary
Department of Defence
20 January 2023

OVERVIEW

As at 30 June 2022, Capability Acquisition and Sustainment Group (CASG) was managing 158 major and 10 minor acquisition projects at various phases in the Capability Life Cycle, worth a total acquisition cost of \$130.5 billion. The 2021-22 acquisition budget of \$9.5 billion was achieved, which was an increase of \$0.2 billion from the prior year.

During this period, 12 major and minor acquisition projects were closed. These 12 closed projects had a final spend over their life of \$2 billion, against a budget of \$2.1 billion. CASG also had 10 new major acquisition projects approved with a combined budget of \$2.1 billion.

The Major Projects Report (MPR) outlines 21 projects, delivered by CASG, with a total acquisition cost of \$59 billion. This accounts for 45 per cent of CASG projects by total budget.

Scope of the ANAO review

The purpose of the MPR is to provide transparency and accountability of Defence acquisition for the benefit of Parliament and other stakeholders. The Australian National Audit Office conducts a priority assurance review of the information provided in the Project Data Summary Sheets (PDSS) at Part 3 of the report to provide confidence to the Parliament and other stakeholders that the information being provided by Defence is accurate and transparent.

The PDSS provided at Part 3 of this report disclose key project activity relating to cost, scope, schedule, risks and issues, and lessons learned up to 30 June 2022. Significant events that have occurred subsequent to 30 June 2022 are disclosed in the Statement by the Secretary of Defence and are detailed in Part 3 of the 2021-22 MPR.

Treatment of classified and sensitive information

In accordance with the JCPAA Guidelines, Defence is responsible for ensuring that the information in the MPR is suitable for unclassified publication. This year, in conducting the assessment of the security of the information, Defence assessed that some details, both in respect of independent projects and in the aggregate, would or could reasonably be expected to cause damage to the security, defence or international relations of the Commonwealth without sanitisation of the data.

There are four projects in this MPR (Offshore Patrol Vessel, Peregrine, SRGB Air Defence, and JORN Mid-Life Upgrade) where some schedule information has not been published in this report on security grounds. Defence has, however, provided the schedule information to the ANAO to conduct their assurance and analysis. The remaining 17 projects have the same level of information published as in previous years.

Key Achievements and Annual Performance

Overall, the performance of the Department's major capital equipment program in the 2021-22 financial year has been strong.

Key achievements this year include:

- Battlespace Communications System (JNT 2072 Phase 2B) delivered three medium SATCOM terminals on 28 July 2021, that arrived in Australia from the United States (Boeing Defence Australia Testing and Integration Facility) on 23 August 2021.
- On 26 October 2021, Maritime Operational Support Capability (SEA 1654 Phase 3) declared Initial Operational Capability for the first Supply-class replenishment ship, HMAS Supply, and commissioned the second ship HMAS *Stalwart* in the Royal Australian Navy. HMAS *Stalwart* achieved operational capability in June 2022.
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- ANZAC Air Search Radar Replacement (SEA 1448 Phase 4B) achieved the Initial Operational Capability (IOC) milestone in July 2021.
- Combat Reconnaissance Vehicles (LAND 400 Phase 2) achieved the IOC milestone in June 2022.

In respect of the acquisition projects managed by CASG in 2021-22:

- Achieved \$9.5 billion in acquisition.
- Six achieved IOC, four on time or ahead of schedule¹²⁹.
- Seven achieved FOC, three on time or ahead of schedule delivery, in accordance with second pass approval.

The performance of the 21 MPR projects over the 2021-22 period has been largely consistent with the overall performance of the 158 major equipment projects managed by CASG.

¹²⁹ Note, this does not take into account re-baselined projects or all closed projects.

Entry and exit from MPR

Of the 21 projects included in this report, 20 projects have carried over from last year's report. One project has been removed as it had minimal budget remaining, and has delivered the majority of its required scope.

- Indian Ocean Region UHF SATCOM (JP 2008 Phase 5A).

There is one new inclusion to the MPR:

- Airborne Intelligence, Surveillance, Reconnaissance and Electronic Warfare (ISREW) Capability (AIR 555 Phase 1).

Appendix A lists the projects that have been removed from the report since its inception including the reason for their removal and expenditure, as at 30 June 2022.

The project additions and removals are in accordance with MPR Guidelines endorsed by the JCPAA in 2021 and are published in Part 4 of this report.

DEFENCE STRATEGIC ENVIRONMENT

Acquisition Environment

In this reporting period, there have been some significant events for Defence including support to Ukraine. The Ukraine Defence Military Aid (DMA) provided by the ADF was an unprecedented event. Support included both lethal and non-lethal capabilities that were provided either through gifting of current ADF assets or procured and delivered through third party agencies. All DMA provided was subject to legal and international rules to include the Geneva Convention, International Traffic in Arms Regulation and Australian Export Controls.

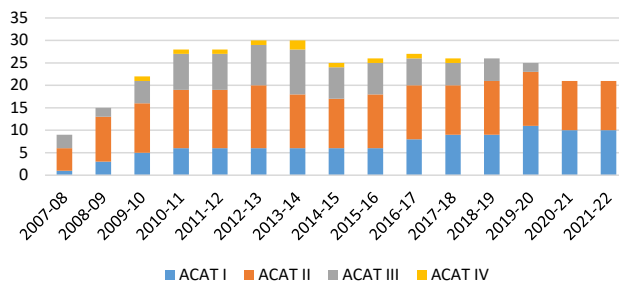
Defence and Industry have continued to equip and sustain the Australian Defence Force through the COVID-19 pandemic. As the world emerges from the pandemic, Defence and CASG have not been immune to ongoing supply chain challenges. The examples are well known across the country, such as computer chip shortages, and the ongoing freight capacity issues by both air and sea. The approach to shortages, such as chips, has been to take a whole of Defence view, and seek to use negotiation to deal with the priorities. Freight capacity shortfalls have driven up prices, and this has shifted some freight from now very high cost air freight, to slower, but lower cost, sea freight. However, these remain difficult management problems with sea freight schedule reliability remaining low, compared to pre-pandemic levels.

Defence and Industry continue to grapple with significant, and at times acute, workforce pressures – both capacity and skillsets. Allocating and managing workforce resources to ensure the appropriate level of resourcing from project start up and through life is critical to deal with skills scarcity.

Over the last decade the number of highest complexity (ACAT I) projects has increased from 11 to 24. Some of these projects carry extreme risk associated with the level of structural and technical complexity and integration (Appendix B refers).

Of the 21 projects in the 2021-22 MPR, ten are the highest complexity ACAT I and 11 are ACAT II. Whilst two¹³⁰ are cooperative programs with the United States Government, one has Foreign Military Sales (FMS) as the prime contract. In comparison, the 28 projects in the 2010-11 MPR comprised only six ACAT I and 13 ACAT II, with the remaining being ACAT III and ACAT IV projects. Five of these projects were Foreign Military Sales.

Figure 1 – ACAT complexity of MPR projects by year, as at 30 June 2022



¹³⁰ See AIR 6000 Phase 2A/2B and AIR 7000 Phase 1B.

Since the release of the 2016 Defence Industry Policy Statement, Australian Industry Capability (AIC) obligations have been updated in a range of Defence tenders and contracts. The 2019 Defence Policy for Industry Participation (DPIP) provides greater consistency, unity and opportunity for Australian industry involvement in Defence procurement. It establishes a framework to give Australian businesses the best possible opportunity to compete for Defence work, recognising that providing the best capability for Defence and value for money will continue to drive decisions. The AIC program is a major element of the DPIP. The AIC program plays an important role in driving Australian industry as a Fundamental Input to Capability and supports the delivery of the Sovereign Industrial Capability Priorities.

During 2021-2022 Defence has worked with industry to embed specific and measurable obligations in contracts under a consistent framework and undertaken a number of pilot AIC Plan audits to establish a better understanding of how the DPIP is being implemented across Defence industry.

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 with the 2021-22 Defence Portfolio Budget Statements, Portfolio Additional Estimates Statements, and Annual Report, are presented on an accrual basis.

The total in-year budget (2021-22) for all the projects listed in the 2021-22 MPR is \$5.9 billion and total approved acquisition cost is \$59 billion.

Table 1 lists the 21 projects by total Government approval from highest to lowest total approved budget.

Table 1: 2021-22 MPR Projects by Total Approved Budget, as at June 2022

#	Project Number	Project Name	ACAT	2021-22 In-Year Budget (\$m)	Total Approved Project Budget (\$m)
1	AIR 6000 Phase 2A/2B	New Air Combat Capability	I	1,754.4	15,795.7
2	SEA 5000 Phase 1	Hunter Class Frigate Design and Construction	I	531.1	6,055.7
3	LAND 400 Phase 2	Combat Reconnaissance Vehicles	I	370.0	5,606.3
4	SEA 1000 Phase 1B	Future Submarines Design Acquisition	I	961.7	4,816.2
5	AIR 9000 Phase 2/4/6	Multi-Role Helicopter	I	113.2	3,770.7
6	SEA 1180 Phase 1	Offshore Patrol Vessel	II	366.8	3,648.6
7	LAND 121 Phase 3B	Medium Heavy Capability, Field Vehicles, Modules and Trailers	I	74.2	3,399.6
8	AIR 555 Phase 1	Airborne Intelligence, Surveillance, Reconnaissance and Electronic Warfare Capability	II	306.5	2,233.6
9	AIR 7000 Phase 1B	MQ-4C Triton Remotely Piloted Aircraft System	II	269.7	1,999.5
10	LAND 121 Phase 4	Protected Mobility Vehicle – Light	I	338.5	1,962.9
11	AIR 8000 Phase 2	Battlefield Airlift – Caribou Replacement	II	74.9	1,421.6
12	LAND 19 Phase 7B	Short Range Ground Based Air Defence	II	144.2	1,216.3
13	AIR 2025 Phase 6	Jindalee Operational Radar Network	II	63.3	1,146.2
14	SEA 1654 Phase 3	Maritime Operational Support Capability	II	86.4	1,078.0
15	AIR 5431 Phase 3	Civil Military Air Management System	I	115.9	1,010.8
16	LAND 200 Tranche 2	Battlefield Command System	I	57.0	966.2
17	JNT 2072 Phase 2B	Battlespace Communications System	I	92.0	942.9
18	SEA 1439 Phase 5B2	Collins Class Communications and Electronic Warfare Improvement Program	II	33.8	610.1
19	SEA 3036 Phase 1	Pacific Patrol Boat Replacement	II	68.2	502.3
20	SEA 1442 Phase 4	Maritime Communications Modernisation	II	31.8	434.8
21	SEA 1448 Phase 4B	ANZAC Air Search Radar Replacement	II	22.0	429.2
Total				5,875.6	59,047.2

Understanding Budget Variation

Real budget variations occur as a result of Government endorsed changes to scope, real cost changes and scope transfers between projects. Subsequent Government approvals leading to real project budget variation includes activities such as:

- Follow-on Second Pass approvals for additional phases of capability.
- 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.

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.

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 budget. There have been no RCIs in this reporting year for MPR projects.

In-Year Cost

Defence considers that the Final Budget Forecasts represent the baseline against which in-year project financial performance should be measured. The 21 projects in the 2021-22 MPR had a combined in year budget and forecast of \$5.9 billion, with actual achievement of \$5.7 billion. The overall financial variation was -\$221 million or -4%. Appendix E further details total budget and in year budget status for each of the MPR projects.

In 2021-22 most of the 21 projects reported spending less than their annual budget allocation. The three projects with the largest variation between their final forecast and actual achievement are:

- SEA 1000 Phase 1B - Future Submarines Design Acquisition. In year expenditure of \$1,143.9 million against a Final Plan expenditure forecast of \$961.7 million. The variation is primarily due to the cancellation of the Attack Class submarine program and the resulting settlement payment to Naval Group.
- SEA 1180 Phase 1 - Offshore Patrol Vessel (OPV). In year expenditure of \$231.4 million against a Final Plan expenditure forecast of \$366.8 million. The variation is primarily due to the shift in deliverables, including the support system, and delay in current build performance.
- Air 555 Phase 1 - Long Range ISREW Aircraft. In year expenditure of \$220.5 million against a Final Plan expenditure forecast of \$306.5 million due to delay in flight testing on the baseline aircraft for this first of type capability and the subsequent deferral of milestone payments to 2022-23.

Schedule

CASG projects have continued to deliver successful capability outcomes, noting schedule remains the primary improvement focus. Defence set ambitious schedule targets to ensure it can provide the ADF with leading edge capability, which can sometimes result in schedule variation. Additional causes may include late delivery, increase in scope, a force majeure event or a deliberate management decision. Table E3 provides the detailed breakdown for the MPR projects.

Causes of Schedule Variation 2021-22

Schedule variations are reported based on the achievement of FOC. In most instances the programs are providing effective capability to the ADF prior to FOC.

Schedule variation in early milestones, such as IMR and IOC, do not necessarily result in a variation to the originally forecast FOC date. This is because schedule development will often accommodate overlap in design and production, long production lead times and the ability to redeploy assets or surge a workforce, as one phase is completed and another commences. There are a number of causes for these variations, including continuing impacts of COVID-19 and natural disasters affecting supply chains, resource availability, domestic and international travel restrictions and shutdowns. While some schedules have been impacted, the majority of projects continue without detriment. Other factors include changes in delivery scope, delays to interdependent projects, technical reliability, contractual negotiations and integration issues.

Of the 14 projects with published forecast FOC, five projects reported schedule variation to forecast FOC declaration during the year. The three projects with the largest variations are:

- MRH90 Helicopters (AIR 9000 Phase 2, 4 and 6) – ongoing capability delays have resulted in a revision of FOC. 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.
- Battlefield Command System (LAND 200 Tranche 2) – The FOC date was extended to accommodate a Contract Change Proposal relating to COVID-19 Delay.
- Civil Military Air Traffic Management System (CMATS) (AIR 5431 Phase 3) – A highly complex and interdependent joint project has experienced challenges in technical complexity and interdependencies. The FOC date has extended with schedule milestones being actively reviewed and planned by the project and its contractual partners.

Materiel Scope and Capability

It is important to understand the difference between materiel scope and capability. 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 is the delivery of the materiel element of capability. Other fundamental inputs to capability, such as workforce, facilities or supporting IT infrastructure, are outside the materiel scope.

Calculating 'expected scope delivery' in a percentage term does not distinguish the relative impact some scope may have on overall capability, either up or down. Likewise, measuring the materiel delivery of a project against the final intended capability effect, without considering other fundamental inputs to capability, does not present a true picture of the forecast capability.

The 'traffic light' assessment of each element is indicative of:

- **Green.** A high level of confidence that the materiel scope outcome will be met.
- **Amber.** The materiel scope outcome being under risk, but still considered manageable and able to be met.
- **Red.** At this stage, the materiel scope outcome is unlikely to be fully met.
- **Blue.** An increase of materiel scope.

Of the 21 projects in this MPR:

- 11 projects reported 100 per cent in having a high level of confidence that the materiel scope outcome will be met (Green)
- Four projects are reported to have measures which are at risk (Amber)
- Two projects are reported to have both measures which are at risk (Amber) and an element that is unlikely to be fully met (Red)
- One project is reported to have both elements that are subject to risk (Amber) and an increase of materiel scope (Blue)
- One project is reporting an element that is unlikely to be fully met (Red)
- One project currently in the design phase, and has been not included, and
- One project that has been cancelled, and has not been included.

Table 2 - Details of Projects Reporting Amber or Red Measures

#	Project	Traffic Light	Narrative for Amber / Red Rating
1	LAND 121 Phase 3B Overlander Medium/Heavy	11% Amber	IOC was achieved with caveats due to delays in achievement of air certification. Achieving air certification by FOC remains a medium risk after mitigation. Schedule management remains a key focus and is being closely managed by CASG and the Capability Manager.
2	LAND 200 Tranche 2 Battlefield Command System	36% Amber	This reflects the non-delivery of aspects of the Elbit contract, specifically acceptance issues associated with the Battle Management System. Following the implementation of the Elbit BMS R1.1 Resolution Plan, the Commonwealth and Elbit agreed a Demonstration of BMS Release 1.1 performance. The Commonwealth and Elbit were unable to agree whether or not the issues were resolved by the Demonstration. The Commonwealth continues to work with Elbit to resolve open contract issues.
		16% Red	Based on direction from the Army program sponsor, the project does not expect to deliver the Weapon Integrated Battle Management System capability within the M1A1. Further, also based on direction from the Army program sponsor, the project does not expect to deliver the Hawkei General Service Vehicle node: this is offset by the direction from the Army Program Sponsor to increase the delivered quantities of Hawkei Command and control Vehicle and Manoeuvre nodes. Based on direction from the Army program sponsor, the Project will now only deliver 19 Protected Mobility Vehicle-Medium (PMV-M) Gate-Way vehicles. The remaining 38 PMV-M Gate Way vehicles originally within the Project's scope will now be delivered by the Land 4111 Phase 1 Protected Mobility Modernisation Project. This approach is expected to be confirmed following Government consideration.
3	SEA 1180 Phase 1 Offshore Patrol Vessel	0.4% Amber	The primary weapon system of the Offshore Patrol Vessel to conduct Constabulary Operations is the seaboots. The other weapon systems onboard are the main gun and two 50 calibre machine guns. A temporary change to the main gun size has had an operational impact.
4	SEA 3036 Phase 1 Pacific Patrol Boat Replacement	95% Amber	15 ships have been delivered and are currently operating in a very limited capacity. Six additional ships are potentially facing delays due to the imperative to rectify defects and enhance safety. None of this is considered to be a serious threat to the realisation of full capability.
		5% Blue	The additional ship will need to be entered into the project's scope along with some design and build modifications to enhance safety.
5	LAND 121 Phase 4 Protected Mobility Vehicle - Light	0.2% Red	In October 2021, Government approved the reduction to project scope of two Hawkei vehicles to support an export opportunity. This represents a reduction of 0.2% of the number of vehicles to be delivered by the Project. This reduction has not yet been updated within the MAA. Defence continues to support Thales' pursuit of export opportunities, and will receive royalty fees from any future overseas sales of the Hawkei.

#	Project	Traffic Light	Narrative for Amber / Red Rating
6	AIR 6000 Phase 2A/2B Joint Strike Fighter	1.0% Amber	AIR6000 Phase 2A/2B has options to deliver Maritime Strike capabilities in a timeframe closely following that of the United States Navy.
7	AIR 9000 Phase 2,4 & 6 Multi-Role Helicopter (MRH) 90	45% Amber 35% Red	Supportability and capability assurance costs to life-of-type present future capability risk. Rate of Effort (ROE) achievement continues to impact capability outcomes. The forecast cost of ownership out to the current life-of-type is unacceptably high.
8	JNT 2072 Phase 2B Battlespace Communications System (Land)	2.5% Amber	The Project is managing schedule risks associated with the Terrestrial Range Extension System (TRES) scope of work as expressed in the Materiel Acquisition Agreement and supporting suite of Capability Definition Documentation.

ACQUISITION GOVERNANCE

Performance Governance

Capability Acquisition and Sustainment Group governs and assures project delivery through a range of policies and practices in support of the One Defence Capability System.

CASG is implementing a range of enhancements throughout 2022-23 to the governance process for management and oversight of delivery performance, in support of Government's priority to enhance the early identification of performance risks and issues. This will include the establishment of an independent projects and portfolio management office within CASG, providing centralised delivery Group performance monitoring and reporting, to senior Defence stakeholders and committees, to Government and to external bodies.

Defence is implementing a revised Projects of Concern and Interest regime, including formal processes and 'early warning' criteria for placing projects on the Projects of Concern and Projects of Interest lists, and establishment of regular summits with industry to discuss remediation plans. This will be supported by fostering a culture of raising attention to emerging problems and encouraging and enabling early response, with projects experiencing performance issues provided the support needed to recover performance.

Project Performance Reporting

CASG continues to evolve its performance reporting to ensure that it is timely and informative in assisting leaders in overseeing and assuring the performance of their projects and products. CASG's acquisition and sustainment performance features in Portfolio Budget Statements, Portfolio Additional Estimates Statements and the Defence Annual Report, including commentary the Top 30 Projects and Products. Defence also relies upon existing governance mechanisms such as annual budget processes, enterprise committee accountabilities, and One Defence Capability system processes to ensure the timely and accurate reporting to decision makers.

Managing Underperformance

Projects of Concern is an enduring framework that remains a valuable tool to escalate projects for more senior management of complex issues within Defence and with Industry. Projects (or sustainment activities) identified as a Project (Product) of Concern have technical, commercial, cost or schedule challenges that benefit from additional senior executive and Ministerial support. The process allows Defence, Defence Industry and Ministers to work together to establish remediation actions with the primary objective being to return the project to the usual management framework.

The status of Projects of Concern is as follows:

- MRH 90 Multi Role Helicopter (AIR 9000 Phases 2, 4 and 6) – the project was first reported as a Project of Concern in November 2011 and continues to be managed as such.
- Deployable Defence Air Traffic Management and Control System (AIR 5431 Phase 1) – the project was first reported as a Project of Concern in August 2017 and its improved performance resulted in the Minister for Defence Industry announcing its removal from the list on 27 October 2022.
- Civil-Military Air Traffic Management System (AIR 5431 Phase 3) – the project was listed a Project of Interest in June 2018, and its elevation to a Project of Concern was announced by the Minister for Defence Industry on 27 October 2022. A Ministerial Summit to discuss this project was held on 2 December 2022.

Defence Major Projects Report

Auditor-General Report No.12 2022–23
2021–22 Major Projects Report

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 progress on remediation strategies to get the project/product back on track. 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 further deterioration of delivery parameters.

Agreements

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

As the Defence Transformation Strategy, Data Strategy and the Enterprise Resource Planning project is implemented, Defence will continue to adapt the MAA templates as required. Product Delivery Agreements (PDA) were intended to replace Material Sustainment Agreements (MSA) and MAA tracing to capability programs, however the implementation of programmatic agreements continues to be reviewed.

Smart Buyer

Defence's Smart Buyer program supports projects and products in their early planning phases through consideration of key strategy drivers, which in turn supports the development of robust project execution strategies. Within CASG, these strategies are subsequently tested in the Independent Assurance Review (IAR) that follow.

Whilst the primary role of Smart Buyer is to set-up projects for success, the methodology is flexible and has been adapted to address a variety of situations, including where support is required to establish programs, or where services or sustainment activities are contemplated. The Smart Buyer program is an example of the One Defence approach to capability acquisition with the program formally undertaking workshops with all three major delivery groups (CASG, Chief Information Officer Group and Estate and Infrastructure).

During 2021-22, there were 194 Smart Buyer workshops, in support of 97 projects / programs Gate 0, 1 or 2 activities.

The Smart Buyer framework was not used at the Second Pass government approval stage for the one project entering the MPR in 2021–22, AIR 555 Phase 1 (Peregrine). Smart Buyer activity has been conducted during the financial year for project SEA 1180 Phase 1 (Offshore Patrol Vessel) and considering AIR 555 Phase 1 (Peregrine) and AIR 7000 Phase 1B (Triton), as part of Intelligence, Surveillance and Reconnaissance Program considerations.

Independent Assurance Reviews

IARs consider the health and outlook of projects throughout their life. 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 makes recommendations or proposes 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 elevation to Project of Interest or Project of Concern status. In 2021-22, 111 IARs were conducted, covering 150 project phases or sustainment activities.

Both the Smart Buyer and IAR programs draw on a common pool of experienced external reviewers. Recent additions to the pool have expanded both numbers and skillsets available, enabling the programs to better meet rising demand across Defence. Review Board members have extremely varied professional backgrounds but typically have extensive senior management experience gained in either the Australian Public Service, ADF, Industry or Academia, and have a very sound understanding of Defence, CASG and Government processes.

Risk Reform

The CASG Risk Reform Program was acknowledged as complete by CASG senior management in March 2022. The program modernised CASG risk management practices by delivering a Risk Management System that:

- standardised application of the ISO31000:2018 risk management process;
- defined the level and depth of risk planning for specific project, product and business scenarios;
- introduced a common risk language;
- standardised the format for risk planning;
- provided a selection of appropriate methods, techniques and approaches; and
- incorporated an information management system that enables enhanced risk-based decision making.

The CASG Risk Management Directive, Strategy and Framework (published June 2020), CASG Risk Management Manual (published August 2021) and CASG Risk Management Practical Guide (published March 2022) were delivered under the CASG Risk Reform Program. The CASG Risk Management Manual mandates the use of the CASG risk tool (*Predict!*) for new and existing projects¹³¹, products and business areas moving the Group to a common and modern risk management platform and retiring the use of offline spreadsheets.

Alongside the updates to policy, practice and systems, reform was aided by the establishment of a Group-wide risk management community of practice, domain risk management working groups, and additional training offerings to risk practitioners on using the now mandated system. Following completion of the reform program the CASG risk community and its practitioners are focussed on uplifting conformance with mandated practices via targeted communications, on the job training and advice and the continuous update of policy and practice documentation to improve understanding and conformance.

Project and Product practices include requirements to regularly review and adjust/validate risks under management at the project and product level. Monthly Project and Product performance review meetings can access project and product specific risk data sourced from and maintained in the *Predict!* system. This data is also available for other management and review activities, such as IAR.

¹³¹ Some projects and products scheduled to complete activities in FY21-22 were exempted from the requirement to transfer to using *Predict!*.

Appendix A – List of Projects Removed from the Major Projects Report, since Inception

Table A1 - List of Projects Removed from the Major Projects Report, since Inception

#	Project Number	Project	First Reported in the MPR (FY)	Last Reported in the MPR (FY)	Government Approved Budget (\$m)	Expenditure to Date of exit from MPR (\$m)	Remaining Budget as at exit from the MPR(\$m)	FMR Achieved / Forecast as at exit from MPR	FOC Achieved / Forecast as at exit from MPR	Reason for Exit
1	JP 2008 Phase 5A	Indian Ocean Region UHF SATCOM	2010-11	2020-21	421.3	385.2	36.1	Sep-21	Mar-22	JCPAA Approval
2	SEA 4000 Phase 3	Air Warfare Destroyer Build	2008-09	2019-20	9,093.4	8,260.7	832.7	Jun-20	Jun-21	JCPAA Approval
3	AIR 7000 Phase 2B	Maritime Patrol and Response Aircraft System	2014-15	2019-20	5,574.1	4,343.6	1,230.5	Jun-22	Jun-22	JCPAA Approval
4	AIR 5349 Phase 3	EA-18G Growler Airborne Electronic Attack Capability	2013-14	2019-20	3,436.4	2,843.3	593.1	Aug-22	Aug-22	JCPAA Approval
5	AIR 9000 Phase 8	Future Naval Aviation Combat System Helicopter	2011-12	2019-20	3,003.7	2,520.0	483.7	Dec-23	Dec-23	JCPAA Approval
6	LAND 53 Phase 1BR	Night Fighting Equipment Replacement	2018-19	2019-20	561.8	459.0	102.8	Mar-23	Sep-23	JCPAA Approval
7	SEA 1439 Phase 3	Collins Class Submarine Reliability and Sustainability	2009-10	2019-20	444.5	412.1	32.4	Dec-22	Jun-23	JCPAA Approval
8	SEA 1448 Phase 2B	ANZAC Anti-Ship Missile Defence (2B)	2009-10	2018-19	678.6	645.4	33.2	Nov-18	Jun-19	FOC achieved
9	AIR 7403 Phase 3	Additional KC-30A Multi-role Tanker Transport	2015-16	2018-19	873.7	662.3	211.4	Oct-19	Dec-19	JCPAA Approval
10	JP 2048 Phase 3	Amphibious Watercraft Replacement	2013-14	2018-19	236.8	183.3	53.5	Dec-16	Nov-19	JCPAA Approval
11	JP 2048 Phase 4A/4B	Amphibious Ships (LHD)	2008-09	2018-19	3,092.4	2,875.6	216.8	Oct-19	Nov-19	JCPAA Approval
12	JNT 2072 Phase 2A	Battlespace Communications Systems Phase 2A	2012-13	2018-19	427.9	376.2	51.7	Jan-19	Dec-19	JCPAA Approval
13	JP 9000 Phase 7	Helicopter Aircrew Training System	2015-16	2018-19	481.6	385.8	95.8	Apr-19	Dec-20	JCPAA Approval
14	LAND 75 Phase 4B	Battlefield Command System	2015-16	2017-18	316.4	280.8	35.6	Dec-17	Dec-17	FOC achieved
15	SEA 1429 Phase 2	Replacement Heavyweight Torpedo	2009-10	2017-18	428.7	337.5	91.2	Oct-18	Dec-18	JCPAA Approval ¹³²
16	SEA 1439 Phase 4A	Collins Replacement Combat System	2007-08	2017-18	438.8	438.8	-	Oct-18	Dec-18	JCPAA Approval ¹³³
17	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 ¹³⁴
18	AIR 9000 Phase 5C	Additional Medium Lift Helicopter	2010-11	2016-17	637.8	448.2	189.6	Jul-17	Jul-17	FOC achieved
19	LAND 116	Bushmaster Protected Mobility Vehicle	2007-08	2016-17	1,250.6	1,036.1	214.5	Oct-17	Jan-17	FOC achieved

¹³² Approval granted in 2018 based on a risk assessment performed CASG and endorsed by the Capability Manager, which concluded the overall risk rating for remaining work was low.

¹³³ Approval granted in 2018 based on a risk assessment performed CASG and endorsed by the Capability Manager, which concluded the overall risk rating for remaining work was low.

¹³⁴ Approval granted in 2018 based on a risk assessment performed CASG and endorsed by the Capability Manager, which concluded the overall risk rating for remaining work was low.

#	Project Number	Project	First Reported in the MPR (FY)	Last Reported in the MPR (FY)	Government Approved Budget (\$m)	Expenditure to Date of exit from MPR (\$m)	Remaining Budget as at exit from the MPR(\$m)	FMR Achieved / Forecast as at exit from MPR	FOC Achieved / Forecast as at exit from MPR	Reason for Exit
20	LAND 121 Phase 3A	Overlander Vehicles (Light)	2009-10 (Ph 3) 2012-13 (Ph 3A)	2016-17	1,017.6	900.5	214.5	Oct-16	Oct-16	FOC achieved
21	AIR 87	Armed Reconnaissance Helicopter	2007-08	2016-17	1,867.8	1,867.8	-	Mar-14	Apr-16	FOC achieved with Caveats
22	AIR 5402	Air to Air Refuel	2008-09	2015-16	1,818.7	1,764.3	54.4	May-16	Jul-16	FOC achieved
23	AIR 5077 Phase 3	Wedgetail	2007-08	2014-15	3,881.2	3,754.4	126.8	Feb-15	May-15	FOC achieved
24	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
25	AIR 5376 Phase 2	F/A 18 Hornet Upgrade	2007-08	2013-14	1,882.5	1,663.8	218.7	Sep-12	Oct-14	FMR achieved
26	JP 2008 Phase 4	Next Generation SATCOM Capability	2009-10	2013-14	869.5	569.1	300.4	Jun-14	Jul-15	FMR achieved
27	LAND 17 Phase 1A	Artillery Replacement	2010-11	2013-14	158.5	158.5	-	Sep-13	Oct-14	FMR achieved
28	AIR 5418 Phase 1	Follow On Stand Off Weapon	2009-10	2013-14	319.0	287.1	31.9	Sep-13	Jan-14	FOC achieved
29	JP 2043 Phase 3A	High Frequency Modernisation	2007-08	2013-14	580.2	498.1	82.1	Nov-17	Nov-17	JCPAA Approval ¹³⁵
30	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 ¹³⁶
31	SEA 1390 Phase 4B	SM-1 Missile Replacement	2010-11	2013-14	416.1	356.5	59.7	Feb-15	Jun-15	JCPAA Approval ¹³⁷
32	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
33	SEA 1444 Phase 1	Armada Class Patrol Boat	2007-08	2012-13	537.2	530.3	6.9	Nov-07	Oct-12	FOC achieved
34	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
35	AIR 8000 Phase 3	C-17 Heavy Airlift	2008-09	2011-12	1,423.4	1,423.4	-	Dec-11	Dec-11	FOC achieved
36	AIR 5376 Phase 3.2	F/A 18 Hornet Upgrade Structural Refurbishment (Hornet Refurb)	2008-09	2010-11	319.1	319.1	-	N/A	N/A	JCPAA Approval ¹³⁸

¹³⁵ 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.

¹³⁶ 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.

¹³⁷ 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.

¹³⁸ Approval granted after project scope and budget were approved for transition to the in-service sustainment support system in 2010-11.

Appendix B - Acquisition Complexity 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 categorizing 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 C – One Defence Capability System

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 has now been effectively integrated with other capability processes, such as program management, interoperability and force design, resulting in the One Defence Capability System.

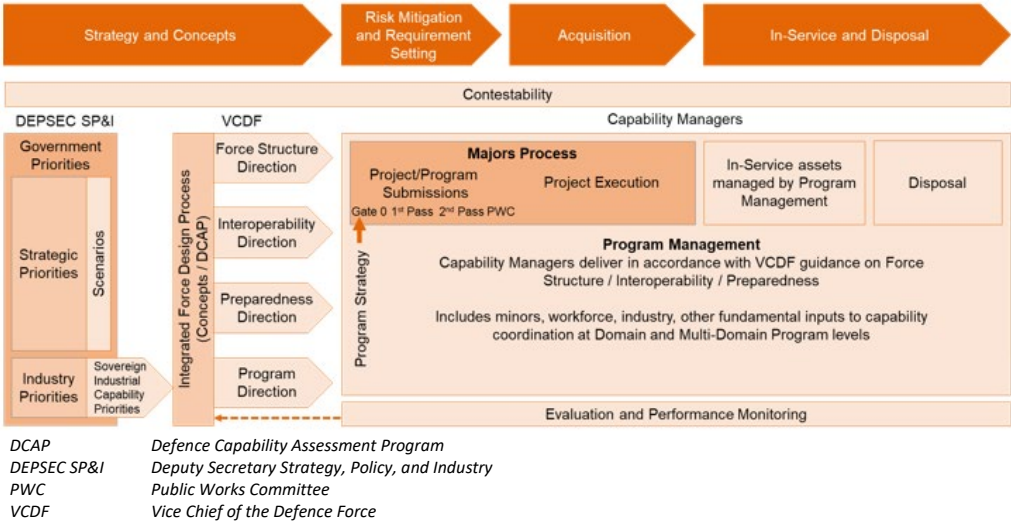
The One Defence Capability System is an integrated system that ensures Defence capability decisions optimise capability outcomes within resource limitations. The One Defence Capability System progresses through four phases shown in Figure C-1, which connect Government’s priorities through to prepared forces that are available to be committed to operations. At any point in time, individual capabilities will be at different stages of maturity across the four phases. The phases are:

- **Strategy and Concepts phase** which connects the Government’s assessment of strategic risks and other priorities, through to alternative concepts and force design.
- **Risk Mitigation and Requirement Setting phase** which sees development of solutions to address the priorities identified through Integrated Force Design, including options, detailed specifications and risk management strategies.
- **Acquisition phase** which sees the capability acquired, delivered, integrated, and brought into service.
- **In-Service and Disposal phase** which sees the maintenance of capabilities at the appropriate level of preparedness, in accordance with the CDF’s Preparedness Directive, available to be force-assigned to Chief of Joint Operations, or other operational commander, as required for operational employment.

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:

- **Gate Zero.** 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 acceleration to proceed directly to Gate 2.
- **Gate One.** If required, it 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, it 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.** 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 (Second Pass), or provides direction to remediate projects.
- **Second Pass.** A final milestone in the Risk Mitigation and Requirement Setting and Planning Phase at which point Government endorses a specific capability solution and approves funding for the Acquisition and In-Service and Disposal Phases.

Figure C1: One Defence Capability System



Appendix D - Lessons Learned

The 2021-22 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.'

Table D1 - Lessons Learned

#	Project	Categories of Systemic Lessons	Project Lesson
Projects Exited from the MPR, for 2021-22			
1	JP 2008 Phase 5A Indian Ocean Region UHF SATCOM	Procurement Planning	The genuine ability of the vendor to achieve the contracted requirements must be assessed and validated prior to Contract and the engineering capability of the company, based on proven past performance, and a high level of engineering discipline and accreditation demanded.
		Leadership	When negotiating an MOU, be a smart buyer. The SATCOM Capability Manager should thoroughly understand the terms of future MOUs including costs, responsibilities, capability limitations, and administrative overheads.
		Capability Outcomes	Partnering imposes limitations but also increases ADF SATCOM capability. Collaborating with the US has provided Australia with an exceptional capability that would have otherwise been unachievable. The benefits available through international collaboration should be considered.
		Risk, Issues and Opportunities	Additional SATCOM capacity can be traded. The ADF traded excess UHF capacity on IS-22 for capacity on US satellites and the trade advantages of acquiring sovereign capacity additional to ADF needs, against the cost of acquisition and ownership is to be considered.
		Schedule	External factors including US Joint Interoperability Test Command (JITC) can significantly impact schedule and it is prudent to include a significant allowance within the schedule to better absorb unforeseen delays.
Previously Exited Projects Still Reporting Significant Events ¹³⁹			
2	AIR 5349 Phase 3 EA-18G Growler Airborne Electronic Attack Capability	Resourcing	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.
3	AIR 7000 Phase 2B Maritime Patrol and Response Aircraft System	Contract Management	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	Precision of description about what is included under the PSFD MoU.
		Contract 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 'reach-back' to US CONUS OEM as required if IP, export and data support can be assured.
		Contract 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	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.
		Requirements 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.

¹³⁹ These lessons are correct as at the time of the project's exit from the MPR and continue to remain in this table as they still have a requirement to report within the Secretary's Statement. These projects will exit this table when they exit the Secretary's Statement

#	Project	Categories of Systemic Lessons	Project Lesson
		Requirements Management	Greater focus in regards to Australian Industry involvement within MoU.
		Requirements 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	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	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	Ensure the transition plan is approved well in advance of the first aircraft delivery (12 months or more).
		Resourcing	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.
4	AIR 9000 Phase 8 Future Naval Aviation Combat System	Contract Management	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. 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. 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.
		Off-The-Shelf Equipment	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.
		Resourcing	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.
		Schedule Management	Linking ship integration to the project has assured continued support and oversight of that aspect from subject matter experts. As this project's 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.
5	JP 2048 Phase 4A/4B Amphibious Ships (LHD)	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.
		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.
		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.
6	JNT 2072 Phase 2A Battlespace Communications System	Resourcing	JNT 2072 is required to provide extensive support and advice to other projects procuring or integrating communications equipment via JNT 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 JNT 2072 phases.
7	SEA 1439 Phase 3	Contract Management	Consider the impact associated with long term sole source cost plus contracts.

#	Project	Categories of Systemic Lessons	Project Lesson
	Collins Class Submarine Reliability and Sustainability	Governance	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.
		Requirements Management	Ensure that all capability requirements are clearly defined, approved and appropriately funded before detailed acquisition planning commences.
		Schedule Management	Ensure that maintenance period schedule dependencies are identified and appropriate risk management strategies developed.
		Schedule Management	Understand the competing priorities within a program (ISS Performance Term Contract) and how they will impact on individual project performance.
		Contract Management	
8	SEA 1448 Phase 2B ANZAC Anti-Ship Missile Defence	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.
		Governance	Adequate communication between, and engagement of, critical stakeholders to ensure that a common understanding of Project status is maintained.
		Governance	Project budgets must be managed to avoid adverse impacts of program level changes to budget management practices.
		Governance	Seaworthiness policy changed the role of Regulators in the reviewing of the T1-338. Need to engage early with Policy and Procedure Owner to establish what 'assurance' is required and authorised.
		Contract Management	The Hobart Class Combat System operation and performance has been proven on HMAS Hobart and NUSHIP Brisbane 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.
9	SEA 4000 Phase 3 Air Warfare Destroyer	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.
		Governance	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.
		Resourcing	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.
		First of Type Equipment	
		Resourcing	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.
		Schedule Management	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.

Appendix E - Data Tables

Table E1 - Project Budget Status, as at June 2022

#	Project Number	Government Approved Budget at Second Pass (\$m)	Subsequent Government Approvals (\$m)	Price Indexation (\$m)	Foreign Exchange Variation (\$m)	Real Cost / Scope Variation (\$m)	Transfers (\$m)	Budgetary Adjustments (\$m)	Budget Cost Savings (\$m)	Current Budget (\$m)
1	AIR 2025 Phase 6	1,117.9	6.1	-	-	8.2	14.0	-	-	1,146.2
2	AIR 5431 Phase 3	731.4	-	-	3.8	247.5	34.9	(6.8)	-	1,010.8
3	AIR 555 Phase 1	2,166.3	-	-	67.8	-	2.4	(2.9)	-	2,233.6
4	AIR 6000 Phase 2A/2B	2,751.6	10,515.4	351.0	2,188.9	(2.8)	(8.4)	-	-	15,795.7
5	AIR 7000 Phase 1B	2,067.9	-	0.2	(86.3)	-	17.7	-	-	1,999.5
6	AIR 8000 Phase 2	1,156.5	-	-	268.4	-	(3.3)	-	-	1,421.6
7	AIR 9000 Phase 2/4/6	957.2	2,565.6	679.8	(136.6)	31.5	(239.3)	(87.4)	-	3,770.7
8	JNT 2072 Phase 2B	915.7	-	-	27.1	-	-	-	-	942.9
9	LAND 121 Phase 3B	2,549.2	735.6	-	144.8	-	(30.0)	-	-	3,399.6
10	LAND 121 Phase 4	1,944.9	-	0.4	17.7	-	-	-	-	1,962.9
11	LAND 19 Phase 7B	1,274.3	-	-	(58.0)	-	-	-	-	1,216.3
12	LAND 200 Tranche 2	930.0	-	-	36.2	-	-	-	-	966.2
13	LAND 400 Phase 2	5,762.7	-	-	(156.4)	-	-	-	-	5,606.3
14	SEA 1000 Phase 1B	989.4	5,021.7	-	(99.3)	-	(1,095.7)	0.1	-	4,816.2
15	SEA 1180 Phase 1	3,639.1	-	-	9.5	-	-	-	-	3,648.6
16	SEA 1439 Phase 5B2	597.8	-	0.4	8.1	1.4	-	2.5	-	610.1
17	SEA 1442 Phase 4	385.6	-	-	49.1	-	-	-	-	434.8
18	SEA 1448 Phase 4B	427.8	-	-	1.5	-	-	-	-	429.2
19	SEA 1654 Phase 3	1,004.7	-	-	(3.2)	-	(76.5)	-	-	1,078.0
20	SEA 3036 Phase 1	503.3	-	-	(2.2)	-	1.2	-	-	502.3
21	SEA 5000 Phase 1	6,184.0	-	-	(131.6)	-	3.3	-	-	6,055.7
Total		38,057.2	18,844.3	1,031.8	2,149.2	285.8	(1,226.6)	(94.6)	-	59,047.1

Table E2 - Project In-Year Financial Status, as at June 2022

#	Project Number	Portfolio Budget Statements (\$m)	Portfolio Additional Estimate Statements (\$m)	Final Plan (FP) (\$m)	Actual Spend (\$m)	PBS minus Actual Spend (\$m)	Variation (\$m)	FP minus Actual Spend (\$m)	Variation FP minus Actual Spend (%)
1	AIR 2025 Phase 6	50.2	63.3	63.3	61.9	-1.7	1.4		2.2
2	AIR 5431 Phase 3	148.1	116.5	115.9	99.1	49.0	16.8		14.5
3	AIR 555 Phase 1	294.5	310.0	306.5	220.5	74.0	86.0		28.1
4	AIR 6000 Phase 2A/2B	1,949.3	1,774.3	1,754.4	1,701.7	247.6	52.7		3.0
5	AIR 7000 Phase 1B	319.8	272.6	269.7	251.5	68.3	18.2		6.7
6	AIR 8000 Phase	61.3	75.5	74.9	58.9	2.4	16.0		21.4
7	AIR 9000 Phase 2/4/6	166.6	61.0	113.2	36.0	130.6	77.2		68.2
8	JNT 2072 Phase 2B	103.7	92.3	92.0	70.0	33.7	22.0		23.9
9	LAND 121 Phase 3B	65.1	74.4	74.2	63.0	2.1	11.2		15.1
10	LAND 121 Phase 4	548.1	341.1	338.5	341.1	207.0	-2.6		-0.8
11	LAND 19 Phase 7B	162.4	143.1	144.2	183.8	-21.4	-39.6		-27.5
12	LAND 200 Tranche 2	155.8	57.3	57.0	19.8	136.0	37.2		65.3
13	LAND 400 Phase 2	665.1	374.1	370.0	370.1	295.0	-0.1		0.0
14	SEA 1000 Phase 1B	981.8	980.6	961.7	1,143.9	-162.1	-182.2		-18.9
15	SEA 1180 Phase 1	366.5	367.8	366.8	231.4	135.1	135.4		36.9
16	SEA 1439 Phase 5B2	37.5	33.9	33.8	23.6	13.9	10.2		30.2
17	SEA 1442 Phase 4	40.0	31.7	31.8	24.4	15.6	7.4		23.3
18	SEA 1448 Phase 4B	33.0	22.0	22.0	19.2	13.8	2.8		12.7
19	SEA 1654 Phase 3	49.4	88.2	86.4	64.5	-15.1	21.9		25.3
20	SEA 3036 Phase 1	81.5	68.4	68.2	61.5	20.0	6.7		9.8
21	SEA 5000 Phase 1	655.2	532.1	531.1	608.5	46.7	-77.4		-14.6
Total		6,934.9	5,880.2	5,875.6	5,654.4	1,280.5	221.2		3.8

Table E3 - Project Schedule Status, as at June 2022

#	Project Number	2nd Pass	Originally Estimated IOC	Forecast IOC As at 30 Jun 21	Forecast IOC As at 30 Jun 22	IOC Variation (months)	Variation (%)	Originally estimated FOC	Forecast FOC As at 30 Jun 21	Forecast FOC As at 30 Jun 22	FOC Variation (months)	Variation (%)
1	AIR 2025 Phase 6	Dec 17	Apr 24	TBA	NFP	NFP	NFP	Jan 29	TBA	NFP	NFP	NFP
2	AIR 5431 Phase 3	Dec 14	Jun 20	TBA ¹⁴⁰	Jun 25	60	90.89	Jun 23	TBA	Mar 28	57	56.00
3	AIR 5555 Phase 1	Sep 17	NFP	NFP	NFP	NFP	NFP	NFP	NFP	NFP	NFP	NFP
4	AIR 6000 Phase 2A/2B	Apr 14	Dec 20	Dec 20	Dec 20	0	0.00	Dec 23	Dec 23	Dec 23	0	0.00
5	AIR 7000 Phase 1B	Nov 20	Jul 24	Jun 26	Jun 26	23	54.04	Dec 25	Jul 31	Jun 31	66	108.00
6	AIR 8000 Phase 2	Apr 12	Dec 16	Dec 16	Dec 16	0	0.00	Dec 17	Jun 22	Jun 22	54	80.00
7	AIR 9000 Phase 2/4/6	Apr 06	Apr 11	Dec 14	Feb 15	47	78.20	Jul 14	Jun 22	Mar 23	104	105.00
8	JINT 2072 Phase 2B	Apr 15	Sep 17	Mar 18	Mar 18	6	23.42	Sep 20	Sep 23	Sep 23	36	56.00
9	LAND 121 Phase 3B	Jul 13	Dec 19	Dec 19	Dec 19	0	0.00	Dec 23	Dec 23	TBA	TBA	TBA
10	LAND 121 Phase 4	Aug 15	Dec 19	May 21	May 21	17	33.86	Jun 23	Jun 23	Jun 23	0	0.00
11	LAND 19 Phase 7B	Feb 19	Jun 23	Jun 23	Delayed	NFP	NFP	Jun 26	Jun 26	Jun 26	0	0.00
12	LAND 200 Tranche 2	Sep 17	Sep 21	Apr 23	Mar 24	30	62.83	Jun 22	Oct 23	Aug 25	38	67.00
13	LAND 400 Phase 2	Mar 18	Jun 22	Jun 22	Jun 22	0	0.00	Jun 27	Jun 27	Jun 27	0	0.00
14	SEA 1000 Phase 1B	Feb 19				Project Cancelled						
15	SEA 1180 Phase 1	Nov 17	Dec 22	Dec 22	Delayed	NFP	NFP	Jun 30	Jun 30	Delayed	NFP	NFP
16	SEA 1439 Phase 5B2	Mar 17	Jun 21	Dec 22	Dec 22	18	35.29	Dec 24	Jun 27	Jun 27	30	32.00
17	SEA 1442 Phase 4	Jul 13	Dec 18	Dec 21	Oct 22	46	70.74	Dec 23	Apr 25	Apr 25	16	13.00
18	SEA 1448 Phase 4B	Jun 17	Jun 20	Jul 21	Jul 21	13	36.04	Jun 24	Jun 24	May 24	-1	-1.00
19	SEA 1654 Phase 3	Apr 16	Mar 21	Aug 21	Oct 21	7	11.92	Dec 22	Dec 22	Dec 22	0	0.00
20	SEA 3036 Phase 1	Apr 16	Oct 18	Nov 18	Nov 18	1	6.57	Sep 23	TBA	TBA	TBA	TBA
21	SEA 5000 Phase 1	Jun 18				IOC and FOC Dates have not yet been agreed						

¹⁴⁰ Per the 2020-21 MPR, the forecast dates were under analysis by Defence and reported as 'TBA'.

Appendix F – Glossary

Acquisition Categories	See Appendix B.
Additional Estimates	Where amounts appropriated at Budget time are required to change, Parliament may make adjustments to portfolios through the Additional Estimates Acts.
Australianised Military-off-the-Shelf (MOTS) Capability	An adapted military-off-the-shelf product where modifications are made to meet particular ADF operational requirements. 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.
Caveat	In relation to the declaration of Initial or Final Operational Capability or other capability milestone, is a plan, stipulation, condition or limitation to mitigate the capability impact of a Deficiency.
Contract Change Proposal (CCP)	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.
Deficiency	In relation to the declaration of Initial or Final Operational Capability or other capability milestone, is a shortfall between the Government agreed requirements and that which is provided at the milestone.
Developmental	A product that is not available off-the-shelf and has to be developed specifically to meet the ADF's particular operational requirements.
Final Materiel Release	A milestone that marks the completion and release of those Acquisition Project supplies required to support the achievement of Final Operational Capability.
Final Operational Capability (FOC)	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.

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.
Initial Materiel Release (IMR)	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)	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 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.
Materiel Acquisition Agreement (MAA)	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.
Out Turned Costs / Out-Turning	Defence establishes cost estimates using out-turned costs (i.e. inclusive of agreed or estimated contract price indexation) to ensure that estimates include allowances for future inflationary cost increases and foreign exchange.
Platforms	Refers to air, land, or surface or sub-surface assets that are discrete and taskable elements within the ADF.
Portfolio Budget Statement (PBS)	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 (PSI)	The entity that has prime responsibility for delivering the mission and support systems.
Public Governance, Performance and Accountability Act (PGPA) 2013	The <i>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.
Risk	The effect of uncertainty on objectives. An effect is a deviation from the expected. It can be positive, negative or both, and can address, create or result in opportunities and threats. Risk is usually expressed in terms of risk sources, potential events, their consequences and their likelihood.
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.

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 21 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 *2021–22 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 2022. 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.

Emphasis of Matter – Impact of Security Review

I draw attention to the *Statement by the Secretary of Defence* where Defence has disclosed that, following a security review in November 2022, Defence has not published some information in the PDSSs due to Defence's assessment that the information would or could reasonably be expected to cause damage to the security, defence or international relations of the Commonwealth.

Information was not published in the PDSSs for:

- a) SEA 1180 Phase 1 Offshore Patrol Vessel — some forecast dates and schedule variances in Section 3.2, Section 3.3, and Section 4.2;
- b) AIR 555 Phase 1 Airborne Intelligence, Surveillance, Reconnaissance and Electronic Warfare (ISREW) Capability — original planned dates, forecast dates and schedule variances in Section 3.2, Section 3.3, and Section 4.2;
- c) LAND 19 Phase 7 Short Range Ground Based Air Defence — some current contracted dates, forecast dates and schedule variances in Section 3.2, Section 3.3, and Section 4.2; and
- d) AIR 2025 Phase 6 Jindalee Operational Radar Network — current contracted dates, forecast dates and schedule variances in Section 3.1, Section 3.2, Section 3.3, and Section 4.2.

My conclusion is not modified in respect of this matter.

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 21 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
23 January 2023

Statement by the Secretary of Defence

The attached Project Data Summary Sheets for the 21 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 2022

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 2022.

Significant Events Occurring Post 30 June 2022

In stating this opinion that the Project Data Summary Sheets comply in all material respects with the Guidelines, I acknowledge the following material events have occurred post 30 June 2022:

SEA 5000 Phase 1 – Future Frigates

In July 2022, a Contract Change Proposal between the Commonwealth and BAE Systems Maritime Australia came into effect to amend a number of key milestones in the design and productionisation stage. These amendments reflect the previously reported 18-month delay to the commencement of construction of the first ship. As a result of the Contract Change Proposal, the following dates in table 3.1 have been updated since 30 June 2022:

- “Current Contracted” date for the Support System Definition Review changed from December 2022 to March 2023; and
- “Original Planned” date for Preliminary Design Review changed from N/A to October 2023.

LAND 121 Phase 4 – Protected Mobility Vehicle - Light

The Hawkei program experienced some initial challenges meeting Full-Rate-Production and uplift capacity requirements, and has also been impacted by COVID-19 related disruptions to global supply chains. These have impacted Army’s ability to complete the necessary training for the introduction of the vehicle. The collective impact of these delays mean that Final Operational Capability will be rescheduled from June 2023 to June 2024. On 11 November 2022, Thales Australia advised Defence that it had identified a new issue impacting the brakes on the Hawkei. This was identified by Thales Australia at its Bendigo facility as part of the routine quality assurance inspection on vehicles undergoing final production work. The root cause of the issue is being investigated, and the total number of vehicles affected is not yet known. Thales Australia has therefore recommended that Defence restrict the use of the Hawkei fleet as a precautionary measure until the matter can be properly investigated. As the safety of personnel and equipment is paramount, Defence has accepted this recommendation. This does not appear to be related to the original Hawkei braking issue involving the Anti-Lock Braking System (ABS), for which a technical solution is being implemented.

JNT2072 Phase 2B - Battle Communications System (Land) 2B

The management of the Deployable Local Area Network (DLAN) hardware was transferred to LAND 4125 Deployable Information Environment on 30 September 2022.

SEA 1654 Phase 3 – Supply Class Replenishment Ships

A small number of outstanding defects and deficiencies in both Auxiliary Oil Replacement platforms remain to be rectified by the Prime Contractor, and the work can only be completed in the maintenance periods available as both ships are operational fleet assets. There is a planned maintenance period for Ship 1 later in 2022, but the next availability for Ship 2 is early next year. The works are planned to be completed on both ships in those maintenance periods, and negotiations are underway for the Prime Contract completion milestone date to be extended to end March 2023 to accommodate these availability periods.

AIR 5431 Phase 3 – Civil Military Air Management System

On 27 October 2022, the Minister for Defence Industry announced the elevation of AIR 5431 Phase 3 - Civil Military Air Management System to the Project of Concern list. The decision to elevate was due to consistent schedule delays caused by the performance of Thales, including inability to meet designated milestones and provide a reliable schedule. This is the second time the project has been placed on the Projects of Concern list, having previously been listed in 2017-2018 due to prolonged contract negotiations.

SEA 3036 Phase 1 – Pacific Patrol Boat Replacement

Following the grounding of the Samoan Guardian Class Patrol Boat Nafanua II in August 2021, the previous Australian Government announced they would replace the vessel. This has now become Boat 22 and was formally incorporated into the acquisition contract on 1 November 2022.

SEA 1442 Phase 4 – Maritime Communications Modernisation

In July 2022, the fourth ANZAC ship system was accepted (HMAS Perth).

SEA1000 Phase 1B – Future Submarines

The Attack class submarine program (SEA1000 Phase 1B) is on track to complete remaining close out activities in 2023.

AIR 9000 Phase 2 / 4 / 6 – Multi-Role Helicopter

On 18 January 2023, Defence announced the acquisition of 40 UH-60M Black Hawk helicopters for the Australian Army to replace the MRH90 Taipan fleet.

Update on Projects that exited the MPR in 2019-20 and 2020-21:

AIR 7000 Phase 2 – P-8A Poseidon

The AIR 7000 Phase 2 project continued to plan for the acquisition of an additional two P-8A aircraft and support elements, in line with the Government-approved change in Final Operational Capability. The Project also continued planning for the next set of capability updates to already delivered P-8A aircraft, Mission Support elements and Training Systems in order to align the configuration of all weapon system elements. Delivery of other project elements including remaining spares and the UNIPAC III Search and Rescue kit continued.

AIR 5349 Phase 3 – Growler

Final Operational Capability for AIR 5349 Phase 3 – Growler may be rescheduled due to the delayed delivery of Mobile Threat Training Emitter System at the Delamere Air Training Area, delivery of an additional EA-18G aircraft, and further enhancements to Airborne Electronic Attack system supportability. The project will deliver all remaining scope within the approved budget.

SEA 1439 Phase 3 – Collins Class Submarine Reliability and Sustainability

Planned SEA1439 Phase 3 – Collins Class Submarine Reliability and Sustainability - related engineering enhancements to HMAS Dechaineux during her current full-cycle docking are complete. Final Operational Capability remains on track for achievement in 2023.

LAND 53 Phase 1BR – Night Fighting Equipment Replacement

During 2021-22, the project completed Tranche 1 (Materiel Releases 1-5) replacing Ninox and legacy night fighting equipment nationally. Contracts for Tranche 2 equipment were signed in December 2020 with Materiel 6 and 7 deliveries completed 24 August 2021. Materiel Releases 8 and 9 are scheduled to occur by 31 March 2023 and enable Final Materiel Release declaration by that date. Final Operating Capability remains on schedule for September 2023.

AIR 9000 Phase 8 – MH-60R Seahawk

AIR 9000 Phase 8 – MH-60R Seahawk has progressed further ship modification works to the ANZAC Class FFH fleet. Project milestones continue to be met, including the arrival of the final training device, enabling training on the device to commence in March 2022, a month ahead of schedule. The final training device was formally accepted in July 2022 following delivery of a final spare component. This

project remains on schedule to meet Materiel Release 4, Final Materiel Release and Final Operational Capability in December 2023.

JP 2048 Phase 4A/4B – Amphibious Ships

Final Operational Capability was declared on 4 November 2019 with notable deficiencies that are being rectified. The table below provides further detail on the outstanding deficiencies.

Description of Deficiency	Status
Propulsion Pod Induced Vibration The propulsion pods exhibited some deficiencies.	Rectification work complete for HMA Ships Canberra and Adelaide.
Magazine Capacity	Deficiencies for HMAS Adelaide were partially remediated during 2021 docking. Scheduled works to HMAS Canberra will be undertaken on an opportunity basis during 2022-23.
Sewage Treatment Plants (STP) The system experienced some deficiencies.	Remediation of STP deficiencies is being undertaken on an opportunity basis during 2022-23.

JP 2008 Phase 5A – UHF SATCOM

JP 2008 Phase 5A – UHF SATCOM achieved Final Materiel Release for the Network Control System milestone in August 2021 and this was formally recognised by the Capability Manager on 17 September 2021. The project declared interim operational capability in October 2021 and Final Operational Capability was subsequently declared in March 2022.

Security Review of Project Data Summary Sheets (PDSS)

A security classification review of the Capability Acquisition and Sustainment Group and sponsor information contained within the Project Data Summary Sheets for release in the 2021-22 Major Projects Report has been completed.

The purpose of the security review is to ensure that each individual Project Data Summary Sheets is presenting data at an 'unclassified' level and to confirm the aggregated information is not a risk to national security, and is suitable for public release by tabling in parliament.

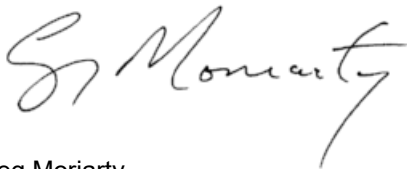
It is assessed that some details, both with respect to independent projects and in the aggregate, would or could reasonably be expected to cause damage to the security, defence or international relations of the Commonwealth without sanitisation of the data. These details have been removed from the relevant PDSSs. This is marked in

the PDSSs by the terms “NFP” meaning Not for Publication, or “Delayed” meaning delayed from the Original Planned date or the Forecast date in the 2020–21 PDSS.

Performance Governance

CASG is implementing a range of enhancements throughout 2022-23 to the governance process for management and oversight of delivery performance, in support of Government’s priority to enhance the early identification of performance risks and issues. This will include the establishment of an independent projects and portfolio management office within CASG, providing centralised delivery Group performance monitoring and reporting, to senior Defence stakeholders and committees, to Government and to external bodies.

Defence is implementing a revised Projects of Concern and Interest regime, including formal processes and ‘early warning’ criteria for placing projects on the Projects of Concern and Projects of Interest lists, and establishment of regular summits with industry to discuss remediation plans. This will be supported by fostering a culture of raising attention to emerging problems and encouraging and enabling early response, with projects experiencing performance issues provided the support needed to recover performance.

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 January 2023

Project Data Summary Sheets

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Project Data Summary Sheets

Auditor-General Report No.12 2022–23
2021–22 Major Projects Report

Project Data Summary Sheet¹⁴¹

Project Number	AIR6000 Phase 2A/2B
Project Name	NEW AIR COMBAT CAPABILITY
First Year Reported in the MPR	2010-11
Capability Type	Replacement
Capability Manager	Chief of Air Force
Government 1st Pass Approval	Nov 06
Government 2nd Pass Approval	Nov 09 (Stage 1) Apr 14 (Stage 2)
Budget at 2nd Pass Approval	13,264.1m
Total Approved Budget (Current)	15,795.7m
2021-22 Budget	1,754.4m
Complexity	ACAT I



Section 1 – Project Summary

1.1 Project Description

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

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

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

1.2 Current Status

Cost PerformanceIn-year

30 June 2022 – The year-end cost variance of 3.0% or \$52.7m underspend. The project net variation is primarily due to delays in the development/delivery of Weapons and Australia Canada United Kingdom Reprogramming Lab (ACURL) Phase 2 software, as well as delivery volatility in Spares. Covid-19 travel restrictions caused the cancellation of planned validation and verification activities. This underspend was offset by re-phasing the F-35 Lot 15 Air Vehicle Advanced Acquisition Contract to shore up the overall production schedule.

Project Financial Assurance Statement

In consideration of risks disclosed at Section 5.1, as at 30 June 2022, Project AIR6000 Phase 2A/2B has reviewed the approved scope and budget for those elements required to be delivered by the project. In 2019, the project obtained Government approval to move a final scope element between AIR6000 program phases, resolving the Project AIR6000 Phase 2A/2B affordability issue advised to Government in 2017. The approved changes have not increased funding for AIR6000 Phase 2A/2B or other associated program phases. Defence considers there is sufficient budget, including contingency, remaining for the project to deliver the revised scope. The project will continue to address cost risks in annual updates to Government.

Contingency Statement

The project has not applied contingency in the financial year.

Schedule Performance

The first two aircraft to be permanently based in Australia arrived in Williamstown on 10 December 2018, as planned in the schedule established at 2014 approval. In the 2021-22 financial year Australia accepted 13 aircraft bringing the total Australian fleet to 53.

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

The COVID-19 pandemic increased the uncertainty and complexity of delivery of the F-35 Program however the effects on AIR6000 Phase 2A/2B schedule have been largely mitigated despite consequential restrictions on international travel, supply chain

141 Notice to reader

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

<p>and workforce. Initial Operational Capability (IOC) was achieved on 28 December 2020, and the stand-up of F-35 capability at RAAF Base Tindal in the Northern Territory occurred in December 2021.</p> <p>The Australia Canada United Kingdom Reprogramming Lab (ACURL) Phase 1 ACURL facility was commissioned 24 February 2020 and formal reprogramming operations have commenced. ACURL Phase 2 activities are on schedule, with construction underway of the ACURL facility extension.</p> <p>Facilities construction at RAAF Base Tindal is complete with ICT and security accreditation finalised, Full Mission Simulators, supporting equipment and spares are installed and aircraft are in place. Number 75 Squadron commenced operations in December 2021. Numbers 3 and 77 Squadrons, and Number 2 Operational Conversion Unit are operational at RAAF Base Williamtown.</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 JPO and industry on the planning and execution of these requirements.</p> <p>The Asia-Pacific F-35 Propulsion Initial Depot Capability was conditionally confirmed by Pratt & Whitney on 5 April 2022.</p>	
<p>Material Capability/Scope Delivery Performance</p> <p>The F-35A JSF Air Vehicle achieved its Initial Operational Capability (IOC) by the scheduled date of December 2020. Stand-up of Williamtown and Tindal F-35 squadrons was completed in December 2021. The Verification and Validation (V&V) Program has progressed well, mitigating risks to Final Operational Capability (FOC), despite minor COVID-19 impacts.</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 Air Vehicle production Lots 13-15. AIR6000 Phase 2A/2B will continue to contribute to JSF Program developments to enable Australia to consider capability options and upgrades. AIR6000 Phase 2A/2B has options to deliver Maritime Strike capabilities in a timeframe closely following that of the United States Navy. AIR6000 Phase 2A/2B will also continue to invest in F-35A development toward advanced Maritime Strike options open for consideration under AIR3023 in the context of a Joint Maritime Strike strategy.</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 JPO has confirmed that ODIN will deliver improved operational outcomes through the use of cloud-based technology, a government-managed integrated data environment, and user-centred applications. All partner nations will transition to the new integrated information system in a migration led by the F-35 Joint Program Office. The F-35 is a fifth generation platform that is designed to evolve. Improvements and upgrades to the logistics information system were already planned and Australia's extant budget includes funding for such upgrades. Accordingly responsibility for ODIN implementation in Sustainment was formally transitioned to ACPSO in July 2021.</p>	
<p>Note</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>Background</p> <p>Project AIR6000 was established in 1999 to replace the air combat capabilities provided by the F/A-18A/B and F-111 fleets. In 2002, Government identified the Lockheed Martin F-35A JSF as the preferred option and joined the System Development and Demonstration (SDD) phase of the JSF Program as one of nine partner nations. At this time the project discontinued the competitive evaluation under AIR6000. The subsequent decision by Government to acquire the F-35A JSF has been taken progressively, including:</p> <ul style="list-style-type: none"> • Providing First Pass Approval in November 2006, which included agreement to join the next phase of the JSF Program and funded project AIR6000 Phase 1B to conduct detailed definition and analysis activities to support Government Second Pass Approval for AIR6000 Phase 2A/2B. • Signing the multilateral Production, Sustainment and Follow-on Development (PSFD) Memorandum of Understanding (MoU) in December 2006 to allow entry into the next stage of the JSF Program. • AIR6000 Phase 2A/2B Stage 1 Approval in November 2009 to acquire 14 CTOL F-35A JSF aircraft and associated support and enabling elements necessary to establish the initial training capability in the US, commencing in 2014, and to allow commencement of Operational Test in the US and Australia. • AIR6000 Phase 2A/2B Stage 2 was approved by Government in April 2014 to acquire an additional 58 CTOL F-35A JSF aircraft and enabling elements. The combined acquisition of 72 aircraft will achieve FOC in 2023 comprising of three operational squadrons of fifth generation F-35A JSF to replace the F/A-18A/B Hornet aircraft. • In 2017, Defence advised Government of emerging issues associated with AIR6000 Phase 2A/2B affordability. In 2018 and 2019, Government agreed to Defence proposals to defer elements of project scope to later, unapproved, AIR6000 program phases. The majority of these scope items were no longer needed, as FOC requirements will be met without major upgrades. Beyond Line of Sight Communications (BLOS) was only desirable and will now be delivered as a cost effective common F-35 Joint Program capability, rather than Australian unique. In conjunction with the retirement of cost risks within the project, this has remediated the cost issues identified to Government in 2017. These adjustments have also aligned Australian delivery schedules with the global JSF development program. While the approved changes have reduced the capability being delivered by Phase 2A/2B it has not increased or reduced funding, or the capability being delivered, in the broader AIR6000 program. As the changes have minimal impact on overall delivery schedule of the project, AIR6000 Phase 2A/2B plans for FOC in 2023 remain unchanged. 	
<p>Uniqueness</p> <p>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.</p> <p>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.</p>	

Project Data Summary Sheets

Auditor-General Report No.12 2022–23
2021–22 Major Projects Report

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

Due to strict US export restrictions imposed on the JSF Air System, direct commercial sale is not permitted. JSF aircraft and associated supporting systems will be acquired by Australia under the PSFD MoU arrangements. Key factors are:

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

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

The New Air Combat Capability – Industry Support Program (NACC-ISP) was launched on 10 August 2011. In total, \$21.9 million (GST exclusive) was available to Australian businesses and research organisations to support development of new or improved capabilities that may enhance their ability to win work in production, sustainment and follow-on development phases of the F-35 Program. The NACC-ISP ceased taking applications on the 30 June 2021. To date, over 50 Australian companies have, some with NACC-ISP support, directly shared in excess of \$3.0 billion in global F-35 contracts.

The Joint Strike Fighter – Industry Support Program (JSF-ISP) was launched on 9 December 2020 with initial funding of \$4.0m from Phase 2A/2B. A further \$60.0m has been added to the fund to further industry participation. 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 a risk regarding industry, including realisation of economic benefits, which was recently downgraded to a medium risk.

The project has now largely addressed the COVID-19 impacts to the delivery schedule. Cost was not significantly impacted. Lockheed Martin and the F-35 Joint Project Office re-baselined the Air Vehicle production schedule in 2021 to accommodate a reduced production workforce. Australian international and domestic travel restrictions that limited the ability of specialist installation and verification personnel were overcome through close engagement with Australian Border Force to ensure compliance with all entry requirements.

Australia's ability to organically manage non-standard Low Observables maintenance from a zonal verification and validation perspective have been delayed.

The issue of Air Force maintenance personnel needing practice fitting Alternate Mission Equipment and loading dummy rounds using Air Vehicles instead of a training aid has been resolved. Delivery of the Weapons Loading Trainer and Gun Module upgrades in Q4 2021 enabled Australian personnel to be trained using the Trainer and gun module from Q2 2022.

Other Current Related Projects/Phases

AIR JSF System Development and Demonstration (SDD) – Participation in the JSF SDD Program: In November 2018, Australia closed the Materiel Acquisition Agreement for AIR JSF SDD – Participation in the JSF SDD Program, as all AIR JSF SDD financial milestones were completed. The US expects to formally complete the F-35 program SDD phase, following Operational Test and Evaluation and a Department of Defense decision to go into full-rate aircraft production.

AIR6000 Phase 5 - Air Combat Capability Air-to-Air Weapons: This project was approved by Government in March 2016 and will acquire reserve stocks of air-to-air Within-Visual-Range (WVR) and Beyond-Visual-Range (BVR) missiles for the Air Combat Capability including the F-35A Joint Strike Fighter.

AIR6000 Phase 3 - Air Combat Capability Air-to-Surface Weapons: This project was approved by Government in May 2018 and will acquire the reserve stocks of air to ground weapons, new countermeasures and ammunition for the F-35 Joint Strike Fighter.

AIR6000 Phase 6 – F-35A Follow-On Modernisation: This project was approved by Government in December 2021. This project will ensure that the Australian F-35A fleet will continue to be modernised through to its life of type.

Note

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

Section 2 – Financial Performance

2.1 Project Budget (out-turned) and Expenditure History

Date	Description	\$m	Notes
	Project Budget		
Nov 09	Original Approved (Government second Pass Approval – Stage 1)	2,751.6	
May 12	Real Cost Decrease	(204.4)	1
Sep 12	Real Cost Increase	201.5	1
Jun 14	Government Second Pass Approval – Stage 2	10,515.4	2
	Total at Second Pass Approval	13,264.1	
Apr 18	Real Variation – Transfer	(8.4)	3
Jul 10	Price Indexation	351.0	4
Jun 22	Exchange Variation	2,188.9	
Jun 22	Total Budget	15,795.7	
	Project Expenditure		
Prior to Jul 21	Contract Expenditure – US Government (Block Buy Contract Production)	(3001.6)	5,6
	Contract Expenditure – US Government (Block Buy Contract Propulsion)	(640.2)	5,6
	Contract Expenditure – US Government PSFD (MoU (FY 14/15 – 22/23)	(481.0)	5
	Contract Expenditure – US Government – FMS Cases AT-D-YAF, AT-P-AMN (Weapons)	(159.8)	5
	Contract Expenditure – US Government – LRIP11 Non-Annualised Sustainment	(126.6)	5
	Contract Expenditure – US Government – LRIP11 – Production	(876.6)	5
	Contract Expenditure – US Government – LRIP10 – Non-Annualised Sustainment	(195.7)	5
	Contract Expenditure - US Government LRIP 11 Propulsion	(147.1)	5
	Contract Expenditure – US Government LOT 15 Production	(21.7)	5
	Contract Expenditure- US Government- LRIP 10 Production	(220.5)	5
	Contract Expenditure – LOT 12-14 Indefinite Delivery Indefinite Quality (IDIQ)	(62.9)	5
	Contract Expenditure – US Government – Reprogramming Laboratory	(121.1)	5
	Contract Expenditure – US Government – LRIP 10 Propulsion	(795.0)	5
	Contract Expenditure – US Government LRIP 8 – Production and Non-Annualised Sustainment	(98.2)	5
	Contract Expenditure – US Government Expenditure – LOT 15 Propulsion	(1.5)	5
	Other Contract Payments/Internal Expenses	(2092.2)	7
		(9,041.7)	
FY to Jun 22	Contract Expenditure – US Government (Block Buy Contract Production)	(891.0)	5,6
	Contract Expenditure – US Government (Block Buy Contract Propulsion)	(205.9)	5,6
	Contract Expenditure – US Government PSFD (MoU (FY 14/15 – 22/23)	(175.8)	5
	Contract Expenditure – US Government – LRIP11 Non-Annualised Sustainment	(15.0)	5

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	Contract Expenditure – US Government – LRIP11 – Production	(7.2)	5
	Contract Expenditure – US Government – LRIP10 – Non-Annualised Sustainment	(15.9)	5
	Contract Expenditure - US Government LRIP 11 Propulsion	(1.3)	5
	Contract Expenditure – US Government LOT 15 Production	(82.0)	5
	Contract Expenditure- US Government- LRIP 10 Production	(10.2)	5
	Contract Expenditure – LOT 12-14 Indefinite Delivery Indefinite Quality (IDIQ)	(54.0)	5
	Contract Expenditure – US Government – LRIP 10 Propulsion	(0.4)	5
	Contract Expenditure – US Government LRIP 8 – Production and Non-Annualised Sustainment	(0.6)	5
	Contract Expenditure – US Government Expenditure – LOT 15 Propulsion	(10.5)	5
	Other Contract Payments/Internal Expenses	(232.0)	8
		1,701.7	
Jun 22	Total Expenditure	10,743.1	
Jun 22	Remaining Budget	5,052.6	

Notes

1	A May 2012 budget adjustment (\$204.4m) was applied to AIR6000 Phase 2A/2B based on an incorrect interpretation of the Government's decision to vary the New Air Combat Capability (NACC) Program. In September 2012, a budget adjustment correction was applied (\$201.5m), using an updated exchange rate. As a result, the project's total approved budget has remained the same as intended by Government.
2	Government approved AIR6000 Phase 2A/2B Stage 2 in April 2014 for an additional 58 CTOL F-35A JSF aircraft.
3	Transfer to Estate and Infrastructure Group following request for funding scope changes for RAAF Base Tindal Joint Strike Fighter facilities.
4	Up until July 2010, indexation was applied to project budgets on a periodic basis. The cumulative impact of this approach was \$70.3m. In addition to this amount, the impact on the project budget as a result of out-turning was a further \$280.8m having been applied to the remaining life of the project.
5	The scope of this contract is explained further in Section 2.3 – Details of Project Major Contracts.
6	Previously reported as a single Block buy Contract that combined the expenditure of the Production and Propulsion.
7	Other expenditure for the period prior to July 2021 is associated with Support Systems (\$484.4m) 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 (\$470.7m) comprising of FMS cases, weapons and aircraft; Project Office services (\$148.2m) comprising of Project Office services (travel, contract support services) and contract administration in relation to the Joint Project Office NACC operating expenditure (\$73.2m) comprising of Project Office expenses, initial support and maintenance, US pilot training and the NACC ISP Grants Program (\$28.4m); and non-standard mission system (\$7.4m) for the Ferry activities, LRIP 6 Production (\$263.4m), LRIP 6 Propulsion (\$50.0m), Production Sustainment and Follow On Development MOU (\$180.9m), FY17 Air Vehicle Initial Spares (\$85.9m), Lot 12 Air Vehicle Initial Spares (\$89.2m), FMS Other (\$120.1m) and CIOG Expenditure (\$90.3m).
8	Other expenditure for the period July 2021 to June 2022 is associated with Mission System (\$145m), Supports Systems (\$72m) and FMS (\$5.4m)

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
1,949.3	1,774.3	1,754.4	<p>PBS – PAES:</p> <p>During 2021-22, aircraft production activities continued to be delivered in accordance with the revised delivery schedule as agreed by the F35 Joint Program Office due to COVID-19. This change in delivery schedule resulted in an F35 fleet of 53 aircraft instead of 56 by the end of 2021-22. Delivery of the three aircraft will occur in 2022-23.</p> <p>PAES – Final Plan:</p> <p>The movement in exchange rate account for the variance. The acquisition is as now forecast in 2022-23 PBS Rates.</p>
Variance \$m	(175.0)	(19.9)	Total Variance (\$m): (194.9)
Variance %	(9.0%)	(1.1%)	Total Variance (%): (10.1%)

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(4.5)	Australian Industry	30 Jun 22 - The variation is primarily due to underspend of Spares, Weapons, and some Verification and Validation activities as well as Australian Canadian United Kingdom Reprogramming Laboratory (ACURL) Phase 2. This underspend was partially offset by re-phasing the Aircraft Lot 15 Air Vehicle Advanced Acquisition Contract to shore up the production schedule.
		(48.2)	Foreign Industry	
			Early Processes	
			Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
1,754.4	1,701.7	(52.7)	Total Variance	
		(3.0)	% Variance	

2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 22 \$m			
US Government PSFD MoU (FY 14/15 – 22/23)	Dec 06	180.3	768.7	Various	MoU	1, 9, 10
US Government (LRIP 10 Production)	Dec 14	79.2	898.2	Fixed Price Incentive	USG Contract	2, 9, 10
US Government (LRIP 10 Propulsion)	Mar 15	13.4	154.6	Fixed Price Incentive	USG Contract	3, 9, 10
US Government (Reprogramming Laboratory)	Mar 15	119.0	116.1	Fixed Price Incentive	USG Contract	4, 9, 10
US Government (LRIP 8 Production and Non-Annualised Sustainment)	Jun 15	99.9	103.2	Fixed Price Incentive	USG Contract	5, 9, 10
US Government (LRIP 11 Production)	Dec 15	88.2	857.4	Fixed Price Incentive	USG Contract	6, 9, 10
US Government (AT-D-YAF)	Jun 16	111.9	111.6	Reimbursement	FMS	9, 10
US Government (LRIP 10 Non-Annualised Sustainment)	Jun 16	31.8	283.5	Various	USG Contract	9, 10, 13
US Government (AT-P-AMN)	Jul 16	132.3	140.9	Reimbursement	FMS	9, 10
US Government (LRIP 11 Propulsion)	Jul 16	14.2	157.0	Fixed Price Incentive	USG Contract	9, 10, 12
US Government (Block Buy Contract Production)	Feb 17	236.3	4,219.7	Various	USG Contract	7, 9, 10
US Government (Block Buy Contract Propulsion)	Aug 17	39.6	864.6	Various	USG Contract	7,9, 10
US Government (LRIP 11 Non-Annualised Sustainment)	May 18	57.5	176.2	Various	USG Contract	9, 10, 13
US Government (LOT 12-14 Indefinite Delivery Indefinite Quantity)	Jan 19	52.8	160.4	Various	USG Contract	9, 10, 14
US Government (LOT 15 Production)	Jan 20	125.3	603.1	Fixed Price Incentive	USG Contract	9, 10, 15
US Government (LOT 15 Propulsion)	Dec 19	16.6	156.0	Various	USG Contract	9, 10, 16
Notes						
1	Contribution to PSFD MoU shared costs based on proportionality principle: i.e.number of aircraft foreshadowed for purchase as a percentage of entire partner fleet. Commitment via MoU signature in December 2006 and again in March 2021 with price re-baselined from 2002 to 2012 per US Government update. Covers period from 2014–15 to 2022–23 as approved by Government in April 2014. The PSFD MoU 'contract' is a 'variable' priced 'contract' in that it is updated annually to reflect both estimated shared costs and escalation. Contract Price increase since signature due to increased tooling replacement cost not previously included; inclusion of scope previously considered country unique; and updated estimates for shared					

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	sustainment, Follow-on Development and F-35 Joint Program Office administration.			
2	LRIP 10 Production contract for Australia's next tranche of eight F-35A aircraft for initial Long Lead items. This contract is progressively modified with approved work scope and forms the basis of the Air System contract for the complete system – per Section 1.3 'Uniqueness'.			
3	LRIP 10 Propulsion contract for eight engines for installation on Australia's next tranche of eight F-35A aircraft. This contract is progressively modified with approved work scope and forms the basis of the propulsion contract for the complete system – per Section 1.3 'Uniqueness'. Subsequent to full funding being awarded for this contract further modifications (contract changes) have occurred. These include: (1) Long Lead funding for LOT 12 (15 aircraft), (2) initial sparing for operating units, maintenance depots and the Global Pool and (3) the migration of ALIS propulsion data.			
4	Contract for Reprogramming Laboratory hardware and software tools.			
5	LRIP 8 Production and Non Annualised Sustainment contract for the provision of training devices, support equipment, non-aircraft spares and an aircrew fitting service.			
6	LRIP 11 Production contract for Australia's next tranche of eight F-35A aircraft. This contract includes Long Lead items and is progressively modified, forming the basis of the Air System contract for the complete system – per Section 1.3 'Uniqueness'. This contract has met Full Funding award with the increase in contract value a result of the staged procurement and provision of funding for the F-35 production line to build the aircraft.			
7	Lots 12-14 Production and Propulsion are procured under separate Block Buy Contracts, Air Vehicle Production via Lockheed Martin and Propulsion via Pratt & Whitney. Both contracts encompass Long Lead items for the procurement of aircraft under Lots 12-14 and Economic Order Quantities for the production contract only. Both production and propulsion are also contracted under 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. The FY 17 Air Vehicle Initial Spares contract had USD30,709,575 deobligated, as the eventual Finalised Contract value was lower than the 'not to exceed' value of the Unfinalised Contracting Action.			
9	Contract value as at 30 June 2022 is based on actual expenditure to 30 June 2022 and remaining commitment at current exchange rates. This includes adjustments for indexation (where applicable).			
10	The scope of these contracts is explained further below.			
11	The project has reviewed the list of major contracts reported in the PDSS to ensure it reflects only the most significant contracts of the project. This has resulted in some contracts previously reported separately now being reported as part of other contract payments/internal expenses and being removed from the list of major contracts.			
12	LRIP 11 Propulsion contract for eight engines for installation on Australia's tranche of eight F-35A aircraft being procured through the LRIP 11 Production Lot. This contract is progressively modified with approved work scope and forms the basis of the propulsion contract for the complete system – per Section 1.3 'Uniqueness'.			
13	LRIP 10 and 11 Non-Annualised (NA) Sustainment contracts consist of one-time tasks and infrastructure stand up activities. The contracts undergo discrete modifications for each individual good and/or service being procured which in turn dictates the 'type' of contract. The majority of each discrete procurement is acquisition related, examples being initial non-aircraft spares, site activation, depot stand-up, hardware procurement and delivery, training systems, support equipment and ALIS.			
14	FY19-20 Air Vehicle Initial Spares, Lot 12 - 14 Generation III Heavy Helmet Mounted Display Systems (GEN IIH HMDS) and Lot 13 - 14 Ancillary Mission Equipment (AME) and Pilot Fit Equipment (PFE) have been placed on the Lockheed Martin Indefinite Delivery Indefinite Quantity (IDIQ) contract. The IDIQ contract allows flexibility in both quantities and delivery scheduling and allow the ordering of supplies and goods to be delayed until after requirements materialise. The JPO have stated that placing Spares, AME and PFE requirements on the IDIQ contract allows for more agile procurement for F-35 Enterprise, aligning delivery schedule with aircraft deliveries.			
15	Lot 15 Production contract for Long Lead and Economic Order Quantity (EOQ) funding associated with the procurement of nine F-35A aircraft. The purpose of EOQ funding is to allow for the procurement of extra-long lead components that will reduce the procurement cost of the aircraft by taking advantage of economy of scale orders. Allocated funding was advanced in May 2022 to shore up continued production of Lot 15 aircraft ahead of the finalised Lot 15 AV Production Full Funding Contract, anticipated in August 2022.			
16	Lot 15 Propulsion Contract for the procurement of nine F135 engines for installation on Australia's nine F-35A Aircraft procured through the Lot 15 Production Contract. This contract commenced with Long Lead funding and was later modified as an Unfinalised Contract Action (UCA) to include the remaining Production funding (Full Funding). As the total price for Australia's Lot 15 F135 Propulsion Production was known, commitment approval was sought for the full estimate (100%) NTE value minus previous Long Lead commitments. Finalisation of Lot 15 Propulsion contract is anticipated for August 2022.			
Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 22		
US Government (PSFD MoU)	N/A	N/A	Australia's contribution to shared costs from 2010 to 2023 based on the purchase of 100 aircraft. Includes contribution to production tooling, US overhead cost of running program, follow on development and shared sustainment activities.	1
US Government (LRIP 10 Production)	8	8	Procurement of Advanced Acquisition items associated with the next eight F-35A aircraft procurement.	
US Government (LRIP 10 Propulsion)	8	8	Procurement of Advanced Acquisition items and spares associated with propulsion systems for the next eight F-35A aircraft procurement. This contract	

			has also been modified to include Long Lead items to support Lot 12 aircraft.	
US Government (Reprogramming Laboratory)	N/A	N/A	Reprogramming Laboratory Hardware and Software tools.	
US Government (LRIP 8 Production and Non-Annualised Sustainment)	N/A	N/A	Training devices, support equipment and non-aircraft spares.	
US Government (LRIP 11 Production)	8	8	Procurement of Advanced Acquisition items associated with the next eight F-35A aircraft procurement.	
US Government (AT-D-YAF)	N/A	N/A	Procurement of Small Diameter Bombs (SDB 1) and associated racks.	
US Government (AT-P-AMN)	N/A	N/A	Procurement of Radio Frequency Countermeasures.	
US Government (Block Buy Contract Production)	N/A	45	Procurement of Long Lead items and Economic Order Quantities for Lots 12-14, with full funding contract awarded in Quarter 4 2019, for procurement of 45 F-35A aircraft.	2
US Government (FY17 Air Vehicle Initial Spares & ACURL Spares)	N/A	N/A	F35 global spares pool, Deployable Spares Pack and spares for the Reprogramming Lab.	
US Government (Block Buy Contract Propulsion)	N/A	45	Procurement of Long Lead items for Lots 12-14, with full funding contract awarded in Quarter 4 2019, for procurement of 45 F135 propulsion systems.	2
US Government (LRIP 11 Propulsion)	8	8	Procurement of propulsion systems required for the eight F-35A aircraft being procured through the LRIP 11 Production Lot.	
US Government (LRIP 10 Non-Annualised Sustainment Contract)	N/A	N/A	Procurement of initial non-aircraft spares, site activation, depot stand-up, hardware procurement and delivery, training systems, support equipment and ALIS.	
US Government (LRIP 11 Non-Annualised Sustainment)	N/A	N/A	Procurement of initial non- aircraft spares, site activation, depot stand-up, hardware procurement and delivery, training systems, support equipment and ALIS.	
US Government (Lot 12-14 Indefinite Delivery Indefinite Quantity)	N/A	N/A	Procurement of Lot 13-14 Ancillary Mission Equipment and Pilot Fit Equipment and HMDS Spares, Lots 12-14 Helmet Mounted Display System (HMDS), and FY 19-20 Air Vehicle Spares.	
US Government (Lot 15 Production)	N/A	N/A	Procurement of Advanced Acquisition items associated with the next nine F-35A aircraft procurement.	
US Government (Lot 15 Propulsion)	N/A	N/A	Procurement of Advance Acquisition items and full funding production costs for nine F135 engines associated with Lot 15 F-35A Production	
Major equipment accepted and quantities to 30 Jun 22				
53 F-35A aircraft have been received by Australia.				
Notes				
1	No equipment delivered as part of this contract.			
2	These contracts were previously reported as Lot 12 Long Lead and EOQ.			

Section 3 – Schedule Performance

3.1 Design Review Progress

Review	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
Preliminary Design	JSF Air System (CTOL Variant)	Mar 03	N/A	Jul 03	4	1
Critical Design	JSF Air System (CTOL Variant)	Apr 04	Feb 06	Feb 06	22	2
Notes						
1	Aircraft weight was the major issue that delayed the closure of the Preliminary Design Review (PDR) by four months.					
2	Additional design effort was required to achieve the weight savings expected after PDR. The CTOL Critical Design Review (CDR) was delayed as a result from April 2004 to February 2006 until the re-design was complete and included the 'roll up' of many lower-tiered reviews.					

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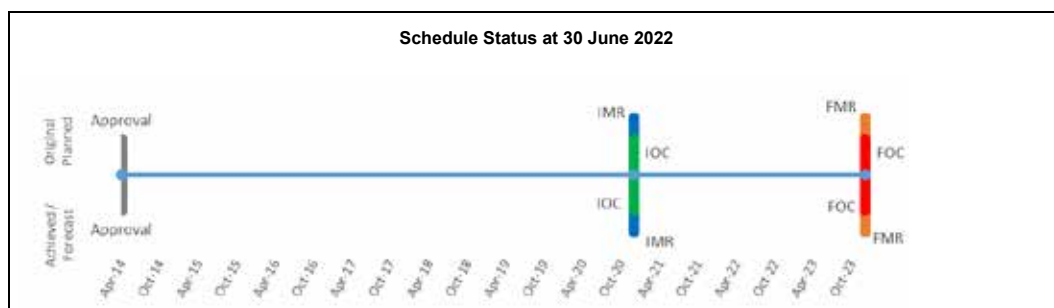
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3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
System Integration	Block 2B Fleet Release (against IMS7 Baseline)	Jun 15	Jun 15	Jul 15	1	1
	Block 3i Initial Release to support LRIP 6 (against IMS7 Baseline)	Mar 14	Nov 14	Sep 14	6	2
	Block 3F Fleet Release (against IMS7 Baseline) – for F-35A (full envelope with weapons)	Aug 17	Oct 17	Aug 17	0	3, 4, 5
Acceptance	Accept and deliver two (LRIP 6) aircraft to US Pilot Training Centre	Mar 14	Nov 14	Nov 14	8	6
	Accept and deliver aircraft 3-14	Dec 16	Jun 19	Jun 19	30	7
	Accept and deliver aircraft 15-72	Dec 23	Sep 23	Dec 23	0	8
Notes						
1	Block 2B supported the United States Marine Corps IOC declaration which occurred on 31 July 2015.					
2	Block 3i Initial Release software provides initial pilot training capability for the LRIP 6 aircraft configuration. The six month variance was due to delays in earlier software deliveries and compounded by integration into the updated computer architecture delivered in LRIP 6 aircraft.					
3	F-35 aircraft software is developed and released in capability blocks. Block 3F software is the final release under the System Development and Demonstration (SDD) phase of the program and is the requirement for Australian IOC declaration. It is noteworthy; all Block 3F software is developed to support full Australian weapons requirements, where Australia's weapons approval is dependent on US and Australian clearances.					
4	Block 3F software was fleet released August/October 2017 onto late LRIP 9 US and Partner aircraft. Fleet release dates indicate software has finished development, while the release of partner nation specific loads follows with minor adjustments to meet sovereign requirements. The priority for the release of partner specific loads is driven by a nation's aircraft delivery schedules.					
5	Australia accepted its first three Block 3F aircraft March 2018. Acceptance, initially planned February 2018 as contracted Bed Down Plan, was delayed to remediate non-software related production issues. All new aircraft are to be accepted in Block 3F (or later) configuration.					
6	The March 2014 original delivery date was based on Australian IOC in December 2018. The November 2014 delivery date reflects a deferral in production to align with the US re-baselining of JSF production, and verification of a new software load for LRIP 6 aircraft to assure an appropriate training capability.					
7	The final remaining 12 Stage 1 aircraft were originally scheduled for delivery by December 2016 leading to Australian IOC in 2018. In March 10, the JSF Program experienced a Nunn-McCurdy breach of the critical cost growth statutory threshold. Based on subsequent delays to SDD completion and the US aircraft buy profile, the Australian Government initiated a two year deferral in production and IOC, with Aircraft (14) accepted in June 19. This will achieve a revised Australian IOC by December 20.					
8	The COVID-19 re-baselined Air Vehicle production remains on schedule, with aircraft deliveries occurring on or slightly ahead of schedule. Successive contracting delays and Technical Refresh 3 production incorporation may pressure delivery of the final Lot 15 aircraft prior to Dec 23. JPO schedule and executive communications continue to provide assurance that Lot 15 production and delivery schedules will support timely declaration of FOC.					

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Oct - Dec 20	Dec 20	(0)	1
Initial Operational Capability (IOC)	Dec 20	Dec 20	(0)	1
Final Materiel Release (FMR)	Oct - Dec 23	Dec 23	(0)	1
Final Operational Capability (FOC)	Dec 23	Dec 23	(0)	1, 2
Notes				
1	The Capability Manager declared IOC on schedule acknowledging a number of known acceptable deficiencies with the aircraft and support systems. This is not unusual for capabilities being introduced into service. The capability continues to track toward FOC in 2023. Delivery of aircraft remains largely in line with the capability manager's expectation.			
2	While this milestone represents the completion of Phase 2A/2B requirements, the aircraft will continue to develop under the Continuous Capability Development and Delivery program through future phases of the AIR6000 program managed by ACSPO.			

**Note**

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

Section 4 – Material Capability/Scope Delivery Performance**4.1 Measures of Material Capability/Scope Delivery Performance****Traffic Light Diagram: Percentage Breakdown of Material Capability/Scope Delivery Performance**

	Green: The Project expects to meet the majority of capability requirements as expressed in the Material Acquisition Agreement and supporting suite of Capability Definition Documentation, with delivery in accordance with requirements of the relevant Technical Regulatory Authorities.
	Amber: AIR6000 Phase 2A/2B has options to deliver Maritime Strike capabilities in a timeframe closely following that of the United States Navy.
	Red:
Note This Traffic Light Diagram represents Defence's expected capability delivery. Capability assessments and forecast dates are excluded from the scope of the Auditor-General's Independent Assurance Report.	

4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	Acceptance and delivery of 33 aircraft to RAAF Base Williamtown between 2018 and 2020 to support Australian V&V and stand-up of No.3 Squadron (SQN) and No.2 Operational Conversion Unit (2OCU); 3SQN facilities fully fitted, accredited, staffed and ready to support flying operations. Materiel delivery, V&V, training, support and transition activities required for IOC completed. IMR was achieved in December 2020.	Achieved
Initial Operational Capability (IOC)	The JSF system shall be capable of performing and sustaining one squadron capable of Defensive Counter Air (DCA), and Offensive Counter Air (OCA) roles (though not concurrently) for a 30 day period. The JSF system shall be deployable to Forward Operating Bases within Australia and Overseas. Aircraft are available to support the start of pilot training in Australia. Initial Operational Capability was achieved in December 2020.	Achieved
Final Materiel Release (FMR)	Delivery of final aircraft between 2021 and 2023, resulting in all 72 F-35A aircraft in Australia. All aircraft will be upgraded in accordance with the Continuous Capability Development and delivery (C2D2) plan (noting that this is an ongoing program of capability enhancement). Delivery and acceptance, commissioning or contracting in Australia of the aircraft, spares, support systems, and	Not yet achieved

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	personnel, training, weapons, equipment, contracts and facilities necessary for ongoing operations of three Operational Squadrons and one training Squadron at FOC. Materiel delivery, V&V, training, support and transition activities required for FOC completion. FMR is expected to be achieved December 2023.	
Final Operational Capability (FOC)	The JSF system shall be capable of performing and sustaining three operational squadrons and one training squadron, as per strategic and capability guidance. FOC is expected to be achieved in December 2023.	Not yet achieved

Section 5 – Major Risks and Issues

5.1 Major Project Risks

Identified Risks (risk identified by standard project risk management processes)		
Description	Remedial Action	
The F-35A capability may be impacted by failure to Deliver air system elements to meet the capability requirements of Air Force as a result of a technical deficiency or a delay in delivery schedule. F-35A air system elements include aircraft/engine, weapons, Autonomous Logistics Information System (ALIS) system, reprogramming enterprise and the training system.	AIR6000 Phase 2A/2B has established a risk management framework to ensure that any risks to establishing a credible air combat capability are identified and resources can be allocated to mitigate these risks to ensure they do not impact the system which is being delivered. The air system elements are monitored and controlled within the integrated master schedule and the Project Performance Review process. The inclusion of Cooperative Partner Personnel positions within the Joint Program Office will give Australia early insight into emergent potential issues. The Capability Manager is a key informed stakeholder in this process which will ensure the systems being delivered will meet Air Forces evolving capability needs.	
The Australian F-35 capability relies on a cohesive Joint Strike Fighter Cooperative Program to develop and sustain the F-35 system. Significant changes to the program organisation may impact Australia's and the F-35 Partners' ability to influence the program.	Defence will maintain cohesive working relationships with enterprise stakeholders, maintain Government to Government engagement in the program, and continue to engage in multilateral and bilateral discussions with F-35 partners. Australia will continue representation at strategic fora and where appropriate take the lead on influencing the F-35 Partners with the F-35 JPO and any future F-35 sustainment organisation. This risk has been downgraded due to changes to the cooperative program.	
The Australian F-35A sustainment solution may be impacted by the Joint Program Offices (JPO) ongoing development and evolution to a mature and effective Global Support Solution (GSS), leading to an impact on Australia's sustainment performance.	The F-35 Lightning II Program has not yet reached Full Rate Production but is simultaneously executing Development, Production and Sustainment lines. The F-35 GSS performance is currently lower than anticipated but is still maturing and developing. AIR6000 Phase 2A/2B and Air Combat Systems Program Office will continue to provide feedback on the GSS performance at F-35 JPO governance fora to make it effective for the Australian F-35 capability.	
Australia's standing and reputation in the international F-35 co-operative partnership may be compromised due to security or cyber breaches leading to potential disclosure of sensitive information to potential adversaries.	AIR6000 Phase 2A/2B will continue to train, practice and promote efficient application of security policy, practices and procedures across the physical, information and personnel security domains and ensure that effective and appropriate mitigations are deployed to address any identified issues. Robust security compliance assurance control activities are continually conducted within Defence and our broader industry partners. In addition to the promotion and enforcement of the Defence Industry Security Program, engagement continues with Defence and Government cyber security agencies to develop an Information and Communications Technology Protection Program which would assist our industry partners.	
Acquisition and operation of the F-35A capability may be affected by overall funding or programming issues arising from internal cost growth / forecasting inaccuracy, production cost increases, future development of the common reprogramming laboratory and COVID-19; leading to an impact on capability and schedule.	AIR6000 Phase 2A/2B will conduct on-going engagement with the F-35 Joint Program Office and major project suppliers to facilitate improved cost data to allow the F-35 project to meet budgeting and programming expectations along with proactive management of cost risk identification and engagement with the Capability Manager to prioritise requirements to deliver project capability within the approved project budget.	
The required Australian industry benefit may not be realised, or may be delayed, resulting in a reduced advantage to the Australian economy and causing reputational damage to Defence and Government. Australian industry may not be able to meet Global Support Solution (GSS) performance, cost or schedule requirements. Australian industry assignment MRO&U activation may impact on the performance outcomes of F-35 GSS.	AIR6000 Phase 2A/2B will conduct coordinated activities with Defence Industry Division and maintain close working relationships with industry participants. The project will continue to use the grants program to provide financial support for industry capacity and capability growth, and AIR6000 Phase 2A/2B advocacy on behalf of Australian Industry with Joint Program Office, United States Prime Contractors and Original Equipment Manufacturers. This risk has been downgraded due to realised benefit to Australian industry.	

Failure to effectively employ and manage the Military, Government employee and supporting Defence Industry workforce may impact the effectiveness and efficiency of the Australian F-35A program.	The JSF Integrated Project Team conducts a comprehensive review of its Workforce Plan quarterly. This plan feeds into the CASG Total Workforce Model to ensure the right balance of APS, permanent Air Force personnel and reserves that will generate a built-in resilience in key operational areas. Resource planning working groups have been set up to address niche or nascent capabilities to ensure sufficient attention is given to addressing workforce fragility. Where appropriate a skilled contractor workforce will be engaged to provide surety of capability delivery. Regular engagement of RAAF personnel management, APS recruitment agencies and industry partners enables the program to be responsive to issues, across the total workforce, and address deficiencies in a timely manner. This risk has been retired due to commencement of domestic training, activation of key industry facilities and wind-up of Classic Hornet support work.
The capability requirements for an integrated fifth generation Air Force may be impacted due to delays in delivery of an effective training system. This may include service release of training devices and equipment, workforce provisioning and contractual arrangements resulting in possible delays to capability outcome declarations.	The JSF Training System is evolving and work continues with the key stakeholders on understanding the capabilities and aligning expectations. Additional personnel have been engaged to deliver the Australian Training System and the associated support contracts. Influential representation by Defence at critical and essential F-35 JPO meetings and Periodic Technical Interchange Meetings with Lockheed Martin will burn-down the risk through persistent and consistent education.
Emergent Risks (risk not previously identified but has emerged during 2021–22)	
Description	Remedial Action
AIR6000PH3 and PH5 may not deliver sufficient weapon inventory for FOC.	Consequential impact to FOC is being actively managed by AEOSPO and Air Force.

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 has largely addressed the COVID-19 impacts to the delivery schedule. Cost was not significantly impacted. Lockheed Martin and the US F-35 Joint Project Office re-baselined the aircraft production schedule to accommodate a reduced production workforce. Australian international and domestic travel restrictions that limited the ability of specialist installation and verification personnel were overcome through close engagement with Australian Border Force to ensure compliance with all entry requirements.
The upgrade of the Weapons Loading Trainer to the 3.2 and 3.2.1 configurations was affected by delays in contracting, resulting in the delivery schedule being late to need.	Delivery of the Weapons Loading Trainer and Gun Module upgrades in Q4 2021 enabled Australian personnel to be trained using the Trainer and gun module from Q2 2022.
Australia's ability to organically manage non-standard Low Observable maintenance from a zonal verification and validation perspective have been delayed.	The project is working with Lockheed Martin and the F-35 Joint Program Office to mitigate the impact by using a Lockheed Martin embedded Low Observable Field Service Representative and contracted field teams who have the necessary experience to operate the HIT, analyse the data manually, and incorporate into LOHAS as required. All zonal Low Observable verification & validation activities will be carried out by the contracted personnel until the organic capability is established.

Note

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

Section 6 – Lessons Learned

6.1 Key Lessons Learned

Description	Categories of Systemic Lessons
JSF is a complex program that requires a robust Program Management framework to be established early in the life of the program lifecycle.	Governance
JSF is a US Cooperative Program that requires active engagement with all Program Participants and especially the US Services to ensure Australian 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
The complexity and effort to integration JSF into ADF systems of systems has been underestimated.	Requirements Management
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 proposed the renovation of a disused Masters Hardware facility, rather than building a new facility on a green-field site. This resulted in significant schedule reduction.	Requirements Management

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The disadvantages of conducting staged facility handover / takeover (HOTO) activities outweigh the advantages. Traditional HOTO activities should be conducted.	Requirements Management
Having a dedicated ICT SME team (CIOG) embedded within the Project Office was a significant contributor to reducing ICT risks.	Requirements Management
The ongoing sustainment costs of ICT intensive projects is expensive - hardware refresh, software licensing, upgrades, personnel (administrators) - and cannot be underestimated.	Requirements Management

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2022

Unit	Name
Division	Aerospace Systems Division
Branch	Aerospace Combat Systems Branch

Project Data Summary Sheet¹⁴²

Project Number	SEA5000 Phase 1
Project Name	HUNTER CLASS FRIGATE DESIGN AND CONSTRUCTION
First Year Reported in the MPR	2019-20
Capability Type	Replacement
Capability Manager	Chief of Navy
Government 1st Pass Approval	Apr 16
Government 2nd Pass Approval	Jun 18
Budget at 2nd Pass Approval	\$6,184.0m
Total Approved Budget (Current)	\$6,055.7m
2021-22 Budget	\$531.1m
Complexity	ACAT I



Hunter Class Frigate

Section 1 – Project Summary

1.1 Project Description

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

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

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

- progressing detailed design;
- commencement of prototyping works; and
- procurement of some Long Lead Time Items (LLTI) for Batch 1 Build.

The Head Contract is with ASC Shipbuilding Pty Ltd (trading as BAE Systems Maritime Australia (BAESMA)), a subsidiary of BAE Systems Australia.

The HCF will be constructed in Osborne, South Australia.

1.2 Current Status

Cost Performance

In-year

As at 30 June 2022, financial year 2021-22 expenditure is \$608.5m against the forecast budget of \$531.1m. The variation is mainly driven by:

- earlier than planned payment of a portion of the UK licence fee for the reference ship design;
- higher than forecast Foreign Military Sales (FMS) disbursements for the combat management system;
- higher pass-through shipyard costs under the Head Contract; and
- services relating to CASG's Maritime Information Environment (MIE).

Project Financial Assurance Statement

As at 30 June 2022, project SEA5000 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 that as at the reporting date there is sufficient budget including contingency remaining for the Project to complete against the agreed scope.

Contingency Statement

The Project has not applied contingency in the financial year.

Schedule Performance

In June 2018, Government approval was granted for the D&P stage, inclusive of prototyping and procurement of LLTI for Batch 1 Build. This has enabled the design of the Mission and Support Systems to proceed, together with mobilisation of BAESMA to the Osborne South Naval Shipyard ahead of prototyping, which commenced on schedule in December 2020.

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

<p>In the current year (2021-22), the completion date for the System Definition Review has driven delays to subsequent design reviews. The Project has also experienced schedule variance due to delays in the design maturity of the UK's Type 26 Program, which is the Reference Ship Design for the HCF. These delays in the UK were exacerbated by the COVID-19 pandemic.</p> <p>In June 2021, the Government agreed to the deferral of the Ship 1 Cut Steel milestone by up to 18 months, to no later than June 2024. This will enable the Commonwealth and BAESMA to address design maturity and develop a contractible offer for the Batch 1 Build Scope. This in turn will enable the commencement of the construction of Ship 1 no later than June 2024. The extended prototyping period now includes the construction of four HCF blocks, in addition to the five Type 26 blocks that were approved by Government in 2018. The Project intends to use the four additional prototyping blocks in the construction of the Batch 1 ships. The Project is expected to return to Government for consideration of the Batch 1 Build stage Second Pass funding and approval in early 2024.</p> <p>While there are significant risks and challenges, as would be expected for a project of this complexity, the Project is on track to commence Ship 1 construction in June 2024. The Commonwealth continues to work with BAESMA on mitigating risks, managing issues and any associated impacts to the Project.</p>
<p>Material Capability/Scope Delivery Performance</p> <p>The current scope of the Head Contract addresses the D&P stage, inclusive of prototyping and procurement of LLTI for the Batch 1 Build stage.</p> <p>Under the existing Head Contract D&P scope and budget, BAESMA will also fabricate a 'proof of concept test rig' as a risk reduction measure for the fabrication of the Ship 1 mast.</p>
<p>Note</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>Background</p> <p>The Project will form the foundation of the Government's Continuous Naval Shipbuilding Program, as announced in the 2017 National Naval Shipbuilding Plan. The Project is in the D&P stage, and will progress through multiple Government decision-making points for subsequent project stages.</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 SEA5000 Phase 1 capability. The Project was directed to return to Government in March 2015 when further decisions on SEA5000 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 <i>Hunter</i> Class Frigates will be built in South Australia at the Osborne South Naval Shipyard.</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 SEA5000 Phase 1 to progress a Competitive Evaluation Process (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 approval for SEA5000 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 SEA5000 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 BAE's 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 design changes to incorporate the HLCRs as prescribed by Government. The nine frigates were classed as the <i>Hunter</i> Class FFG.</p> <p>In February 2022, the Project sought Interim Pass approval from Government to contract BAESMA to construct four additional prototyping blocks in addition to the five it is contracted to build under the current D&P scope. The aim is to (a) provide the minimum necessary additional production scope to ensure no redundancies are required in the core production workforce and maintain reasonable continuity of production skill sets; and (b) reduce cost, risk, and uncertainty while improving design maturity and schedule durations to ensure the Commonwealth and BAESMA can execute an arrangement for the Batch 1 Build scope which is affordable and acceptable to the Commonwealth.</p>
<p>Uniqueness</p> <p>The Project, delivering nine anti-submarine warfare frigates to the RAN, is one of the largest naval ship building projects ever undertaken in Australia.</p> <p>SEA5000 Phase 1 will be delivered in a number of stages to achieve the objectives of Continuous Naval Shipbuilding, with each stage requiring separate approvals by Government to ensure the Project remains within cost constraints.</p> <p>While the principles of the One Defence Capability System will be applied to the Project, due to the longevity, and staged nature of the Project, a unique approach will be required to manage the nine ships through the life cycle. An example of this is the requirement to return to Government for approval to commence construction and sustainment for each of the three batches of ships and their support system.</p>

Major Risks and Issues				
The Project is currently managing risks and issues at both a strategic and tactical level. Strategic risks and issues identified within Section 5 broadly fall under a number of key areas being:				
<ul style="list-style-type: none"> • Ship design maturity; • System Integration; • Operating Capability delivered to Navy; • Industry and Navy workforce; • Australian Industry Capability; and • Overall budget affordability. 				
Other Current Related Projects/Phases				
<ul style="list-style-type: none"> • SEA1397 Phase 5B – NULKA Upgrade. This is an upgrade to the launch sub-system associated with the active missile decoy system (Nulka) which is designed to seduce anti-ship missiles from their target. This capability will be ordered and procured under the existing SEA1397-5B Acquisition Contract (as additional order quantities). • DEF5010 – Active Electronically Scanned Array. This is a partnership between CEA Technologies and DSTG exploring the continuous development of Active Electronic Scanned Array technologies. 				
Note				
Major risks and issues are excluded from the scope of the Auditor-General's Independent Assurance Report.				

Section 2 – Financial Performance

2.1 Project Budget (out-turned) and Expenditure History

Date	Description	\$m		Notes
Project Budget				
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		
	Total at Second Pass Approval		6,183.9	
Aug 19	Real Variation - Transfer		3.3	
Feb 22	Exchange Variation		(131.6)	4
			(128.3)	
Jun 22	Total Budget – SEA5000PH1		6,055.7	
Project Expenditure				
Prior to Jul 21	Contract Expenditure - BAE Systems Maritime Australia (previously known as ASC Shipbuilding Pty Ltd)	(591.2)		
	Contract Expenditure - US Government FMS Case (ATPGSC)	(132.9)		
	Contract Expenditure - CEA Technologies Pty Ltd	(39.7)		
	Contract Expenditure - Deloitte Touché Tohmatsu	(30.5)		
	Contract Expenditure - Odense Maritime Technology	(29.5)		
	Contract Expenditure - Saab Australia Pty Ltd	(24.0)		
	Contract Expenditure - Raytheon Australia Pty Ltd	(22.5)		
	Contract Expenditure - US Government FMS Case (ATPLFZ)	(7.5)		
	Other Contract Payments / Internal Expenses	(341.2)		5
			(1,219.1)	
FY to Jun 22	Contract Expenditure - BAE Systems Maritime Australia (previously known as ASC Shipbuilding Pty Ltd)	(415.5)		
	Contract Expenditure - US Government FMS Case (ATPGSC)	(72.4)		
	Contract Expenditure - US Government FMS Case (ATPLFZ)	(37.7)		
	Contract Expenditure - CEA Technologies Pty Ltd	(22.0)		
	Contract Expenditure – Raytheon Australia Pty Ltd	(12.0)		
	Contract Expenditure – Saab Australia Pty Ltd	(11.1)		
	Contract Expenditure – IBM Australia Ltd	(10.8)		
	Contract Expenditure - Odense Maritime Technology	(6.8)		
	Contract Expenditure - Deloitte Touché Tohmatsu	(5.1)		
	Other Contract Payments / Internal Expenses	(15.1)		6
			(608.5)	
Jun 22	Total Expenditure		(1,827.6)	
Jun 22	Remaining Budget		4,228.2	
Notes				
1	CEA Technologies Radar Development Program			
2	Initiating the Competitive Evaluation Process for Future Frigates			
3	Conduct further combat system development activities and to secure critical support staff.			
4	Funding transfer between Capability Acquisition and Sustainment Group (CASG) and Security and Estate Group (SEG, formerly known as the Estate and Infrastructure Group (E&IG)) to address funding shortfall with the Naval Capability Infrastructure Subprogram (NCIS).			
5	Competitive Evaluation Process Participants (CEP) payment totals to \$122.5m, Project and Commercial Support payment totals to \$146.2m and Technical Support payment totals to \$72.4m.			
6	Project and Commercial Support payment totals to \$4.4m, and Technical Support payment totals to \$10.7m.			

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
655.2	532.1	531.1	<p>PBS to PAES: The variance is a result of lower than forecast expenditure against the Head Contract with BAE Systems Maritime Australia due to delays in establishing contracts for long lead items, and a significant reduction in forecast disbursements for combat system elements being acquired via Foreign Military Sales.</p> <p>PAES to Final Plan: The variance is due to foreign exchange supplementation.</p>
Variance \$m	(123.1)	(1.0)	Total Variance (\$m): (124.1)
Variance %	(18.8%)	(0.2%)	Total Variance (%): (18.9)

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(52.0)	Australian Industry	<p>The variation is mainly due to:</p> <ul style="list-style-type: none"> earlier than planned payment of a portion of the UK licence fee for the reference ship design higher than forecast FMS disbursements for the combat management system; higher pass-through shipyard costs under the Head Contract; and services relating to CASG's MIE.
		(25.4)	Foreign Industry	
			Early Processes	
			Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
531.1	608.5	(77.4)	Total Variance	
		(14.6)	% Variance	

2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 22 \$m			
CEA Technologies Pty Ltd 1	Nov 14	0.9	47.0	Variable	Standard Defence Contract	1,5
CEA Technologies Pty Ltd 2	Sep 21	27.8	27.8	Fixed	Standard Defence Contract	5
Saab Australia Pty Ltd	Nov 14	2.4	40.5	Fixed	Standard Defence Contract	7,5
United States Government (AT-P-GSC)	Jan 16	5.5	251.5	Reimbursement	Foreign Military Sales (FMS)	3,5
Deloitte Touche Tohmatsu	Apr 16	0.182	49.6	Fixed	Standard Defence Contract	6,5
BAE Systems Maritime Australia (previously known as ASC Shipbuilding Pty Ltd)	Dec 18	1,904.1	2,726.8	Variable	Standard Defence Contract	4,5
Odense Maritime Technology	Mar 19	0.3	62.5	Variable	Standard Defence Contract	4,5
Raytheon Australia Pty Ltd 1	Apr 19	6.8	13.6	Variable	Standard Defence Contract	2,5
Raytheon Australia Pty Ltd 2	Oct 19	9.0	34.6	Variable	Standard Defence Contract	2,5
IBM Australia Limited	Mar 21	3.5	14.2	Fixed	Standard Defence Contract	5,8
United States Government (AT-P-LFZ)	Sep 20	626.6	619.7	Reimbursement	Foreign Military Sales (FMS)	5,9
Notes						
1	Initial risk reduction studies relating to integration of CEA radar. Subsequent extensions include risk reduction studies, radar development activities including initial design work, initial platform integration and support for the Aegis/CEAFAR interface development.					
2	<p>Raytheon Australia Pty Ltd 1: Initial requirements verification and validation including development of a detailed design and progression towards Operation Readiness Review for the Maritime Information Environment. Subsequent extensions provide for hardware maintenance, software licences and support costs.</p> <p>Raytheon Australia Pty Ltd 2: Initial provision of specialist combat system technical support services for specialist services in support of combat management system activities and subsequent take up of option to extend to support continuous combat system development, which also includes uptake of additional personnel.</p>					

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3	US Government Initial MOU was for SEA5000 Feasibility and Technical Integration Study. Contract value was increased for additional Feasibility and Technical Risk Reduction Studies including CEAFAAR/Cooperative Engagement Capability (CEC) and integration of CEAFAAR into the Aegis Combat System. Contract value also includes acquisition of Long Lead Time Items for Development Sites.			
4	Design and Productionisation for Hunter Class Frigates. Contract changes include inclusion of shipyard licence fees, facilities management services, Functional Baseline review, the Maritime Integration Environment, and the Interim Arrangement, as well as the removal of some Australian Interface scope.			
5	Contract values as at 30 June 2022 is based on actual expenditure to 30 June 2022 and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable).			
6	Initial Contract for Delivery of Shipbuilding Strategy Report, subsequent contracts for Project Management support.			
7	Initial Contracts for combat system studies and subsequent contracts for technical support and de-risking activities for the combat management systems and radar platform integration.			
8	Initial contract for services relating to the in-service support of the Maritime Information Environment, subsequent changes incorporated an upgrade to address shipbuilding and sustainment partner requirements, a scalable solution and implementation approach to reduce cost of ownership.			
9	The variance at "Price at signature" and the "as at 30 June 2022" is a result of fluctuations in current exchange rates.			
Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 22		
CEA Technologies Pty Ltd 1	N/A	N/A	Risk reduction radar development activities including design work, platform integration and support for the Aegis/CEAFAR interface development.	
CEA Technologies Pty Ltd 2	N/A	N/A	Development and testing of new interface between US Aegis and CEAFAAR2 Phased Array Radar Systems.	
Saab Australia Pty Ltd	N/A	N/A	Combat system studies, technical support and de-risking activities for the combat management systems and radar platform integration.	
United States Government (AT-P-GSC and AT-P-LFZ)	N/A	N/A	Feasibility and Integration studies and acquisition of LLTIs.	
Deloitte Touche Tohmatsu	N/A	N/A	Project Management Support.	
BAE Systems Maritime Australia (previously known as ASC Shipbuilding Pty Ltd)	N/A	N/A	Design and Productionisation for the Hunter Class Frigates (HCF).	
Raytheon Australia Pty Ltd 1	N/A	N/A	Development of design operational readiness review of the Maritime Information Environment including licences, hardware and in-service support costs.	
Raytheon Australia Pty Ltd 2	N/A	N/A	Provision of specialist combat system technical support services and support continuous combat system development.	
Odense Maritime Technology	N/A	N/A	Identification of Support Requirements during the D&P stage.	
IBM Australia Limited	N/A	N/A	Services relating to the Maritime Information Environment (CASG's protected maritime ICT network across Naval shipyards and Defence establishments).	
Major equipment accepted and quantities to 30 Jun 22				
N/A				
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 Review (SRR)	Mission System and Support System	Sep 19	N/A	Sep 19	0	1
System Definition Review (SDR)	Mission System (Mission System System Definition Review (MSSDR))	Nov 20	Apr 22	May 22	18	1,2
	Support System (Support System System Definition Review (SSSDR))	Nov 20	Dec 22	Mar 23	28	1,2,3,8
Preliminary Design Review (PDR)	Mission System	N/A	N/A	Oct 23	N/A	1,2,4,8, 9
Critical Design Review (CDR)	Mission System (System Critical Design Review (SCDR))	Nov 22	N/A	Dec 24	25	2,5,6,8, 10
	Mission System (Final Critical Design Review (FCDR))	Jun 24	N/A	Dec 25	18	2,5,6,8, 10
	Support System (Support System Critical Design Review (SSCDR))	Apr 25	N/A	Feb 27	22	2,5,6,7, 8,10
Notes						
1	The Achieved/Forecast dates for the SRR, SDR and PDR design reviews are based on the date that the associated Head Contract Key Milestone was achieved or is forecast to be achieved. For SRR and MSSDR these dates were Sep 19 and May 22 respectively. For SSSDR and PDR, these dates are forecast to be Mar 23 and Oct 23 respectively. It is noted that Head Contract Key Milestones are generally achieved a number of months after the conduct of the design review exit event to enable the Key Milestone Criteria (e.g. closure or downgrading of action items) to be completed.					
2	The delayed achievement of the MSSDR, primarily as a result of design delays experienced in the UK Type 26 Program, has driven delays to subsequent design reviews. It is noted that the MSSDR included an element that was focused on the Land Based Test Site (Development and Sustainment) (LBTS(D&S)).					
3	In Q3 21, the conduct of the SSSDR exit event was deferred to Oct 22, by mutual agreement between the Commonwealth and BAESMA, in order to enable the Integrated Logistics Support artefacts to be further matured thus significantly increasing the likelihood of achieving an optimal outcome from the design review process. The Head Contract Key Milestone associated with SSSDR is forecast to be achieved in Mar 23.					
4	The Commonwealth and BAESMA are developing the scope of the PDR. The PDR exit event will be conducted in Jul 23 and will be focused on setting the Allocated Baseline (for the design of the Batch 1 ships and the LBTS(D&S)) and examining options to control the accumulation of risk into the detailed design leading into the Batch 1 Build stage. The forecast date been adjusted from Jul 23 (as reported in the 2020-21 report) to Oct 23 to align with the Head Contract Key Milestone date for PDR which is based on the Commonwealth's acceptance of the Key Milestone Progress Certificate. It is noted that the acceptance of a Progress Certificate for a Design Review is a number of months after the Design Review exit event to enable the closure or downgrading of action items that arise during the activity.					
5	Forecast dates for events occurring more than 18 months from the current date are not robust and should be considered indicative dates only as the Commonwealth and BAESMA are in the process of re-baselining the schedule for the D&P scope beyond the PDR event. The D&P scope schedule re-baseline activity will be complete in Aug 22 in advance of the second Integrated Baseline Review (IBR2) to be conducted in late 2022.					
6	Previous PDSS's have referred to a 'Critical Design Review – Combat System' event. The project will not conduct an event by this name. The concept of a 'Critical Design Review – Combat System' was contemplated prior to contract signature, however, it was not included in the System Review Plan that was agreed between the Commonwealth and BAESMA at contract signature as its scope was incorporated within the scope of the other Critical Design Reviews.					
7	Previous PDSS's have not referred to the Critical Design Review – Support System (SSCDR) event. The date for this design review (Apr 25) was brought into the Head Contract via the Integrated Logistics Support (ILS) program contract change executed in Feb 21.					
8	Forecast design review dates, derived from the Contract Master Schedule, include hard constraints. This means the dates are considered achievable and will not move if schedule slippage occurs. The D&P scope schedule re-baselining, in preparation for IBR2 in late 2022, may result in adjustments to design reviews that are currently subject to a hard constraint.					
9	The Original Planned and Current Contracted dates for PDR are set as N/A due to this Design Review not being included into the Head Contract as a Key Milestone. This was addressed through a change to the Head Contract that was executed during the 2021-22 review period, however, the Effective Date of the change was 01 Jul 22 (which falls outside the review period).					
10	The SCDR, FCDR and SSCDR are included in the Head Contract as Key Milestones, however, the date is set as TBC. As such, the Current Contracted dates for these Design Reviews are set as N/A. A change to the Head Contract will be executed in the 2022-23 review period to update these Key Milestone dates. The dates will be based on the outcome of the D&P re-baseline and IBR2 activities in late 2022 – see notes 5 and 8.					

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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	Prototyping commencement	Dec 20	N/A	Dec 20	0	
	Ship 1 Build commencement	Dec 22	N/A	Jun 24	18	1,2
Acceptance	Ship 1	TBA	N/A	TBA	N/A	3
Notes						
1	In Jun 21 the Government approved the deferral of the Ship 1 Build Commencement (Ship 1 Cut Steel) milestone date from Dec 22 to no later than Jun 24. The forecast date identified above refers to the milestone currently being worked to by the Commonwealth and BAESMA. It is noted, however, that the Batch 1 Build scope will be subject to Government Second Pass Approval in early 2024 to enable Commonwealth and BAESMA to include this scope within the Head Contract prior to Jun 24.					
2	The risk to the achievement of the Ship 1 Cut Steel milestone remains, but the milestone is currently considered achievable. The production by Design Zone methodology allows construction of low risk blocks to commence in Jun 24 as forecast, which enables the design for higher risk and more complex blocks to mature.					
3	This milestone is expected to be defined by Government Second Pass Approval in early 2024.					

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	TBA	TBA	N/A	1,2
Initial Operational Capability (IOC)	TBA	TBA	N/A	1,2
Final Materiel Release (FMR)	TBA	TBA	N/A	1,3
Final Operational Capability (FOC)	TBA	TBA	N/A	1,3
Notes				
1	SEA5000 Phase 1 has approval to procure LLTIs, perform prototyping and detail Design and Productionisation of the HCF.			
2	These milestones are expected to be defined by Government in early 2024 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 2022

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/Scope Delivery Performance

4.1 Measures of Materiel Capability/Scope Delivery Performance

Traffic Light Diagram: Percentage Breakdown of Materiel Capability/Scope Delivery Performance	
Not Applicable	Green: The Project does not currently have any materiel capability delivery approved. The Project is currently approved for the D&P stage, inclusive of prototyping and procurement of LLTI for the HCF. Capability requirements continue to be refined and assessed against the Second Pass approved scope, cost and schedule. The Project is expected to return to Government in early 2024 to seek approval of the scope and funding required for the Batch 1 Build stage.
	Blue: In Feb 22, the Project obtained Interim Pass approval from Government to increase the Head Contract D&P scope to include four additional prototyping blocks in addition the five BAESMA is already contracted to build. In May 22, the Commonwealth approved BAESMA, under the current D&P scope and budget, to fabricate a 'proof of concept test rig' as a risk reduction measure for the fabrication of the Ship 1 mast.
	Amber: As described in Section 5, the Project is currently managing a variety of technical risks related to the achievement of Navy materiel capability requirements. These risks are primarily related to the integration of the combat system into the UK Type 26 reference ship design, and constraints arising from design margin and fundamental naval architecture limits being reached.
	Red: N/A
Note	
This Traffic Light Diagram represents Defence's expected capability delivery. Capability assessments and forecast dates are excluded from the scope of the Auditor-General's Independent Assurance Report.	

4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	Note 1	Not yet achieved
Initial Operational Capability (IOC)	Note 1	Not yet achieved
Final Materiel Release (FMR)	Note 1	Not yet achieved
Final Operational Capability (FOC)	Note 1	Not yet achieved
Note		
1	The Project has approval to procure LLTIs, perform prototyping and detailed Design and Productionisation of the HCF. These milestones are expected to be defined by Government in subsequent Second Pass Approvals.	

Section 5 – Major Risks and Issues

5.1 Major Project Risks

Identified Risks (risk identified by standard project risk management processes)	
Description	Remedial Action
The HCF design is approaching fundamental naval architecture limits on weight and stability, and is in danger of either exceeding one or more platform limitations or providing in-service growth margins that substantially limit future capabilities.	The Project is tracking naval architecture limits and design margins closely through Head Contract deliverables such as the Margin Monitoring Program, the Quarterly Weight Report, and the Mandated System Review process. The next mandated review is the Preliminary Design Review planned for July 2023.
Change decisions are made without understanding technical, cost and schedule implications, leading to schedule slippage, cost growth, and an inability to achieve holistic technical performance objectives for Ship 1.	The Project has established and placed on contract the Mission System Functional Baseline and is now progressing towards the Allocated Baseline. BAESMA is undertaking a program re-baseline to update the Contract Master Schedule in preparation for the next Integrated Baseline Review.
The HCF design is not sufficiently mature to commence and maintain continuous, efficient production in Q2 2024.	Design Separation is being achieved via a staged release approach. The separation of Design Zones is sequenced to ensure spatial design, planning, and procurement activities are completed to support the shipyard production schedule.
The workforce requirements for the SEA5000 Phase1 capability and support system are not fully resourced within Navy's approved uniformed workforce guidance.	The Project, with Navy and BAESMA, is analysing the ship's Scheme of Complement to ensure it is fit for purpose. Positions will be prioritised to ensure a requisite workforce capability is available to support the HCF introduction into service.
The shipbuilding industry is not acquiring, developing, promoting or sustaining sufficient industrial shipbuilding workforce to support, operate and maintain Continuous Naval Shipbuilding.	BAESMA's plans, such as the Continuous Naval Shipbuilding (CNS) Strategy and CNS Plan, Workforce Management Plan and Supply Chain Management Plan, describe industry obligations and initiatives to develop the workforce and supply chains. The rating of this risk has been reduced to Medium since the 2020-21 report due to the progress that has been made through the approval of the Head Contract management plans, prototyping activities at the Osborne Naval Shipyard, and other enterprise-wide initiatives being implemented by the National Naval Shipbuilding Office.
BAESMA and the Type 26 Original Equipment Manufacturers do not maximise opportunities for Australian industry participation in each batch and achieve sovereign shipbuilding capability for Australia.	The Project is constantly striving to better understand the Australian industrial base and identify more opportunities to invest in, and develop, local industry capability and capacity. Australian Industry Capability (AIC) obligations are described in the Head Contract AIC Strategy and AIC Plan. The rating of this risk has been reduced to Medium since the 2020-21 report due to the progress that has been made through the approval of Head Contract management plans and a contract change that identified and locked-in Local Industry Investment funding for the Batch 1 Build stage.
Combat System integration into the ship is not sufficiently mature to support achievement of expected capability requirements for Ship 1/Batch 1.	The Project, BAESMA, and other key combat system suppliers will refine their combat system integration and assurance roles through an update to the Head Contract Statement of Work and deliverables such as the Engineering Management Plan, System Integration Plan and Combat System Assurance Plan.
The current Design and Productionisation scope realises a Batch 1 design that does not form a suitable basis for future batches, given the expectation of further capability insertion into future batches.	The Project is studying margin remediation options for future batch designs. The Project is continually reviewing requirements and developing plans to address obsolescence and capability development opportunities for future batches.
Emergent Risks (risk not previously identified but has emerged during 2021–22)	
Description	Remedial Action
Unable to raise, train and sustain future Navy workforce in order to support future Navy capabilities and provide Seaworthiness assurance.	The Project, with Navy and BAESMA, will identify training opportunities such as high fidelity simulators, and conduct workforce modelling/analysis to identify key skillsets required.
The delivered HCF (and future batches) has insufficient capability to counter current and emerging threats.	Ships Division, through the Maritime Integrated Warfare Systems Branch, to establish a Surface Combatant System Integration Service to support a spiral development strategy for the HCF.

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5.2 Major Project Issues

Description	Remedial Action
Information exchange is constrained by security, cyber considerations, export, intellectual property, Defence policies and tools.	This is now being managed as a risk as there is a Frigate MoU in place between the Australian and UK governments. The Project actively participates in the Global Combat Ship User Group's information exchange working group. The Project works with the US and UK security authorities to clarify bilateral agreements, and with BAESMA to develop the Data Management System. The rating of this risk has been reduced to Medium since the 2020-21 report due to the governance associated with the Frigate MoU and the GCS UG now being business-as-usual combined with the progress that has been made in the roll-out of the DMS and other Information Management and Technology (IM&T) initiatives.
The acquisition and sustainment of Hunter Class Frigate is not achievable with the allocated funding.	The Project uses a process of progressive Government approval. Cost models are refined through the execution of discrete Head Contract scopes to meet budgeting and programming expectations along with proactive management of cost risk.
The Build Scope Statement contains a level of uncertainty unacceptable to SEA5000-1, Defence and Government.	This is now being managed as a risk as the Project is working collaboratively with BAESMA to meet an early 2024 approach to Government for the Batch 1 Build scope. The Head Contract has been changed to include a program for cost, risk and uncertainty management leading up to the delivery of BAESMA's Batch 1 Build scope response.

Note

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

Section 6 – Lessons Learned

6.1 Key Lessons Learned

Description	Categories of Systemic Lessons
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
A Lessons and Opportunities Framework finalised and agreed to ensure lessons learnt are more robustly captured, assessed and where relevant encapsulated within processes, plans and procedures.	Lessons Learnt Processes
A Quality Management Plan compliant with CASG Quality Management System and in accordance with the guidance included in ISO Standard 9004:2018 is required to ensure continuous and sustained success particularly within a Project that is highly complex.	Quality Management

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2022

Unit	Name
Division	Ships Division
Branch	Hunter Class Frigate Branch

Project Data Summary Sheet¹⁴³

Project Number	LAND400 Phase 2
Project Name	MOUNTED COMBAT RECONNAISSANCE CAPABILITY
First Year Reported in the MPR	2019-20
Capability Type	Replacement
Capability Manager	Chief of Army
Government 1st Pass Approval	Dec 14
Government 2nd Pass Approval	Mar 18
Budget at 2nd Pass Approval	\$5,762.7m
Total Approved Budget (Current)	\$5,606.3m
2021-22 Budget	\$370.0m
Complexity	ACAT I



Section 1 – Project Summary

1.1 Project Description

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

1.2 Current Status

Cost Performance

In-year

As at 30 June 2022, financial year 2021-22 expenditure was \$370.1m against a Year End (YE) budget of \$370.0m representing no material YE variance.

Project Financial Assurance Statement

As at 30 June 2022, Project LAND400 Phase 2 has reviewed the Project's approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial contractual obligations of Defence for this project, current known risks, and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget remaining for the project to complete against the agreed scope.

Contingency Statement

The Project has not applied contingency in the financial year 2021/22.

Schedule Performance

The Project has successfully achieved both Initial Materiel Release (with exceptions) and Initial Operational Capability. The Project schedule was adjusted in 2022 (resulting in increased variance to some milestones) to incorporate a series of contractual changes, principally focused on incorporating capability improvements and addressing further COVID-19 delays. The Project experienced delays in the exit of some design reviews and is working intensively with Rheinmetall Defence Australia (RDA) to ensure the achievement of Final Operational Capability remains on track for 2027.

Materiel Capability/Scope Delivery Performance

As at 30 June 2022, the Project has achieved Initial Operational Capability. Final Materiel Release and Final Operational Capability remain planned for June 2027.

Note

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

1.3 Project Context

Background

The Australian Light Armoured Vehicle (ASLAV) supports the Australian Defence Force's (ADF) 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 2023 and is expected to be withdrawn from service in 2025.

The Government gave First Pass Approval for a replacement Combat Reconnaissance Vehicle (CRV) in December 2014. An assessment

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

<p>prior to First Pass Approval identified that current Military-Off-The-Shelf solutions would be unlikely to be capable of meeting all of Army's capability requirements. In March 2018, Government announced RDA as the preferred tenderer for the delivery of an Australianised Boxer 8x8 CRV for the ADF – an acquisition contract was signed in August 2018 for the provision and initial support of 211 Boxer CRVs to be delivered in two blocks.</p> <p>Block I (now delivered) consists of 25 vehicles (12 Reconnaissance and 13 Multi-Purpose Variants) whilst Block II (currently in design) consists of 186 vehicles, across five variants: Reconnaissance (121); Command and Control (15); Joint Fires and Surveillance (29), Repair (10) and Recovery (11).</p> <p>The Block I vehicles were primarily manufactured and assembled in Germany, with final integration, acceptance testing and operational test and evaluation undertaken in Australia – Defence achieved Initial Operational Capability, on schedule, in June 2022. With a deliberate period of transition, the remaining Block II Boxer CRVs will predominately be built and assembled in Australia. The transition will enable progressive technology transfer of manufacturing techniques and assembly line processes to Australia. There will remain some vehicle subsystems for which the transfer of manufacture or assembly from Europe to Australia would not be cost-effective and will continue to be supplied from Europe (e.g. welded drive module hulls, 30mm cannons, and multi-sensor head systems). Final assembly, integration, set to work, and testing of those elements will, however, still occur in Australia, whilst selected low-volume variants will continue to be assembled in Germany. The Project has so far invoked one Stop Payment milestone (in the period July to September 2019) – this has now been lifted.</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 LAND400 Phase 2 had approached the market, it was not feasible to implement it within the timeframe available.</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>Uniqueness LAND400 Phase 2 is unique for two reasons. Firstly, Australia is the first nation acquiring a Boxer vehicle with a manned-turret – a variant that other countries have expressed an interest in buying. Secondly, the Project is acquiring a uniquely designed Reconfigurable Driver Training Simulator – a system that was designed in Australia, won an Essington-Lewis Award for the best minor acquisition under \$50 million in 2020, and is attracting global interest for follow-on sales.</p> <p>Major Risks and Issues The only high risk for the Project is failure to achieve FOC on schedule. In addition, the Project is managing a small quantity of residual issues associated with two milestones (Initial Material Release and Initial Operational Capability).</p> <p>Other Current Related Projects/Phases LAND200 Tranche 2 (Battlefield Command System) is scoped to deliver two subsystems to the Project, these include:</p> <ul style="list-style-type: none"> • Battlefield Management System (BMS) — that enables vehicle commanders to monitor, direct and review operations with electronic displays of maps and combat data; and • Tactical Communications Network — comprising secure, mobile communications infrastructure to support the distribution of the BMS and other combat systems used by Army. <p>Note 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
Project Budget			
Dec 14	Original Approved (Government first pass approval)	116.7	
Mar 18	Government second pass approval	5,646.0	
	Total at Second Pass Approval	5,762.7	
Jun 22	Exchange Variation	(156.4)	
Jun 22	Total Budget	5,606.3	
Project Expenditure			
Prior to Jul 21	Contract Expenditure – RDA	(1,260.7)	
	Contract Expenditure – NIOA	(52.3)	
	Contract Expenditure – UMS	(20.0)	
	Contract Expenditure – EOS	(5.5)	
	Other Contract Payments / Internal Expenses	(142.4)	1
		(1,480.9)	
FY to Jun 22	Contract Expenditure – RDA	(310.9)	
	Contract Expenditure – NIOA	(25.9)	
	Contract Expenditure – UMS	(6.7)	
	Contract Expenditure – EOS	(1.3)	
	Other Contract Payments / Internal Expenses	(25.3)	2
		(370.1)	

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Jun 22	Total Expenditure	(1,851.0)
Jun 22	Remaining Budget	3,755.3

Notes		
1	Other Expenses (\$142.4m) are for Risk Mitigation Activity Contracts with Rheinmetall Landsysteme GmbH and BAE Systems (\$50.0m), Project Office Administration (\$45.2m), C4I (\$17.5m), Extended Payment Terms Finance Charge (\$17.3m), Support Contract (\$3.4m), German Quality Assurance (\$3.2m), Test and Evaluation (\$3.1m), Risk Mitigation Activity – Other (\$0.9m), Remote Weapon Station – Block I (\$0.6m), Support (\$0.5m), Customs Duty (\$0.4m) and other (\$0.3m).	
2	Other Expenses (\$25.3m) are for Project Office Administration (\$17.1m), C4I (\$6.3m), Support (\$0.9m), Customs Duty (\$0.4m), Test and Evaluation (\$0.3m), Extended Payment Terms Arrangement (\$0.1m) and other (\$0.2m).	

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
665.1	374.1	370.0	The variation from PBS to PAES is primarily due to later than expected achievement of various milestones in the Rheinmetall Defence Australia acquisition contract. The delays are caused by a combination of technical issues and the enduring impact of COVID-19 (including supply chain disruptions and travel restrictions). The variation from PAES to Final Plan is due to budget exchange rate updates.
Variance \$m	(291.0)	(4.1)	Total Variance (\$m): (295.1)
Variance %	(43.8)	(1.1)	Total Variance (%): (44.4)

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		2.6	Australian Industry	There was no material YE variance.
		(0.8)	Foreign Industry	
			Early Processes	
		(1.7)	Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
370.0	370.1	0.1	Total Variance	
		0	% Variance	

2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 22 \$m			
RDA	Aug 18	3,890.2	3,788.2	Fixed	Standard Defence Contract	1,3
UMS	Dec 18	29.1	30.9	Fixed	Standard Defence Contract	
NIOA	Jul 18	47.3	96.8	Fixed	Standard Defence Contract (Standing Offer)	4
EOS	Dec 19	50.2	48.9	Fixed	Standard Defence Contract	2,3
Notes						
1	Contract value as at Signature is based on PBS 2018-19 Budgeted exchange rates. The commitment value included Price escalation estimates.					
2	Contract value as at Signature is based on Mid-Year Economic and Fiscal Outlook 2019-20 Budgeted exchange rates. The commitment value included Price escalation estimates.					
3	The price at 30 Jun 22 is \$103.3m 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 not current value including additional purchase orders.					

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 22		
RDA	211	211	211 Combat Reconnaissance Vehicles, 12 Mission Modules, Support & Test Equipment and Training Equipment	1
UMS	6 1	6 1	Reconfigurable Driver Simulators Part Task Trainer	
NIOA	Classified	Classified	Explosive Ordnance	
EOS	82	82	Remote Weapon Stations (RWS)	
Major equipment accepted and quantities to 30 Jun 22				
As at 30 Jun 22:				
<ul style="list-style-type: none"> 25 CRV have been accepted. 				
A classified quantity and variety of explosive ordnance has been accepted.				
Notes				
1	In 2019/20, the quantity reported at contract signature was 223 – this figure included 211 CRV and the 12 additional Mission Modules. This figure has been updated to 211 to more correctly define the number of complete CRV.			

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	-	1,2
	Block I – Reconnaissance	Nov 18	N/A	Nov 18	-	1
	Block II – Joint Fires and Surveillance	Jul 19	N/A	Jul 19	-	1
	Block II – Command and Control	Jun 19	N/A	Jul 19	1	1
	Block II – Reconnaissance	Jan 19	N/A	Feb 19	1	1
	Block II – Repair	Aug 19	Oct 19	Sep 19	1	1
Preliminary Design	Block II – Recovery	Feb 19	N/A	Feb 19	-	1
	Block I – Multi Purpose Vehicle	N/A	N/A	Jan 19	-	1,2
	Block I – Reconnaissance	May 19	N/A	May 19	-	1
	Block II – Joint Fires and Surveillance	Dec 20	Jan 23	Apr 23	28	1,3,9
	Block II – Command and Control	Jul 20	Jan 23	Apr 23	33	1,4,9
	Block II – Reconnaissance	Jul 19	N/A	Sep 19	2	1,3,5
Detailed Design	Block II – Repair	Dec 21	May 23	Jun 23	18	1,9
	Block II – Recovery	Feb 20	Sep 22	Aug 22	30	1,6, 9
	Block I – Multi Purpose Vehicle	Jan 19	N/A	Aug 19	7	1,2,7
	Block I – Reconnaissance	Oct 19	N/A	Nov 19	1	1
	Block II – Joint Fires and Surveillance	Nov 21	Oct 23	Nov 23	24	1,3,9
	Block II – Command and Control	Apr 21	Oct 23	Oct 23	30	1,4,9
Notes	Block II – Reconnaissance	May 20	May 22	Aug 22	27	1,8, 9
	Block II – Repair	Sep 22	Feb 24	Jan 24	16	1,9
	Block II – Recovery	Mar 21	May 23	Apr 23	25	1,9
1	The date represents the Exit of the Design Review.					
2	The Multi-Purpose Vehicle was only required to conduct a Detailed Design Review.					
3	Delay was due to the introduction of the Electronic Architecture and COVID-19 Contract Change Proposals, uncertainty with the load list, and delays associated with the Command and Control variant.					
4	Delay was due to a combination of the introduction of the Electronic Architecture and COVID-19 Contract Change Proposals, and uncertainty with the load list.					
5	Delay was due to a failure to satisfy all Preliminary Design Review (PDR) requirements which resulted in Defence invoking a Stop Payment in July 2019 – this has now been lifted.					
6	Delay was due to a Commonwealth request for a risk reduction activity (in the form of a capability demonstration) to be incorporated into the Review.					
7	Delay was due to the late achievement of PDR and an underestimation of the time required to implement the design changes following the fitment exercise.					
8	Delay was due to a combination of the Stop Payment (in July 2019) – note 5 refers; the introduction of the Electronic Architecture and COVID-19 Contract Change Proposals; the entry criteria for this activity not being met; and failure to exit the design review on schedule.					
9	The additional variance is due to the execution of CCP026 which incorporated a series of capability improvements and addressed further COVID-19 delays.					

3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System / Platform Variant	Original Planned	Current Contracted	Achieved / Forecast	Variance (Months)	Notes
System Integration and Acceptance	Block I – Multi Purpose Vehicle	Oct 20	N/A	Dec 20	2	1,2
	Block I – Reconnaissance	Oct 20	N/A	Jun 21	8	1,2
	Block II – Joint Fires and Surveillance	Oct 26	Apr 27	Jan 27	3	1,3,4
	Block II – Command and Control	Jun 26	Apr 27	Jan 27	7	1,3
	Block II – Reconnaissance	Oct 26	May 27	Feb 27	4	1,3,4
	Block II – Repair	Jun 26	May 27	Dec 26	6	1,3
	Block II – Recovery	Mar 26	Oct 26	Sep 26	6	1,3,4

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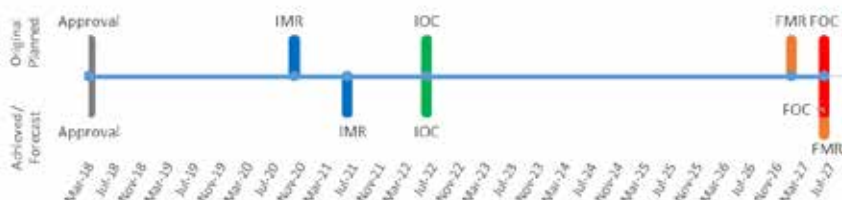
Notes	
1	Dates specified are based on Acceptance of the final delivery for each variant.
2	Delivery was delayed due to a combination of production and manufacturing delays in Europe and the impact of COVID-19 in both Europe and Australia.
3	The variance is due to a combination of technical changes made to all variants and the impact of COVID-19 in both Europe and Australia.
4	While the forecasts are earlier than currently contracted, the milestones have still slipped overall compared to the previously reported forecasts.

3.3 Progress Toward Materiel Release and Operational Capability Milestones

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

Notes	
1	The variance is due to a combination of production and manufacturing delays in Europe and the impact of COVID-19 in both Europe and Australia.
2	IMR was met with the delivery of 21 vehicles to the 7 th Brigade in June 2021. IMR was declared with three exceptions which are further explained in Section 5.2.
3	IOC was declared on 29 June 2022, when the first operationally-deployable CRV element (the first Mounted Combat Squadron) including mission, support and training systems, and facilities, if required, was delivered to the first Combat Brigade and support organisations, and accepted into service. The Block I vehicles experienced some technical issues during Operational Test and Evaluation activities, however these were not impediments to a IOC declaration – these are explained further in Section 5.2.
4	The Project is working intensively with Rheinmetall Defence Australia to ensure FOC is achieved on schedule.
5	Refer to Section 4.2 for definitions of these milestones.

Schedule Status at 30 June 2022



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

Section 4 – Materiel Capability/Scope Delivery Performance

4.1 Measures of Materiel Capability/Scope Delivery Performance

Traffic Light Diagram: Percentage Breakdown of Materiel Capability/Scope Delivery Performance	
	Green: The project expects to meet the Materiel Capability Requirements as expressed in the Materiel Acquisition Agreement.
	Amber:
	Red:
Note	
This Traffic Light Diagram represents Defence's expected capability delivery. Capability assessments and forecast dates are excluded from the scope of the Auditor-General's Independent Assurance Report.	

4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	IMR occurred in June 2021 when 21 Combat Reconnaissance Vehicle mission systems were delivered to 7th Brigade, Brisbane; and the initial contractor-provided logistics support arrangements were established. These included: user documentation, technical data, maintenance support, logistics instructions, engineering support, spares, and training systems.	Achieved with exceptions (Refer to Section 5.2)
Initial Operational Capability (IOC)	IOC occurred, on schedule, in June 2022 when the first operationally deployable CRV element, including mission, support, and training systems, and facilities, if required, were delivered to one Combat Brigade and support organisations, and accepted into operational service.	Achieved
Final Materiel Release (FMR)	FMR will occur with final delivery of the Combat Reconnaissance Vehicle capability. It includes: <ul style="list-style-type: none"> delivery of all vehicles, spares and attrition, and simulation training enablers for the Combat Reconnaissance Vehicle capability to all gaining units, and Logistics support arrangements, including: user documentation; technical data; maintenance support, logistics instruction, engineering support; spares; training systems; and facilities. Forecast: June 2027 	Not yet achieved
Final Operational Capability (FOC)	FOC will occur when: <ul style="list-style-type: none"> The full scope of LAND400 Phase 2, including mission, support and training systems, and facilities (if required), has been delivered to the three Combat Brigades and support organisations, and accepted into operational service. Support arrangements are finalised in accordance with the Integrated Logistics Support Plan. The three Armoured Cavalry Regiments are declared operationally ready by the Capability Manager (including training fleets, and spares and attrition stock vehicles). Forecast: June 2027 	Not yet achieved

Section 5 – Major Risks and Issues

5.1 Major Project Risks

Identified Risks (risk identified by standard project risk management processes)	
Description	Remedial Action
Failure of Boxer CRV to meet the contracted specifications. There is a risk that the Boxer CRV may fail to meet the contracted minimum specifications leading to an impact on cost, schedule or capability.	The Commonwealth is working closely with the supplier as part of the initial testing of the vehicle. Any areas for improvement will be integrated into the vehicle's design. The risk was downgraded from high to medium as the Project has an improved understanding of the vehicle's design.
Failure to achieve FOC on schedule There is a risk that FOC will not be achieved on schedule due to the combined impacts of COVID-19, technical difficulties, global supply chain disruption, and problems faced by the OEM.	The Commonwealth has worked intensively with the supplier to reduce delays. Despite this, the Project assesses that achievement of FOC is currently a high risk and is being actively managed by Commonwealth and Industry senior leadership.
Immersive Tactical Trainer – Containerised (ITT-C) Design is not feasible There is a risk that when operated the ITT-C will create too much heat in the confined container, resulting in a system that does not meet safety requirements and is not fit for purpose.	The Commonwealth will increase the frequency of technical reviews for the development of the ITT-C. This risk was retired as the ITT-C's design issues were resolved.
Cost of Project Contractor Support Exceeds Budget There is a risk that the budget for Contractor Support approved at Second Pass (\$46.805m) will not be sufficient to fund the required contracted workforce for the life of the Project.	This risk was retired as the allocation of resources attributed was reviewed and deemed sufficient.

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RDA Variance at Completion (VAC) Exceeds Budget Allocated Cost	The Commonwealth is monitoring and engaging closely with RDA.
There is a risk that RDA's current VAC of \$109m is an early indicator of cost, schedule and performance challenges.	This risk was retired as the Project has a fixed price contract established and has sufficient contingency included within the contract price.
Emergent Risks (risk not previously identified but has emerged during 2021–22)	
Description	Remedial Action
N/A	N/A

5.2 Major Project Issues

Description	Remedial Action
<p>C4I System Software and Equipment Availability</p> <p>There is an issue that CRV capabilities will be affected by Army and/or communications-related projects, Systems Project Office (SPO) and original equipment manufacturers (OEM) being unable to provide communications equipment, software or technical support within LAND400 Phase 2 timeframes leading to an impact on Cost, Schedule, Performance and Reputation.</p>	<p>The Project is engaging closely with Army, C4I projects, SPOs and OEMs to closely manage the availability of equipment and technical information and support in accordance with LAND400 Phase 2 timeframes.</p> <p>This issue has been expanded for clarity and renamed 'Command, Control, Communications, Computers and Intelligence (C4I) Software and Equipment compromises CRV capability'.</p> <p>This issue was retired as the required software and equipment has been made available within the required timeframes.</p>
<p>Failure to integrate LAND200 Systems onto the CRV</p> <p>There is an issue that LAND200 are unable to provide technical support or equipment within the required LAND400 Phase 2 timeframes.</p>	<p>The Project has established an alternative means of supply.</p> <p>This issue was retired as a technical solution was identified.</p>
<p>Impacts of COVID-19 on RDA</p> <p>There is an issue that RDA will be unable to deliver against its contracted schedule due to the impacts of COVID-19. There will be a six month delay to all contractual milestones with potential impacts to FOC.</p> <p>Realised and 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 II vehicles and corresponding Milestones and potential delays to Block II Mandated System Reviews, delivery of vehicles and the corresponding Milestones.</p>	<p>The Project has worked intensively with RDA to recover schedule – revised arrangements, including the early transition of production-related work to Australia and increased rate of production have now been implemented.</p> <p>This issue was retired as the impacts of COVID-19 were addressed via a contractual change.</p>
<p>C2 and JFS variants inability to Access External Power Source</p> <p>There is an issue that the batteries in the C2 and JFS variants of the CRV are unable to be charged whilst in a static mode, leading to an impact on the operation of vehicle systems.</p>	<p>The Project is working with RDA to incorporate an external power charging port into the design.</p> <p>This issue has been downgraded from high to medium, as a technical solution is being scoped.</p>
<p>Initial Materiel Release Exceptions</p> <p>Initial Materiel Release was declared with three exceptions relating to:</p> <ul style="list-style-type: none"> the completion of Functional Configuration Audit and Physical Configuration Audit, the integration of electronic counter measures, and transportability studies including air transportability and integration with other Army vehicles. 	<p>The Project has completed remediation work to address the integration of electronic counter measures. The Project expects to complete the remaining two exceptions in October 2022.</p>
<p>Block I Technical Issues</p> <p>There is an issue that the Block I vehicles experienced some minor technical issues during introduction into use – issues like these are to be expected in a project of this size and complexity. Whilst the issues did result in increased risk being accepted by the Capability Manager, none were impediments to the declaration of Initial Operational Capability (IOC). The issues were associated with human factors, towing, and air transportability.</p>	<p>The Project is working intensively with Rheinmetall Defence Australia to address these issues – all are expected to be resolved in 2023 within the timeframes required by Army.</p>

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

Section 6 – Lessons Learned

6.1 Key Lessons Learned

Description	Categories of Systemic Lessons
Enhancing project team capability – 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 and Governance
Whole of capability focus – The project should establish and maintain a 'whole of capability' focus in delivering the Boxer CRV, including management of all fundamental inputs to capability and commonality and alignment across the support and training systems to retain its effectiveness in rapidly changing threat and technology environments.	Requirements Management
Whole of life approach – 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
Project management discipline – 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 LAND400 Phase 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 the risks, issues and opportunities that may affect delivery of the capability.	Governance
Capability Manager and stakeholder engagement are an essential part of the tender governance – arrangements should be established for regular participation of the 3-star Capability Manager and Deputy Secretary CASG in senior governance arrangements. It is recommended that each major acquisition program invite participation from Contestability Division, Joint Force Design, Industry Division and Defence Science and Technology at all levels of the Tender Evaluation Organisation.	Governance
Industry engagement – Early engagement of 'Industry' (as one of the fundamental inputs to capability) is required to maximise Australian industry participation in delivering the capability. The requirements, guidance and parameters for industry involvement should be included in the tender documentation and facilitated industry engagement should be a standard part of any major acquisition project.	Requirements Management
Tender requirements – When conducting a tender, the Request For Tender 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
Probity – 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.	Governance

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2022

Unit	Name
Division	Armoured Vehicle Division
Branch	Armoured Fighting Vehicles Branch

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Project Number	SEA1000 Phase 1B
Project Name	FUTURE SUBMARINES DESIGN ACQUISITION
First Year Reported in the MPR	2019 - 20
Capability Type	Replacement
Capability Manager	Chief of Navy
Government 1st Pass Approval	N/A
Key Government pre-Second Pass Approval	Feb 19
Budget at Key Government pre-Second Pass Approval	\$5,952.5m
Total Approved Budget (Current)	\$4,816.2m
2021-22 Budget	\$961.7m
Complexity	ACAT I



Section 1 – Project Summary

1.1 Project Description

SEA1000 Phase 1B was to deliver a fleet of 12 regionally superior conventionally powered submarines to be known as the Attack Class. The Attack Class fleet was to be built in Australia by an Australian workforce, at a purpose built Submarine Construction Yard, owned by the Commonwealth through Australian Naval Infrastructure and operated by Naval Group. The Future Submarine Program was to provide Australia with an enduring sovereign submarine capability, with the ability to build, operate, and sustain submarines in Australia into the future.

The Government announced on 16 September 2021 that it would not continue with the Attack Class Submarine Program due to changes in Australia's strategic circumstances. As a result, contracts with Naval Group and Lockheed Martin Australia have been terminated for convenience. The Project has completed transition out activities, with limited exceptions, with Lockheed Martin Australia and Naval Group in accordance with relevant contractual obligations and the terms of a settlement agreement with Naval Group.

1.2 Current Status

Cost Performance

In-year

The in-year variation of \$182.2m is predominately attributed to the cancellation of the Attack Class submarine program and the resulting settlement payment to Naval Group.

Project Financial Assurance Statement

Project SEA1000 Phase 1B has transitioned to termination, transition out and project closure activities, following the Government announcement to cancel the Attack Class Submarine Program on 16 September 2021.

Following the cancellation of the Attack Class Submarine Program, and having reviewed Defence's current financial contractual obligations 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 the revised objectives.

Contingency Statement

The project has not applied contingency in the financial year.

Schedule Performance

The Future Submarine Program (FSP) was working towards delivery of the first Attack Class submarine in the early 2030s, subject to future Government approvals beyond the authorised design work associated with 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 any costly and lengthy re-work in the future that are likely to arise if the concept design is not robust.

144 Notice to reader

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

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 action was satisfactorily completed in February 2019.

Compared to pre-contract estimates for the progression of design, an extended schedule for the design work was implemented at the commencement of the Submarine Design Contract (SDC) – the first program contract that was executed under the Strategic Partnering Agreement. This schedule addressed the need for high-levels of design maturity required by Defence as the design phase of the Program progressed. The extended period planned for the design work did not impact the scheduled delivery date of the first or follow on submarines.

Under the Submarine Design Contract with Naval Group, the Functional Ship Systems Requirements Review was scheduled for 31 October 2019 and experienced a delay of five weeks to conduct the review. Actions from this review were completed across the first half of 2020 and the Functional Ship System Requirements Review was formally closed in August 2020. The delay was assessed as recoverable by the next major milestone review, Functional Ship - System Functional Review (FS-SFR) however some delay in readiness for the FS-SFR was realised. The Commonwealth elected to enter the FS-SFR as planned in January 2021 on the basis that a credible action plan was in place to confirm the design baseline for the Definition design phase. The program formally exited the FS-SFR in September 2021.

Under the Design Build and Integration Contract with Lockheed Martin Australia, the Combat System Preliminary Design Review was held successfully in September 2021 and a letter advising the Contractor of formal Exit was signed in January 2022.

The contracts with Naval Group and Lockheed Martin Australia were terminated for convenience on 16 September 2021, before subsequent design phases for the Functional Ship and Combat System were commenced.

The Project has completed transition out activities, with limited exceptions, with Lockheed Martin Australia and Naval Group in accordance with contractual obligations and the terms of a settlement agreement with Naval Group.

Material Capability/Scope Delivery Performance

SEA1000 Phase 1B does not have any material capability delivery approved. The project was 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.

Prior to the cancellation of the project, elements of the Attack Class Submarine Program were contributing either directly to or reducing the risk of the Collins Class Life-of-Type Extension (LOTE) project. The Minister for Finance approved the transfer of approved but unspent Future Submarine Program budget to the Collins LOTE project and other broader shipbuilding enterprise activities in February 2022.

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 SEA1000 Phase 1B Program was a large and complex program tied into the National Naval Shipbuilding Plan. The Program was in the design stage, and had multiple Government decision-making points.

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.

On 26 April 2016, Government announced that Naval Group of France had 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 would have been 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.

Following a Restricted Tender Process, Lockheed Martin Australia (LMA) 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 represented the long-term Combat System Integration contract and included the execution of the initial work scope.

As announced by Government in April 2016, the Future Submarines was to be constructed at a purpose built Submarine Construction Yard (SCY) at the Osborne Precinct in Adelaide. The SCY required new infrastructure and upgrades to existing infrastructure to support the work of Naval Group and LMA. Naval Group was to establish SCY Infrastructure Functional Requirements (IFR) and undertake design assurance activities to ensure the SCY was capable of building, integrating, testing and accepting into service the planned Future Submarine fleet.

The first Attack Class Submarine was scheduled to enter service from the early 2030s and was to be delivered to the Royal Australian Navy to commence initial Operational Test and Evaluation.

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.

The Australian Government cancelled the Attack Class Submarine Program on 16 September 2021. Future Submarine Program effort has been required since this date to review claims by the prime contractors for work which had been in progress up until termination, conduct negotiations and planning associated with the termination and transition out of contracts, including workforce demobilisation and commencing project closure activities.

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Uniqueness
SEA1000 Phase 1B was to deliver 12 Attack Class submarines to the Royal Australian Navy and was to have been the largest and most complex ship building endeavour undertaken in Australia.
As such, the project had 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.
Another unique element of the Program was its engagement with key suppliers in the design phase. This was 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 was applied to ensure Australia would be able to exercise sovereign control over operations and sustainment of the Future Submarine.
Major Risks and Issues
Up until the termination decision, the project was 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"> Contractor performance risk; Resources, Skills and Workforce Management risk; Risk to the adaption and enhancement of methods, processes, systems and standards; Australian Industry Capability risk; and Risk to capability delivery to Navy, cost and schedule.
The Australian Government cancelled the Attack Class submarine program on 16 September 2021, resulting in retirement of the above risks. Issues caused by the cancellation were managed through transition out.
The program had also been managing an issue relating to the Commonwealth and Naval Group being unable to agree by 31 January 2021 on the Core Work Scope 2 (CWS2) and Additional Work Scope 1 (AWS1) offers. This issue was closed after the cancellation of the Attack Class submarine program.
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
Project Budget				
Sept 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
Sept 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
	Total at Key Government pre-Second Pass Approval		5,952.5	
Jun 20	Real Variation - Transfer	(2.4)		2
Sept 20	Real Variation - Transfer	(7.9)		5
Dec 20	Real Variation – Budgetary Adjustment	0.1		7
Jan 21	Real Variation – Transfer	(6.4)		2
Nov 21	Real Variation – Real Cost Decrease	(300.0)		11
	Real Variation – Real Cost Decrease	(641.0)		12
June 22	Real Variation – Real Cost Decrease	(79.5)		13
June 22	Exchange Variation	(99.3)		
	Total Budget		4,816.2	
Project Expenditure				
Prior to Jul 21	Naval Group – Submarine Design Contract	(808.5)		8
	Naval Group – Design and Mobilisation Contract	(369.3)		8
	Lockheed Martin Australia – Combat System Design Build and Integration Contract	(339.5)		8
	ASC Pty Ltd – Seconded Workforce	(45.4)		8
	US Government – Submarine Combat Control System MOU	(11.6)		8
	Other Contract Payments / Internal Expenses	(378.7)		9
			(1,953.0)	
FY to Jun 22	Naval Group – Deed of Settlement	(827.2)		8

	Naval Group – Submarine Design Contract	(208.3)	8
	Lockheed Martin Australia – Combat System Design Build and Integration Contract	(69.5)	8
	US Government – Submarine Combat Control System MOU	(4.6)	8
	ASC Pty Ltd – Seconded Workforce	(4.5)	8
	Other Contract Payments / Internal Expenses	(29.9)	10
Jun 22	Total Expenditure		(1,143.9) (3,096.9)
Jun 22	Remaining Budget		1,719.3
Notes			
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. The total value of the planned transfers relating to Note 2 is \$20.4m.		
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	Public Debt Interest on the equity provided to Australian Naval Infrastructure for the Submarine Construction Yard. The total value of the planned transfers relating to Note 5 is \$35.2m.		
6	Government approval for further design work by Naval Group and program office costs, and Portfolio Additional Estimates Statements 2018-19 budget measures.		
7	Budgetary adjustment due to out-turning.		
8	The scope of this contract is explained further in Section 2.3 – Details of Project Major Contracts.		
9	Other expenditure for the period to 30 June 2021 comprises payments for Contractor/Consultant Support (\$167.3m), Collins Class Life of Type Extension Activities (\$32.2m), Lockheed Martin Australia Combat System Integrator Initial Services Contract (\$29.5m), Facilities and Security arrangements in Cherbourg (\$22.1m), US Government (\$19.9m), Legal Services (\$18.4m), Naval Group Design Services Contract (\$10.2m), Office Fitout (\$1.6m) and other expenditure not attributable to the listed contracts (\$77.5m).		
10	Other expenditure for the period 1 July 2021 to 30 June 2022 comprises payments for Contractor/Consultant Support (\$17.3m), Legal Services (\$3.2m), Payments to DGA (\$2.5m), US Government (\$2.2m), Facilities and Security arrangements in Cherbourg (\$1.6m), Combat System Novated Contracts (\$1.2m) and other expenditure not attributable to the listed contracts (\$1.9m).		
11	Government decision to transfer funding to the Nuclear-Powered Submarine Taskforce.		
12	Government decision to transfer funding for the Sovereign Shipbuilding Talent Pool.		
13	Government decision (2 Minister Approval) to transfer to Collins Sustainment and Acquisition.		

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
981.8	980.6	961.7	PBS to PAES: The variation includes transfer of funds to Nuclear-Powered Submarine Taskforce and for costs arising from the Sovereign Shipbuilding Talent Pool, as well as expected costs associated with transitioning out of contractual arrangements. PAES to Estimate Final Plan: The variation relates to an update of budget exchange rates from 2021-22 MYEFO to 2022-23 PBS. Additionally the transfer of funds to Collins LOTE and sustainment.
Variance \$m	(1.2)	(18.9)	Total Variance (\$m): (20.1)
Variance %	(0.1)	(1.9)	Total Variance (%): (2.0)

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		83.2	Australian Industry	The variation is predominately attributed to the cancellation of the Attack Class submarine program and the resulting settlement payment to Naval Group.
		96.0	Foreign Industry	
		0.0	Early Processes	
		3.6	Defence Processes	
		(0.6)	Foreign Government Negotiations/Payments	
		0.0	Cost Saving	
		0.0	Effort in Support of Operations	
		0.0	Additional Government Approvals	
961.7	1143.9	182.2	Total Variance	
		18.9	% Variance	

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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 22 \$m			
Naval Group – Design & Mobilisation Contract	07 Oct 16	60.9	369.3	Cost Ceiling (capped)	Standard Defence Contract	1
ASC Pty Ltd – Seconded Workforce	08 Mar 17	22.1	54.3	Cost Ceiling (capped)	Standing Offer	2,5
Lockheed Martin Australia – Combat System Design Build and Integration Contract	12 Jan 18	607.2	827.7	Cost Ceiling (capped)	Standard Defence Contract	3,5
Naval Group – Submarine Design Contract	01 Mar 19	589.7	1,043.1	Cost Ceiling (capped)	Standard Defence Contract	4,5
US Government	05 Jul 19	224.8	90.5	Reimbursement	MOU	5,7
Naval Group – Deed of Settlement	07Jun 22	825.8	827.2	Fixed	Deed of Settlement and Release	6
Notes						
1	Increase in contract value reflects inclusion of staged concept-design work scopes, offset by reduction in contract value is associated with the termination of the contract in September 2021.The value of this contract is based on actual expenditure and there is no commitment remaining against this contract.					
2	Increase in contract value reflects requirement for technical and engineering expertise, offset by reduction in contract value is associated with the contract termination for convenience with Naval Group and Lockheed Martin Australia.					
3	Increase in contract value reflects the inclusion of costs for subsystems withheld at signature due to pricing uncertainty. The value of this contract is planned to reduce after 30 June 2022, associated with the termination for convenience.					
4	Increase in contract value reflects the inclusion of staged work scopes plus procurement of equipment, offset by reduction in contract value is associated with the termination of the contract in September 2021.					
5	Contract value as at 30 June 2022 is based on actual expenditure to 30 June 2022 and remaining commitment at current exchange rates. This includes adjustments for indexation (where applicable).					
6	Deed of Settlement value as at 30 June 2022 is based on actual expenditure.					
7	The value of this contract has decreased, associated with the termination for convenience and it is planned that the contract will further decrease after 30 June 2022.					
Contractor	Contracted Quantities as at		Scope	Notes		
	Signature	30 Jun 22				
Naval Group – Design & Mobilisation Contract	Nil	Nil	Progress the concept design for the future submarine in parallel to negotiation of the Strategic Partnering Agreement. Contract has been terminated for convenience.			
ASC Pty Ltd	Nil	Nil	Specialist engineering and technical services. This contract has expired as at 30 June 2022.			
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. Contract has been terminated for convenience.			
Naval Group – Submarine Design Contract	Nil	Nil	Progress submarine concept design through definition phase to basic design. Contract has been terminated for convenience.			
US Government	Nil	Nil	Cooperative development, production, and support of the submarine combat control system.			
Naval Group – Deed of Settlement	Nil	Nil	The Deed of Settlement is an agreement between the Commonwealth and Naval Group that discharges and releases both the Commonwealth and Naval Group from any obligations and claims in relation to the termination for convenience.			
Major equipment accepted and quantities to 30 Jun 22						
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	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	Aug 20	10	2
	Functional Ship Systems Functional Review	Jan 21	N/A	Sept 21	8	3,4

Preliminary Design	Combat System Preliminary Design Review	Dec 19	Oct 21	Jan 22	25	5,6
Critical Design	Combat System Critical Design Review	Mar 22	N/A	N/A	N/A	5,6
Notes						
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 were progressively closed and formal exit from the review was confirmed in August 2020 on the basis that all actions were completed or agreed plans were in place to address the remaining outstanding actions.					
3	The Functional Ship – System Functional Review (FS-SFR) was held in January 2021. A series of actions across 3 key areas were agreed in signed meeting minutes. A resourced FS-SFR Exit plan was prepared by the Contractor and a letter advising the Contractor of formal Exit was signed in September 2021.					
4	Compared to pre-contract estimates for the progression of design, an extended schedule for the design work was implemented under the Submarine Design Contract – the first program contract that was executed under the Strategic Partnering Agreement. This schedule addressed 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 Defence Programs during 2018/2019 had 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.					
6	The Combat Systems Design, Build and Integration Contract with Lockheed Martin Australia was terminated for convenience by letter on 16 September 2021. The letter advised that all Approved Work Scope Statements will also terminate at that date. Accordingly the Current Contract Date, Forecast Date and Variance have been removed for the Combat Systems Critical Design Review milestone. This milestone was previously reported with a Contract Date and Forecast Date of June 2023, showing a Variance from the Original Contract Date of 15 Months. The Current Contract and Forecast Dates of June 2023 remained unchanged immediately prior to Program cessation. The Combat Systems Preliminary Design Review had been successfully conducted earlier in September 2021 and a letter advising the Contractor of formal Exit was signed in January 2022, for the purposes of orderly closure.					

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	N/A	1
Acceptance	N/A	N/A	N/A	N/A	N/A	1
Notes						
1	SEA1000 Phase 1B had 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 were expected to be defined by Government in subsequent approvals.					
	The Australian Government cancelled the Attack Class submarine program on 16 September 2021, with no further T&E development required.					

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	N/A	N/A	N/A	1
Initial Operational Capability (IOC)	N/A	N/A	N/A	1
Final Materiel Release (FMR)	N/A	N/A	N/A	1
Final Operational Capability (FOC)	N/A	N/A	N/A	1

Notes

1	SEA1000 Phase 1B had 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 were expected to be defined by Government in subsequent approvals. The Australian Government cancelled the Attack Class submarine program on 16 September 2021.
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Schedule Status at 30 June 2022

Not Applicable

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/Scope Delivery Performance

4.1 Measures of Materiel Capability/Scope Delivery Performance

Traffic Light Diagram: Percentage Breakdown of Materiel Capability/Scope Delivery Performance	
Not Applicable	Green: The contracts with Naval Group and Lockheed Martin Australia were terminated for convenience on 16 September 2021, before subsequent design phases for the Functional Ship and Combat System were commenced. The Project has completed transition out activities, with limited exceptions, with Lockheed Martin Australia and Naval Group in accordance with relevant contractual obligations, and the terms of a settlement agreement reached with Naval Group.
	Amber: N/A
	Red: The Australian Government cancelled the Attack Class Submarine Program on 16 September 2021. SEA1000 Phase 1B was 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 were continuing to be refined and assessed against the approved scope, cost and schedule. SEA1000 Phase 1B was expected to return to Government in FY 21/22 to seek progressive approval of scope and funding as the Program moves through the design and build phase. The first Attack Class Submarine (HMAS Attack) was scheduled to enter service from the early 2030s.
Note	
This Traffic Light Diagram represents Defence's expected capability delivery. Capability assessments and forecast dates are excluded from the scope of the Auditor-General's Independent Assurance Report.	

4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	Note 1	N/A
Initial Operational Capability (IOC)	Note 1	N/A
Final Materiel Release (FMR)	Note 1	N/A
Final Operational Capability (FOC)	Note 1	N/A
Note		
SEA1000 Phase 1B had 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 were expected to be defined by Government in subsequent approvals. The Australian Government cancelled the Attack Class Submarine Program on 16 September 2021, with no capability to be delivered.		

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.	This risk has been retired as a result of the cancellation of the Program on 16 September 2021.
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.	This risk has been retired as a result of the cancellation of the Program on 16 September 2021.
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.	This risk has been retired as a result of the cancellation of the Program on 16 September 2021.
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.	This risk has been retired as a result of the cancellation of the Program on 16 September 2021.

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.	This risk has been retired as a result of the cancellation of the Program on 16 September 2021
Emergent Risks (risk not previously identified but has emerged during 2021–22)	
Description	Remedial Action
	N/A

5.2 Major Project Issues

Description	Remedial Action
There is an issue that the Commonwealth and Naval Group were unable to agree the fundamental Assumptions/requirements and/or the Not to Exceed (NTE) Price for the Core Work Scope 2 (CWS2) and Additional Work Scope 1 (AWS1) offers by 31 January 2021.	This issue was closed after the Australian Government cancelled the Attack Class submarine program on 16 September 2021.
The Australian Government cancelled the Attack Class submarine program on 16 September 2021., with no capability to be delivered.	The Project has completed transition out activities, with limited exceptions, with Lockheed Martin Australia and Naval Group in accordance with relevant contractual obligations and the terms of a settlement agreement reached with Naval Group.

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

Section 6 – Lessons Learned

6.1 Key Lessons Learned

Description	Categories of Systemic Lessons
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 Phase 1B was aware of the necessity of having a set of good requirements to achieve success in design and development.	Requirements Management
Following the decision to cancel the program, SEA1000 found it necessary to promptly engage staff as part of a broad lessons observed process, before they commenced departing the program	Governance

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2022

Unit	Name
Division	Submarines
Branch	Future Submarine Project

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Project Data Summary Sheet¹⁴⁵

Project Number	AIR9000 Phase 2, 4 and 6
Project Name	MULTI-ROLE HELICOPTER
First Year Reported in the MPR	2008-09
Capability Type	Replacement
Capability Manager	Chief of Navy and Chief of Army
Government 1st Pass Approval	Apr 06 (Phases 4 and 6)
Government 2nd Pass Approval	Aug 04 (Phase 2), Apr 06 (Phases 4 and 6)
Budget at 2nd Pass Approval	\$3,522.8m
Total Approved Budget (Current)	\$3,770.7m
2021-22 Budget	\$113.2m
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 AIR9000. Phase 2 (12 helicopters) is the acquisition of an additional Squadron of troop lift aircraft for the Australian Army, Phase 4 (28 helicopters) that replaced Army's Black Hawk helicopters in the Air Mobile and Special Operations roles, and Phase 6 (6 helicopters) that replaced Royal Australian Navy (RAN) Sea King helicopters in the Maritime Support Helicopter role. All three phases are grouped under the AIR9000 MRH Program.

1.2 Current Status

On 28 November 2011, the Minister for Defence announced this project as a Project of Concern.

Cost PerformanceIn-year

The project has spent \$36.0m against a revised budget of \$113.2m to the end of June 2022.

The variance is partially due to an increase in FY 2021-22 budget of \$52.5 million (with a corresponding decrease in FY 2022-23). This budget adjustment was as a result of movements between FYs across multiple projects in order to accommodate funding requirements and capability deliverables within the Acquisition program. This has had no impact on the project budget overall.

The remainder (\$24.9 million) was due to delays to the prime contract milestone achievements and other capability deliverables, and reduction in contractor and project management office costs.

Project Financial Assurance Statement

As at 30 June 2022, project AIR9000 Phase 2, 4 and 6 has reviewed the approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial and contractual obligations of Defence, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget, including contingency remaining for the project to complete against the agreed scope.

Contingency Statement

The project has committed contingency in the financial year primarily for the treatment of various supportability and performance risks such as a replacement Mission Management System including Aviation Mission System (AMS) Hardware procurement and Contractor Support Services, Fast Roping, Rappelling and Extracting System (FRRES) Delta Scope, Common Mission Management System (CMMS) System Service Order Agreement. The commitment of Contingency is directly in support of the transition of the MRH90 into 6 Avn Regt. The expenditure was of previously approved contingency commitments. No additional contingency funding was sought or approved in FY 2021-22.

Schedule Performance

As a result of the Deed 2 negotiations with the contractor, the final aircraft delivery was rescheduled resulting in all forty-seven aircraft being accepted into service with the final aircraft accepted in July 2017. The first thirteen aircraft required an in-service retrofit to bring them to the contracted Acquisition capability baseline, the final retrofit was completed in March 2016. Both Full Flight Mission Simulators have been accepted.

145 Notice to reader

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

Due to ongoing capability delays and technical deficiencies, Final Materiel Release (FMR) and Final Operational Capability (FOC) milestones have been delayed. FMR and FOC forecast dates have been updated to March 2023 as a combined declaration for both. FOC declaration may include some limitations as per Section 4. The following capability milestones have been declared:

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

Remediation configuration management issues of production aircraft slowed the acceptance of production aircraft in 2015, this in turn slowed the rate of capability growth.

Due to reliability and design shortfalls the Chief of Army delayed the introduction of MRH90 into 6 Avn Regt by three years and delayed the withdrawal of Black Hawk to 2022 to mitigate the risk to capability. In September 2017 the Chief of Army, with endorsement from Chief of Army's Senior Advisory Committee (CASAC), agreed to continue the transition of MRH90 into 6 Avn Regt. The transition commenced in January 2019 and concluded with the withdrawal of S70A-9 Black Hawk from Service.

The transition of MRH90 into 6 Avn Regt has been supported by the project through the funding of facilities works, procurement of Support and Test Equipment and additional spares.

Army is in the process of developing an option for the rapid replacement of the MRH90 with UH-60M Black Hawk helicopters under LAND4507 Phase 1 Multi-Role Helicopter Rapid Replacement Project. Government is scheduled to consider this project for approval in the fourth quarter of 2022. The project continues to work with the Capability Manager to assure the Taipan Multi-Role Helicopter capability for the remainder of its life of type.

Project SEA9100 Phase 1 improved Embarked Logistics Support Helicopter has been granted Second Pass Approval by government. The project will acquire 12 MH-60R Aircraft that will replace the Navy's existing MRH-90 Taipan fleet. Navy ceased MRH90 operations in May 2022.

The Helicopter Aircrew Respirator System (HARS) has been granted Service release in the reporting period.

The MRH Aircraft Maintenance Trainer was delivered to Army Aviation Training Centre Oakey in October 2021 and is now in service to support maintenance technician training.

As previously reported, the Taipan Gun Mount has been granted Incorporation Approval and production batches are being delivered to and Accepted by the Project. Taipan Gun Mount Service Release is pending Operational Acceptance of the capability by the Capability Manager.

Materiel Capability/Scope Delivery Performance

The project is focussed on delivering the following Capabilities to support the declaration of Final Materiel Release:

- Taipan Gun Mount
- Mission Troop Seat
- Enhanced Cargo Hook
- Aeromedical Evacuation – Mature
- Helicopter Aircrew Respirator System, and
- C17 Tactical Loading

All capabilities listed are subject to ongoing detailed management against their scheduled delivery dates to support FMR and project closure. However, the capability outcomes required of the MRH system at FOC, are unlikely to be fully met. Materiel delivery as required under the Materiel Acquisition Agreement (MAA), is forecast to be achieved by FMR.

FMR has been reviewed and is now forecast to be achieved in March 2023 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) and C-17 Tactical Loading to the Army Aviation System Program Office (AASPO).

MRH did not achieve the planned 2020/21 Financial Year Rate Of Effort (ROE) which continues to impact capability outcomes.

ROE is a Sustainment Contract Key System Health Indicator and this achievement indicates that some Key Performance Indicators are below the required performance bands.

Supportability and capability assurance costs present future capability risk and are unacceptably high out to current life-of-type.

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 and 6. Phase 2 was initially approved, providing 12 additional Troop Lift helicopters for Army. Phases 4 and 6 were subsequently approved; Phase 4 provided 28 helicopters as the replacement of the Australian Army's fleet of 34 S-70A-9 Black Hawk helicopters and Phase 6 provided six helicopters as the replacement of the RAN's fleet of Sea King helicopters, providing maritime support capability for Navy. The delivery of a 47th MRH90 was negotiated as part of Deed 2 to allow an aircraft to be used as a Ground Training Device.

In total, the AIR9000 MRH Program has acquired 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, were 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 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.

The three AIR9000 Phase 2, 4 and 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

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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 subsequent 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 has introduced 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 provided the project with a single interface for introduction into service issues. (Navy ceased MRH90 operations in May 2022).

The MRH Program Office Design Acceptance Strategy is dependent upon the French Military Airworthiness Authority's (Direction Générale de l'Armement (DGA)) prior acceptance of the NH90 variants and certification recommendation for the 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 achievement of the FMR has been delayed by the late delivery of role equipment including the Taipan Gun Mount, AME-Mature, and the Mission Troop Seat leading to an impact on cost, schedule and performance.
- The current design of the self-protection weapons system is not meeting capability requirements. The Taipan Gun Mount will replace the current self-protection weapons system.
- 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.
- Spares will need to be procured to support the new role equipment and capabilities being developed for the MRH90.
- 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.

Other Current Related Projects/Phases

AIR9000 Phase 7 Helicopter Aircrew Training System (HATS): HATS will be an important link in the training continuum for inductees to the MRH 90 training system.

AIR9000 Phase 8 Future Naval Aviation Combat System: The acquisition of 24 helicopters to enable the Navy to deploy at least eight Seahawks embarked at sea across the ANZAC class frigates and the new Hobart class Air Warfare Destroyers.

AIR90 Identification Friend or Foe (IFF): AIR90 has upgraded all MRH90 to the Mode 5 IFF waveform to maintain interoperability with US and NATO secure combat identification systems. The MRH related scope of AIR90 is in the project closure phase.

Project SEA9100 Ph1 Improved Embarked Logistics Support Helicopter: will expand and rationalise the support and logistics helicopter fleet consistent with the expectations for larger naval operations. The project will acquire 12 MH-60R Aircraft to replace the Navy's existing MRH-90 Taipan fleet.

Note

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

Section 2 – Financial Performance

2.1 Project Budget (out-turned) and Expenditure History

Date	Description	\$m	Notes
Project Budget			
Apr 04	Original Approved	3.3	1
Aug 04	Government second pass approval (Phase 2)	953.9	
Jun 06	Real Variation – Scope (Second Pass Phase 4 and 6)	2,565.6	2
		3,522.8	
Oct 06	Real Variation – Transfer	(219.0)	3
Oct 08, Nov 18, Jun 20	Real Variation – Transfer	(20.3)	4
	Real Variation – Scope	31.5	5
Sep 17	Real Variation – Budgetary Adjustment	(87.4)	6
Nov 18	Real Variation – Transfer	(0.2)	
		(295.2)	
Jul 10	Price Indexation	679.8	7
May 22	Real variation – Transfer of \$52.5m		
	Increase of 2021-22 budget	52.5	8
	Decrease of 2022 -23 budget	(52.5)	
Jun 22	Exchange Variation	(136.7)	
Jun 22	Total Budget	3,770.7	
Project Expenditure			
Prior to Jul 21	Contract Expenditure – Airbus AP	(2,884.8)	
	Contract Expenditure – CAE Australia	(192.4)	
	Contract Expenditure – Leonardo Helicopters	(13.5)	
	Contract Expenditure – NAHEMA	(20.7)	
	Other Contract Payments / Internal Expenses	(349.8)	9
		(3,461.3)	
FY to Jun 22	Contract Expenditure – Airbus AP	(9.7)	
	Contract Expenditure – CAE Australia	(0.6)	
	Contract Expenditure – Leonardo Helicopters	(3.2)	
	Contract Expenditure – NAHEMA	(2.8)	
	Other Contract Payments / Internal Expenses	(19.7)	10

Jun 22	Total Expenditure	(36.0)
		(3,497.1)
Jun 22	Remaining Budget	273.6
Notes		
1	This project's original budget amount is that prior to achieving Second Pass Government Approval.	
2	Incorporation of AIR9000 Phase 4 (Black Hawk Upgrade/Replacement) and AIR9000 Phase 6 (Maritime Support Helicopter).	
3	The funding related to facilities elements of the project was managed by Defence Estate and Infrastructure Group (DE&IG).	
4	Transfer to DE&IG for Facilities Infrastructure (\$20.0m), temporary amenities at 6 Avn Regt (\$0.2m) and for facility remediation at 5 Avn Regt (\$0.05m).	
5	Real Cost Increase funding for Full Flight Mission Simulator.	
6	Real Variation for Budget Adjustment (\$87.4m). This was offset and corrected by 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	The increase in FY 21/22 (with a corresponding decrease in FY 2022-23) was a result of cross-levelling and movements between FYs across multiple projects in order to accommodate funding requirements and capability deliverables within the Acquisition program. This has had no impact on the project budget overall.	
9	Other expenditure: \$369.8m for operating expenditure, contractors, consultants and other capital expenditure not attributable to the aforementioned contracts.	
10	Other expenditure: \$19.7m includes \$12.8m for Non-Prime Acquisition expenditure, \$4.5m for contractors and consultants, \$1.3m for Liquidated Damages and \$0.9m for operating expenditure.	

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
166.6	61.0	113.2	PBS to PAES: The variation is primarily due to delay to the delivery schedule delaying achievement of the Final Acceptance milestone. PAES to Final Plan: The variance is partially due to an increase in FY 2021-22 budget of \$52.5 million (with a corresponding decrease in FY 2022-23). This budget adjustment was as a result of movements between FYs across multiple projects in order to accommodate funding requirements and capability deliverables within the Acquisition program. This has had no impact on the project budget overall.
Variance \$m	(105.6)	52.2	Total Variance (\$m): (53.4)
Variance %	(63.4)	85.6	Total Variance (%): (32.1)

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(23.0)	Australian Industry	The variance is partially due to an increase in FY 2021-22 budget of \$52.5 million (with a corresponding decrease in FY 2022-23). This budget adjustment was as a result of movements between FYs across multiple projects in order to accommodate funding requirements and capability deliverables within the Acquisition program. This has had no impact on the project budget overall.
			Foreign Industry	
			Early Processes	
		(54.4)	Defence Processes	
			Foreign Government	
			Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	The remainder (\$24.9 million) was due to delays to the prime contract milestone achievements and other capability deliverables, and reduction in contractor and project management office costs.
113.2	36.0	(77.2)	Total Variance	
		(68.2)	% Variance	

2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 22 \$m			
Airbus AP	Jun 05	846.3	2,986.1	Variable	Standard Defence Contract	1,2,3,4
CAE Australia	Dec 07	180.5	193.2	Variable	Standard Defence Contract	4,5
NAHEMA	Oct 19	20.5	26.1	Variable	Non Standard Defence Contract (Multi Nation)	4,7
Leonardo Australia	Apr 18	16.3	16.8	Variable	Deed	4,6
Notes						
1	This contract also included an Electronic Warfare Self Protection Support System, MRH Software Support System, MRH Instrumented System and 23 Ground Mission Management System (GMMS) (4 Fixed GMMS, 7 Deployable GMMS, 1 Reduced, 9 Light and 2 interim GMMS). Contract Base date is January 2004.					
2	The MRH Instrumented System includes an airborne instrumentation pallet, some ground based instrumentation and three					

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	aircraft (from the total fleet of 47) that have provisions to have the instrumentation pallet installed.			
3	The increase from the original contract value is predominantly due to the increase in aircraft ordered and associated systems following government approved scope changes as described in Section 1.3. Since 1 July 2018, there have been key CCPs processed for an Aeromedical Evacuation Mature System (Phase 1), replacement Cargo Hooks, Heavy Stores Carriers (HSCs), Taipan Gun Mount, Fast Roping, Rappelling and Extracting System and External Auxiliary Fuel Tanks (EAFTs) Packaging.			
4	Contract value as at 30 June 2022 is based on actual expenditure to 30 June 2022 and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable).			
5	The Commonwealth conducted negotiations with the Contractor, to review and settle commercial and technical issues, in December 2015.			
6	The Commonwealth entered into contract with Leonardo Australia for the establishment of a helicopter transmission repair and overhaul facility.			
7	The Commonwealth entered into contract with the NATO Helicopter Design and Development, Production and Logistics Management Organization (NAHEMA) as a Contributing Participant in this multi nation contract for an Aircraft Maintenance Trainer (AMT).			
Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 22		
Airbus AP	12	47	MRH90 Aircraft	1
CAE Australia	2	2	Full Flight and Mission Simulator	
NAHEMA	1	1	Aircraft Maintenance Trainer	
Leonardo Australia	N/A	N/A	Repair and overhaul capability for helicopter transmission, including a repair facility, initial spares, personnel costs, and transmission pallets.	
Major equipment accepted and quantities to 30 Jun 22				
<ul style="list-style-type: none">Forty-seven MRH aircraft have been accepted to date.Both Full Flight Mission Simulators have been accepted by the Commonwealth.Aircraft Maintenance Trainer has been accepted.				
Notes				
1	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.			

Section 3 – Schedule Performance

3.1 Design Review Progress

Review	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
System Requirements	MRH aircraft - Phase 2	Aug 05	Oct 05	Sep 05	1	1
	MRH aircraft - Phase 4/6	Apr 07	Apr 07	May 07	1	1
	MRH Software Support Centre	N/A	Mar 07	Apr 07	1	
	Electronic Warfare Self Protection Support System	N/A	N/A	Nov 05	N/A	
	Ground based Mission planning and Management System	Oct 05	Oct 05	Feb 07	16	2
	MRH Instrumented System	N/A	Jun 07	Jul 07	1	
	Full Flight and Mission Simulators	May 08	Nov 08	Mar 09	9	3
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
Notes						
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 Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
System Integration	MRH aircraft - Phase 2	Jul 06	Nov 06	Dec 06	5	
	MRH aircraft - Phase 4/6	N/A	N/A	N/A	N/A	1
	MRH Software Support Centre	N/A	Oct 08	Nov 08	1	
	Electronic Warfare Self Protection Support System	N/A	N/A	Nov 07	N/A	
	Ground based Mission planning and Management System	N/A	N/A	N/A	N/A	2
	MRH Instrumented System	Nov 08	May 09	Dec 09	13	3
Acceptance	Full Flight and Mission Simulators	Jun 11	Sept 11	Sep 11	4	4
	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
	MRH aircraft #01 (First aircraft)	Dec 07	N/A	Dec 07	0	
Aircraft Acceptance	MRH aircraft #05 (First Australian built aircraft)	Dec 08	N/A	Dec 08	0	
	MRH aircraft #46	Jul 14	Jun 17	Jun 17	35	10
	MRH aircraft #47 (Final Aircraft)	Jul 17	Jul 17	Jul 17	0	

Notes

1	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 comprise of GMMS deliverables that have been aligned to aircraft delivery – location and baseline. The acceptance of GMMS lots are listed in the acceptance area of this table.
3	The 13 month delay to closure of Test Readiness Review was due to electronic compatibility test design issues not resolved until November 2009. This delay was mitigated by the development of an interim MRH Instrumentation System capability used for a test activity in October 2009.
4	Achieved through completion of Test Readiness Review for Contractor In-Plant Test and Evaluation in September 2011.
5	The first Airworthiness Board (for a 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	Mar 23	101	4

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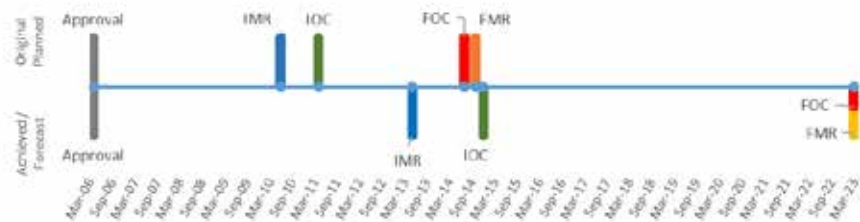
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Final Operational Capability (FOC)	Navy	Dec 12	-	-	5
	Army	Jul 14	Mar 23	104	4,5

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. Ongoing delays to deliver capabilities has resulted in FMR being rescheduled to March 2023.
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) when declared by Capability Manager, which is expected to trigger FOC. Ongoing delays to deliver capabilities have resulted in FOC being rescheduled to March 2023. FOC declaration may include some limitations as per Section 4.

Schedule Status at 30 June 2022



Note

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

Section 4 – Materiel Capability/Scope Delivery Performance

4.1 Measures of Materiel Capability/Scope Delivery Performance

Traffic Light Diagram: Percentage Breakdown of Materiel Capability/Scope Delivery Performance

	Green: The capability outcomes required of the MRH system at FOC are unlikely to be fully met. As a consequence, Army is developing an option for rapid replacement under LAND4507 Phase 1. Materiel delivery as required under the MAA is forecast to be achieved by FMR.
	Amber: Supportability and capability assurance costs to life-of-type present future capability risk.
	Red: Rate of Effort (ROE) achievement continues to impact capability outcomes. The forecast cost of ownership out to the current life-of-type is unacceptably high.

Note

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

4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	<ol style="list-style-type: none"> 1. Six Product Baseline 003 aircraft with associated role equipment to support Initial Operational Capability milestones; 2. Issue of Australian Military Type Certificate and Service Release; 3. Completion of all MRH90 facilities at Townsville, Oakey and Nowra; 4. Establishment of mature planned contractor support to maintenance and logistics; and 5. Provision and certification of Mission Management systems necessary for Initial Operational Capability milestones. <p>Initial Materiel Release was achieved in May 2013.</p>	Achieved
Initial Operational Capability (IOC)	<ol style="list-style-type: none"> 1. Achievement of Operational Capability Maritime Support 1 (OCM1) – a single flight embarked for limited daytime operations. 2. Achievement of Operational Capability Amphibious 1 (OCA1) Milestones – deployment of a single troop (three aircraft) in a permissive environment. <p>Initial Operational Capability was achieved in Army – December 2014 and Navy – February 2015.</p>	Achieved
Final Materiel Release (FMR)	<ol style="list-style-type: none"> 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); 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); 3. A mature sustainment organisation capable of discharging all in-service responsibilities; including logistic and training requirements; 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 5. All facilities and support equipment, required to support the capabilities accepted. <p>FMR is forecast to be achieved in March 2023.</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> <ol style="list-style-type: none"> 1. Operational Capability Maritime (OCM3) - Three embarked flights (<i>Note: OCM3 will not be declared as a result of Navy ceasing MRH Operations</i>) 2. Operational Capability Land (OCL3) - Two Airmobile Squadrons 3. Operational Capability Amphibious (OCA4) - One Squadron capable of supporting amphibious operations 4. Operational Capability Special Operations Support (OCS2) - One Special Operations Aviation Task Unit. <p>Final Operational Capability is forecasted to be achieved in March 2023. FOC declaration may include some limitations as per Section 4.</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
All Major project risks are closed or are being managed as issues.	N/A
Emergent Risks (risk not previously identified but has emerged during 2021–22)	
Description	Remedial Action
N/A	N/A

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5.2 Major Project Issues

Description	Remedial Action
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"> 1. Formation of Cabin Integration Working Group; 2. Industry Prototyping; 3. Accept incremental improvements; 4. Use of Liquidated Damages as offset 5. Leverage NATO Helicopters 90 (NH90) community solutions 6. MAA v2.5 (approved 9 July 2019) approved a re-baselined FMR 7. Ongoing delays require further review of the MAA. <p>The MAA is to be reviewed and updated at its next annual review.</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"> 1. An Aero-Medical Evacuation (AME) capability working group was initially formed and has now evolved into an Integrated Project Team (IPT). 2. The functional requirements specification has been agreed with Commonwealth stakeholders and Industry. 3. Phase 1 of the AME solution is in contract. 4. 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. <p>After agreement of the results of the ACSN the agreed solution may be contracted.</p>
The current design of the self-protection weapons system is not meeting capability requirements.	<ol style="list-style-type: none"> 1. The Taipan Gun Mount will replace the current self-protection weapons system. 2. The Taipan Gun Mount (TGM), which is capable of mounting both the M134D Mini-Gun and Mag-58 General Purpose Machine Gun, design and manufacture was procured by the project to meet the specified MRH Capability Requirements. 3. Maintenance Training for Armourers on M134D was funded by the project and has been conducted. 4. TGM has achieved Incorporation Approval and all artefacts supporting Service Release have been submitted. 5. This issue will be closed when the TGM is granted Service Release. <p>Contingency has been applied (committed) in support of this issue.</p>
Spares will need to be procured to support the new role equipment and capabilities being developed for the MRH90	<ol style="list-style-type: none"> 1. As new Role Equipment is developed for MRH90 spares to support the new items are being procured. 2. 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. 3. This issue will be closed when MRH90 role equipment has been granted Service Release. <p>Contingency has been applied (committed) in support of this issue.</p>
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.	<ol style="list-style-type: none"> 1. Form 6 Avn Regt Integrated Project Team. 2. Monitor delivery of key capabilities. 3. Mitigate delays including through Industry collaboration. 4. Implement solution for each deliverable. <p>Contingency has been applied (committed) in support of this issue. This transition has been completed and the issue will be closed.</p>

Note

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

Section 6 – Lessons Learned

6.1 Key Lessons Learned

Description	Categories of Systemic Lessons
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.	Contract Management

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2022

Unit	Name
Division	Rotary, Aerospace and Surveillance Systems
Branch	Army Aviation Systems Branch

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Project Data Summary Sheet¹⁴⁶

Project Number	SEA1180 Phase 1
Project Name	OFFSHORE PATROL VESSEL
First Year Reported in the MPR	2018-19
Capability Type	Replacement
Capability Manager	Chief of Navy
Government 1st Pass Approval	Apr 16
Government 2nd Pass Approval	Nov 17
Budget at 2nd Pass Approval	\$3,639.1m
Total Approved Budget (Current)	\$3,648.6m
2021-22 Budget	\$366.8m
Complexity	ACAT II



Section 1 – Project Summary

1.1 Project Description

Project SEA1180 Phase 1 Offshore Patrol Vessel (OPV) will acquire 12 new vessels based on an existing design, to replace and improve upon the capability delivered by the Armidale Class Patrol Boats (ACPB). The primary role of the SEA1180 Phase 1 OPV will be maritime patrol and response operations in support of the National Civil Surveillance Program (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 sea boats for the vessels, through a separate contract. These consist of two Rigid Hull Inflatable Boats and one Rapid Intercept Craft for each OPV to facilitate boarding operations.

1.2 Current Status

Cost Performance

In-year

The project achieved \$231.4m spend out of \$366.8m budget. The End Of Financial Year (EOFY) variance is primarily due to the shift in deliverables including the support system and delay in current build performance (\$104m). Other causes include shift in milestone deliverables against OPV transition (\$12.5m), ADF seaboat program (\$6.5m), training systems (\$9m) and government furnished equipment (\$3.4m).

Project Financial Assurance Statement

As at 30 June 2022, project SEA1180 Phase 1 has undertaken a review of the approved scope and budget for those elements required to be delivered by Defence. As at the reporting date, and with regards to the current financial and contractual obligations of the project, current known risks and estimated future expenditure, Defence considers as at the reporting date, there is sufficient budget with contingency remaining for the project to complete against the agreed scope.

Contingency Statement

The project has applied contingency in the financial year primarily for the treatment of high risk relating to the delivery of OPV 3 (Pilbara) leading to an impact on OPV Operational Capability (OC), capability and reputation.

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 OPV in South Australia in November 2018 on schedule. A Whole of Ship Design Review was added to the program and conducted in late October 2019. The Support System Detailed Design Review was delayed to September 2021 to allow a Logistic Support Analysis program to be established effectively in November 2020.

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

As a result of delays created by COVID-19, delivery of Nuship Arafura by Luerssen will be further delayed from the last MPR forecast date of June 2022. The program is working collaboratively with Navy to reduce the impact of ship delivery to Initial Operational Capability (IOC). The Project is on track to achieve the Final Materiel Release (FMR) milestone.

146 Notice to reader

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

Materiel Capability/ Scope Delivery Performance

As a consequence of COVID-19 impacts on the construction schedule, there have been delays in the delivery of the first OPV, however opportunities are being sought by the prime contractor to still deliver the entire 12 Offshore Patrol Vessels and achieve Final Operational Capability (FOC).

In June 2021, due to delays in delivery as a result of COVID-19 and technical certification concerns by Navy, Luerssen Australia was directed to terminate the main gun contract with Leonardo Australia and investigate an interim gun solution. The interim main gun for the Arafura OPVs will be the existing Navy, 25mm Typhoon Mod 0 from Armidale Class Patrol Boats until a replacement gun is identified, which will account for a revised threat assessment and a requirement for commonality.

Note

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

1.3 Project Context**Background**

The SEA1180 Phase 1 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 to facilitate boarding operations.

In August 2015, the Government announced that SEA1180 Phase 1 would become part of the continuous naval shipbuilding program and brought forward the construction of the OPV by two years to enable the start of the naval shipbuilding program by 2018.

In September 2015, the Government approved funding for the commencement of the Competitive Evaluation Process (CEP) for SEA1180 Phase 1. Interim Pass Project Approval was provided by Government in November 2015 and First Pass Approval was provided in April 2016.

The 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.

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.

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.

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.

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, a main gun, an Electro Optical Surveillance System, Electro Optical Device and Electronic Support Measures.

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 (HDL oS) 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. Contract Change Proposal (CCP) 007 adjusted the Support System development and also introduced a Whole of Ship Design Review enabling completion of the design phase.

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.

Uniqueness

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.

Major Risks and Issues

The project continues to experience production resource constraints at Osborne and Henderson stemming from COVID-19 restrictions over the past two years and competition for production and niche engineering resources. Consequently, risks tracked include progress in production for OPV 1 (Arafura) and OPV 3 (Pilbara) with resource competition in WA raised as a child risk to the latter. Risk to progress in Support Products and the Safety Case deliverables are also being closely tracked and prioritised for mitigation by the Project Office.

Other Current Related Projects/Phases

Related Projects include:

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SEA5000 – 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 *Stirling*, HMAS *Coonawarra*, and HMAS *Cairns* to support the introduction into service of 12 new Offshore Patrol Vessels (OPV) being delivered by Luerssen.

Note

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

Section 2 – Financial Performance

2.1 Project Budget (out-turned) and Expenditure History

Date	Description	\$m	Notes
Project Budget			
Sep 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
	Total at Second Pass	3,639.1	
Jun 22	Exchange Variation	9.5	
Jun 22	Total Budget	3,648.6	
Project Expenditure			
Prior to Jul 21	Contract Expenditure - Luerssen Australia	664.8	5
	Contract Expenditure – Nova Defence	39.1	
	Contract Expenditure - Boomeranger Boats Oy	5.3	
	Other Contract Payments/Internal Expenses	104.3	6
		813.4	
FY to Jun 22	Contract Expenditure - Luerssen Australia	173.3	5
	Contract Expenditure – Nova Defence	8.5	
	Contract Expenditure - Boomeranger Boats Oy	4.4	
	Other Contract Payments/Internal Expenses	45.2	7
		231.4	
Jun 22	Total Expenditure	1,044.9	
Jun 22	Remaining Budget	2,603.7	

Notes

- Funding in support of bringing the SEA1180 Phase 1 project forward by two years and establishing a continuous onshore build.
- Funding for the conduct of the initial phase of the Competitive Evaluation Process (CEP).
- Continuation/Completion of CEP which included Project Support, a Risk Reduction Design Study and Schedule Protection Activities.
- 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).
- Prime Contract with Luerssen Australia Pty Ltd. The scope of this contract is explained further in Section 2.3 – Details of Project Major Contracts.
- Other expenditure prior to July 2021 comprises \$29.7m for the Risk Reduction Design Study and Schedule Protection Activity; \$13.4m Luerssen Australia Pty Ltd Licence & facilities costs; \$6.9m EM Solutions and \$54.3m for other contract payments/internal expenses.
- Other expenditure comprises \$5.9m BAE Systems – Maintenance and upgrade works at HMAS Melville, \$5.6m Luerssen Australia Pty Ltd. Licence & facilities costs, \$4.1m L3Harris INDS hardware and non-DEWL software, \$3.6m IBM Australia Maritime Information Environment upgrade, \$16.2m Contractors, \$2.8m Insurance, \$4.8m Pass through costs and \$2.2m other operating 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	Explanation of Material Movements
366.5	367.8	366.8	PBS-PAES: and PAES – Estimate Final Plan variances is due to foreign exchange rates.
Variance \$m	1.3	(1.0)	Total Variance (\$m): 0.3
Variance %	0.4	(0.3)	Total Variance (%): 0.1

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(3.6)	Australian Industry	The variation is primarily due to the shift in deliverables including the support system and delay in current build performance (\$104m). Other causes include shift in milestone deliverables against OPV transition (\$12.5m), ADF seaboard program (\$6.5m), training systems (\$9m) and government furnished equipment (\$3.4m).
		(6.6)	Foreign Industry	
			Early Processes	
		(124.7)	Defence Processes	
		(0.4)	Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	

			Additional Government Approvals
366.8	231.4	(135.3)	Total Variance
		(36.9)	% Variance

2.3 Details of Project Major Contracts

Contractor		Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
			Signature \$m	30 Jun 22 \$m			
Luerssen Australia		31 Jan 18	1,988.0	2,541.3	Fixed with forecast Escalation	Standard Defence Contract (Complex)	1,2
Boomeranger Boats Oy		9 Oct 19	42.2	53.0	Fixed with forecast Escalation	Modified Standard Defence Contract	1,2
Nova Defence		3 Jun 16	12.6	56.6	Fixed	Standard Defence Contract	
Notes							
1	Contract value as at 30 June 2022 is based on actual expenditure to 30 June 2022 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 2022 value will reflect a variance to prior reporting period.						
2	The price is the value in out-turned dollars (as at June 2022) 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 2022 includes this estimate, which is the reason for the large difference between the two figures.						
Contractor		Contracted Quantities as at		Scope			Notes
		Signature	30 Jun 22				
Luerssen Australia		12	12	12 Offshore Patrol Vessels			
Boomeranger Boats Oy		41	41	27 Rigid Hull Inflatable Boats and 14 Rapid Intercept Craft			
Nova Defence		N/A	N/A	Support to the Offshore Patrol Vessels Project			
Major equipment accepted and quantities to 30 Jun 22							
Ship Set 1 Seaboats (3) delivered 26 August 2021 from Boomeranger Boats							
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	N/A	Jun 18	0	
Preliminary Design		Aug 18	N/A	Aug 18	0	
Detailed Design		Oct 18	Nov 18	Nov 18	1	1
System Requirements	Platform System – Stream B	Jun 18	N/A	Jun 18	0	
Preliminary Design		Nov 18	Dec 18	Dec 18	1	1
Detailed Design		Feb 19	N/A	May 19	3	1
System Requirements	Command and Control System (C2)	Jun 18	N/A	Jun 18	0	
Preliminary Design		Dec 18	Nov 18	Nov 18	(1)	
Detailed Design		Mar 19	N/A	Mar 19	0	
System Requirements	Communication and Navigation System (CNS)	Jun 18	N/A	Jun 18	0	
Preliminary Design		Jan 19	N/A	Nov 18	(2)	1
Detailed Design		Apr 19	N/A	May 19	1	
Preliminary Design	Support System (SS)	Nov 18	N/A	Jun 19	7	1,2
Detailed Design		Jun 19	Mar 20	Sep 21	27	1,2,3
Detailed Design Review	Whole of Ship (WoS)	Oct 19	N/A	Oct 19	0	2
Notes						
1	Variance was agreed by the parties at Contract Change Proposal (CCP) 001 and incorporated under Contract Amendment 3.					
2	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 was delayed to allow a Logistic Support Analysis program to be established effectively and occurred in November 2020. Outstanding actions were identified and was exited in September 2021.					

3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
Acceptance	OPV 1 (Arafura)	Dec 21	N/A	delayed from Jun 22	NFP	1
Acceptance	OPV 2 (Eyre)	Sep 22	N/A	delayed from Mar 23	NFP	1
Acceptance	OPV 3 (Pilbara)	May 23	N/A	delayed from May 23	NFP	2
Acceptance	OPV 4 (Gippsland)	Feb 24	N/A	delayed from Feb 24	NFP	2
Acceptance	OPV 5 (Illawarra)	Nov 24	N/A	delayed from Nov 24	NFP	2
Acceptance	OPV 6 (Carpentaria)	Jul 25	N/A	Jul 25	0	2
Acceptance	OPV 7	Apr 26	N/A	Apr 26	0	2
Acceptance	OPV 8	Jan 27	N/A	Jan 27	0	2

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Acceptance	OPV 9	Oct 27	N/A	Oct 27	0	2
Acceptance	OPV 10	Jun 28	N/A	Jun 28	0	2
Acceptance	OPV 11	Mar 29	N/A	Mar 29	0	2
Acceptance	OPV 12	Dec 29	N/A	Dec 29	0	2

Notes

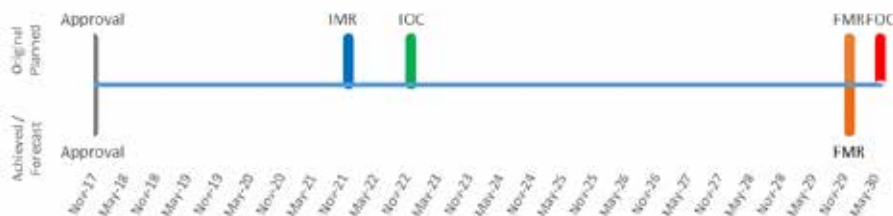
1	The COVID-19 pandemic has impacted multiple aspects relating to construction and in particular, activities at Osborne Shipyard in South Australia from March to October 2020. COVID has continued to have an adverse and significant effect on production and ship building operations supply chain disruptions, resource limitations and hard boarder closures between Western Australia and SA.
2	An Integrated Baseline Review will be held in November 2022 in order to baseline the schedules for OPV 3-12.

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Dec 21	delayed from Jun 22	NFP	1,2
Initial Operational Capability (IOC)	Dec 22	delayed from Dec 22	NFP	2,3
Final Materiel Release (FMR)	Dec 29	Dec 29	0	
Final Operational Capability (FOC)	Jun 30	delayed from Jun 30	NFP	3

Notes

1	The COVID-19 pandemic has impacted multiple aspects relating to construction and in particular, activities at Osborne Shipyard in South Australia from March to October 2020.
2	COVID has continued to have an adverse and significant effect on production and ship building operations, supply chain disruptions, resource limitations and hard boarder closures between Western Australia and South Australia.
3	IOC activities are controlled by Navy and directly linked to the delivery of OPV1 (Arafura). It's anticipated that IOC will occur approximately 37 weeks after acceptance. Delays to FOC are from delays to IOC.
4	Further clarification of milestones will be reflected in Section 4.2.

Schedule Status at 30 June 2022**Note**

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

Section 4 – Materiel Capability/Scope Delivery Performance**4.1 Measures of Materiel Capability/Scope Delivery Performance****Traffic Light Diagram: Percentage Breakdown of Materiel Capability/Scope Delivery Performance**

	Green: The Project is on track to deliver 12 Offshore Patrol Vessels. Whilst COVID has impacted production of the Offshore Patrol Vessels the full impacts will not be known until completion of the IBR of OPV 3 -12.
	Amber: The primary weapon system of the OPV to conduct Constabulary Operations is the seaboats. The other weapon systems onboard are the main gun and two 50 calibre machine guns. A temporary change to the main gun size has had an operational impact. Assessment of capability is (0.4%).
	Red: N/A

Note

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

4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	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.	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.	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.	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 OPV1 (Arafura) will not be delivered on contracted date leading to an impact on IOC of the new capability and reputation.	Progress against the build schedule is closely monitored by the Project Office and Luerssen, to ensure Luerssen achieve their updated milestone dates for launch and delivery of OPV 1 (Arafura) in order to allow Navy to meet IOC
There is a chance that the Arafura Class OPV production in Henderson will be affected by demands on the available workforce in WA leading to an impact on quality and schedule.	Luerssen continues heightened efforts to resource production workforce.
Emergent Risks (risk not previously identified but has emerged during 2021–22)	
Description	Remedial Action
There is a chance that OPV 3 (Pilbara) will not be delivered on contracted date leading to an impact on OPV Operational Capability (OC), capability and reputation.	Progress against the build schedule is closely monitored by the Project Office and Luerssen, to ensure Luerssen achieve their updated milestone dates for launch and delivery of OPV 3 (Pilbara) in order to allow Navy to meet OPV 3 OC. Contingency has been applied to address this risk through amending contractual arrangements. The intended effect is to provide Luerssen with access to a larger pool of production workforce in Western Australia.
There is a chance that priority support products may be partially delivered at IMR leading to an impact on capability and project schedule.	Progress against support product delivery for OPV 1 (Arafura) is closely monitored by the Project Office with the Integrated Logistics Support (ILS) function actively seeking opportunities to support Luerssen in meeting deliverables. The primary driver for this risk is scarcity of specialist ILS resources, and as such, is difficult to mitigate in the short term.
There is a chance that the Safety Case is not accepted by Navy at IOR leading to an impact on capability and schedule.	Progress against Safety Case development is closely monitored by the Systems Safety team within the Project Office. The Project Office is seeking additional fidelity in progress reports and forecasts for delivery of the Safety Case to reduce uncertainty in meeting this delivery timeline. Furthermore the Project has been receiving interim delivery of key data items to enable review and feedback ahead of final submission.

5.2 Major Project Issues

Description	Remedial Action
Nil	N/A

Note

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

Section 6 – Lessons Learned

6.1 Key Lessons Learned

Description	Categories of Systemic Lessons
Nil	N/A

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2022

Unit	Name
Division	Ships
Branch	Offshore Patrol Vessels Branch

Project Data Summary Sheets

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Project Data Summary Sheet¹⁴⁷

Project Number	LAND121 Phase 3B
Project Name	OVERLANDER VEHICLES (MEDIUM AND HEAVY VEHICLES, MODULES AND TRAILERS)
First Year Reported in the MPR	2013-14
Capability Type	Replacement
Capability Manager	Chief of Army
Government 1st Pass Approval	Jun 04 – Phase 3 Dec 11 – Phase 3B
Government 2nd Pass Approval	Aug 07 – Phase 3 Jul 13 – Phase 3B
Budget at 2nd Pass Approval	\$3,284.7m
Total Approved Budget (Current)	\$3,399.6m
2021-22 Budget	\$74.2m
Complexity	ACAT I



Section 1 – Project Summary

1.1 Project Description

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

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

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

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

The following vehicles, trailers and modules are being acquired:

- 2,536 MHC vehicles and 3,054 modules (including 55 Command Post Heavy (CPH) modules) supplied by Rheinmetall MAN Military Vehicles Australia (RMMVA);
- 1,582 trailers from Haulmark Trailers (Australia) (HTA);
- 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 LAND121 Phase 3A;
- 49 in-service Bushmaster Protected Mobility Vehicles upgraded to customised General Maintenance Vehicle variants and associated trailers;
- 18 Line Laying Modules acquired by LAND121 Phase 3A;
- A further 664 specialist modules are to be acquired.
 - 170 Personnel Restraint Modules (PRM) from United Rentals Australia Pty Ltd; and
 - 494 Modules Gun Ammunition (MGA) and Modules Gun Stores (MGS) currently out for tender.

1.2 Current Status

Cost Performance

In-year

As at 30 June 2022, financial year 2021-22 expenditure was \$63.0m against a budget of \$74.2m. The EOFY Variation is primarily due to reprogramming of milestones affected by schedule delay in uncontracted specialist modules and the CPH, and COVID-19 supply chain impacts into Q1 financial year 2022-23 as forecast.

Project Financial Assurance Statement

As at 30 June 2022, project LAND121 Phase 3B has reviewed the approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial and contractual obligations of Defence, 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.

147 Notice to reader

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

Schedule Performance

Phase 3B has progressed through the design phases for all RMMVA contracted vehicles, modules and HTA trailers.

HTA continues to provide trailer 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) with a caveat on vehicle air certification, by the originally planned date of December 2019. RMMVA has been requested by Air Movements Training and Development Unit (AMTDU) to provide additional technical data to inform air certification clearance. This issue is being closely managed by Capability Acquisition and Sustainment Group (CASG) and the Capability Manager.

In 2020-21 PDSS, the Final Materiel Release (FMR) and Final Operational Capability (FOC) milestones were scheduled for December 2022 and December 2023 respectively. However, as at 30 June 2022, the project is in the process of monitoring potential impacts to these milestones from COVID-19 impacts in meeting the Directed Training Requirement (DTR); the outstanding work to achieve air certification; and the time required to finalise the user requirements and deliver the remaining specialist modules.

Materiel Capability/Scope Delivery Performance

As described in the Schedule Performance above, the Project achieved IOC with a caveat on air certification. Schedule management remains a key focus and is being closely managed by CASG and the Capability Manager.

As at 30 June 2022 RMMVA has delivered 2,536 of 2,536 vehicles and 2,999 of 3,054 modules.

HTA has delivered 1,581 of 1,582 companion trailers.

A contract was signed with United Rentals Australia Pty Ltd, for the delivery of 170 PRM modules in December 2021.

A Request for Tender (RFT) was released on 2 May 2022 for MGA and MGS, which closes in October 2022.

Note

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

1.3 Project Context

Background

Project LAND121 is a multi-phased project to provide the ADF with the FVM&T and associated support systems to meet ADF mobility requirements including logistic distribution, command and liaison, casualty evacuation, troop lift, and the provision of mobility for specialist assets such as command shelters and communications terminals.

At the time Government approved LAND121 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.

LAND121 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 LAND121 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 LAND121 Phase 3 into two projects: LAND121 Phase 3A for the LLC approved under Phase 3 and amalgamating this with the additional scope approved under Phase 5A; and LAND121 Phase 3B to progress the Phase 3 MHC scope elements. This decision effectively closed Phase 3 and amounted to a combined pass approval for the new Phase 3A and an 'interim pass' approval for the new Phase 3B. The December 2011 approval allowed the continuation of contracted activities toward the LLC acquisition and the ongoing negotiations for the MHC contracts for Phase 3B.

Phase 3B was required to seek a supplementary second pass approval following contract negotiations.

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

LAND121 Phase 3B is to deliver the FVM&T capability to multiple locations throughout Australia and on operational service overseas. This presents a unique logistic challenge in having a robust Support System that will achieve stated availability requirements for the lowest life cycle cost.

Major Risks and Issues

The project is currently managing the following major risks:

- MGA/MGS, PRM and CPH delivery delays;
- Radiation Hazards from Loading Modules onto Gun Tractor.

The project is also managing the following project issues:

- Finalisation of User Requirements for uncontracted specialist modules;
- AMTDU certification;
- Impact of COVID-19.

Other Current Related Projects/Phases

LAND121 is a multi-phased project providing the ADF with current-generation high-capability field vehicles, modules and trailers.

Other LAND121 projects are:

LAND121 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.

LAND121 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.

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
Project Budget			
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
	At Original Approval (Phase 3B Project Budget after split from Phase 3)	2,549.2	
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
	Total at Revised Second Pass Approval	3,284.7	
Nov 18	Real Variation - Budgetary Adjustment	(30.0)	7
Jun 22	Exchange Variation	144.8	
	Total Budget	3,399.6	
Project Expenditure			
Prior to Jul 21	Contract Expenditure - Rheinmetall MAN Military Vehicles Australia (Acquisition)	(2,046.3)	
	Contract Expenditure - Haulmark Trailers (Aust) Pty Ltd (Acquisition)	(446.3)	
	Rheinmetall MAN Military Vehicles Australia (Support)	(15.4)	
	Other Contract Payments / Internal Expenses	(240.7)	8
		(2,748.8)	
FY to Jun 22	Contract Expenditure - Rheinmetall MAN Military Vehicles Australia (Acquisition)	(19.3)	
	Contract Expenditure - Haulmark Trailers (Aust) Pty Ltd (Acquisition)	(24.6)	
	Rheinmetall MAN Military Vehicles Australia (Support)	0	
	Contract Expenditure - United Rentals Australia Pty Ltd (Acquisition)	(3.0)	
	Other Contract Payments / Internal Expenses	(16.1)	9
		(63.0)	
Jun 22	Total Expenditure	(2,811.8)	
Jun 22	Remaining Budget	587.8	
Notes			
1	Phase 3 project budget prior to the split into Phase 3A and Phase 3B.		
2	Retention of Light Capability scope by LAND121 Phase 3A.		
3	Update of exchange rates from approval to 2012–13 PBS rates.		
4	Transfer of funds from LAND116 Phase 3 for acquisition of trailers.		
5	Transfer of funds from JP2059 Phase 2 Bulk Liquid Distribution for acquisition of some vehicles and associated equipment to facilitate fuel and water transportation.		
6	Provision for general program supplementation associated with easing cost pressures identified during scoping for project approval, as per revised second pass approval.		
7	Budget Adjustment of \$30.0m was approved by Government in Nov 18. The \$30.0m adjustment from LAND121 Phase 3B will be returned to the budget of LAND121 Phase 5B in 2023-24. LAND121Phase 5B relates to the acquisition and delivery into service of an additional 1,044 vehicles, 872 modules and 812 trailers. LAND121 Phase 3B and LAND121Phase 5B are managed by the same project team at Defence		
8	Other Expenses comprise of (\$64.1m) for the acquisition of G-Wagons by LAND121 Phase 3A on behalf of LAND121 Phase 3B, (\$61.6m) for salaries, (\$22.3m) for the Protected Mobility Vehicle, and (\$79.0m) for other project office costs not associated with the prime contracts. An adjustment of \$13.7m was required due to the transition back to Accrual Accounting from a Cash Methodology in FY 2019-20.		
9	Other Expenses comprise of (\$11.6m) for salaries and (\$4.5m) for other project office costs not associated with prime contracts.		

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
65.1	74.4	74.2	PBS to PAES: The variation is due primarily to forecast milestones reprogrammed from FY 22-23 into FY 21-22. PAES to Final Plan: Variance is due to updates to exchange rates.
Variance \$m	9.3	(0.2)	Total Variance (\$m): 9.1
Variance %	14.3	(0.3)	Total Variance (%): 14.0

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(11.2)	Australian Industry	The EOFY Variation is primarily due to reprogramming of milestones affected by schedule delay in uncontracted specialist modules and the CPH, and COVID-19 supply chain impacts into Q1 financial year 2022-23 as forecast.
			Foreign Industry	
			Early Processes	
			Defence Processes	
			Foreign Government	
			Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
74.2	63.0	(11.2)	Total Variance	
		(15.1)	% Variance	

2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 22 \$m			
Rheinmetall MAN Military Vehicles Australia (Acquisition)	Jul 13	1,585.9	2,129.9	Variable	Standard Defence Contract	1, 2, 3
Haulmark Trailers (Australia) Pty Ltd (Acquisition)	Jul 13	397.7	509.6	Variable	Standard Defence Contract	1, 2
Rheinmetall MAN Military Vehicles Australia (Support)	Jul 13	32.3	46.7	Variable	Standard Defence Contract	1, 2, 4
United Rentals Australia Pty Ltd	Dec 21	29.9	33.4	Variable	Standard Defence Contract	2

Notes

- Additional vehicles and trailers, worth \$28.3m and \$4.7m respectively, were funded and procured by LAND121 Phase 3A, on behalf of the LAND121 Phase 3B project.
- Contract value as at 30 June 2022 is based on actual expenditure to 30 June 2022 and remaining commitment at current exchange rates of EURO 0.6589 and USD 0.6889 based on XR RBA on 30 June 2022, and includes adjustments for indexation (where applicable).
- Price at 30 June 2022 varies from Price at Signature due to contracted price escalation, and contract changes related to in-scope capability and support.
- As of 01 July 2020, the Support Contract which has previously been managed by LAND121 Phase 3B has transitioned to Commercial and General Service Vehicle Systems Program Office (CGSVSPO) under CA16 Fleet.

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 22		
Rheinmetall MAN Military Vehicles Australia (Acquisition)	2,536	2,536	MHC vehicles with associated modules.	1
Haulmark Trailers (Australia) Pty Ltd (Acquisition)	1,582	1,582	MHC Trailers.	1
Rheinmetall MAN Military Vehicles Australia (Support)	N/A	N/A	MHC Support Contract for vehicles and modules.	2
United Rentals Australia Pty Ltd	170	170	Personnel Restraint Module	

Major equipment accepted and quantities to 30 Jun 22

As at 30 June 2022 Rheinmetall MAN Military Vehicles Australia has delivered 2,536 of 2,536 of the following vehicles:

- Mediumweight Tray: all deliveries completed;
- Mediumweight Tray with Crane: all deliveries completed;
- Mediumweight Tipper (dump): all deliveries completed;
- Heavy Integrated Load Handling: all deliveries completed;
- Heavy Tipper: all deliveries completed;
- Heavy Tractor: all deliveries completed;
- Medium Recovery : all deliveries completed;
- Heavy Recovery: all deliveries completed; and
- Heavy Tanker: all deliveries completed.

and 2,999 of 3,054 of the following modules:

- Flatracks: all deliveries completed;
- Bridge Boat Interface: all deliveries completed;
- Mediumweight Combat Engineer Section Stores: all deliveries completed;

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<ul style="list-style-type: none"> • Mediumweight Maintenance: all deliveries completed; • Mediumweight Stores: all deliveries completed; • Heavy Stores: all deliveries completed; • Heavy Bulk Fuel Pump and Storage: all deliveries completed; • Heavy Bulk Fuel Storage: all deliveries completed; • Heavy Bulk Water Pump and Storage: all deliveries completed; and • Heavy Bulk Water Storage: all deliveries completed; • Command Post Heavy Module: delivery not yet commenced
As at 30 June 2022 Haulmark Trailers (Australia) has delivered 1,581 of 1,582 of the following matched trailers:
<ul style="list-style-type: none"> • Medium weight Cargo trailers: all deliveries completed; • Heavy ILH trailers: all deliveries completed; • Heavy Equipment Trailers: all deliveries completed; • Medium Equipment Transporters: all deliveries completed; • Heavy Bulk Fuel Tankers: all deliveries completed; • Heavy Equipment Transporters: 95% Complete; • Dolly Low Loaders: all deliveries completed; • Heavy Cargo trailers: all deliveries completed; • Heavy Bulk Water Tankers: all deliveries completed; and • Dolly Road Trains: all deliveries completed.
As at 30 June 2022 United Rentals Australia Pty Ltd, has delivered 0 of 170 of the PRM.
Notes
1 The quantity figures being communicated publicly excludes vehicle and trailer prototypes.
2 As of 1 July 2020, the Support Contract which has previously been managed by LAND121 Phase 3B has transitioned to Commercial and General Service Vehicle Systems Program Office (CGSVSPO) under CA16 Fleet.

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 (RMMVA)	Aug 14	Feb 15	Mar 15	7	1, 2
	Trailers	Jun 16	Jan 17	Jan 17	7	1, 3
	Personnel Restraint Module	Oct 22	N/A	Oct 22	0	
Detailed Design	Vehicles	May 15	Sep 16	Jun 17	25	1, 2
	Modules (RMMVA)	Nov 14	Jun 15	Mar 16	16	1, 2
	Trailers	Jan 17	Jul 17	Jun 17	5	1, 3
	Personnel Restraint Module	Jan 24	N/A	Jan 24	N/A	4
Critical Design	Vehicles	Aug 15	Jan 17	Dec 17	28	1, 2
	Modules (RMMVA)	Mar 15	Nov 15	Sep 16	18	1, 2
Notes						
1	All dates represent the Approval of the exit for the Reviews of the last vehicle, module and trailer variants. All vehicles, contracted modules and trailers have now completed preliminary, detailed and critical design review processes.					
2	Vehicle and Module Variance is due to two 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.					
4	Original/contracted date had a logic error. Contract change in progress to correct the logic and update Current Contracted Date.					

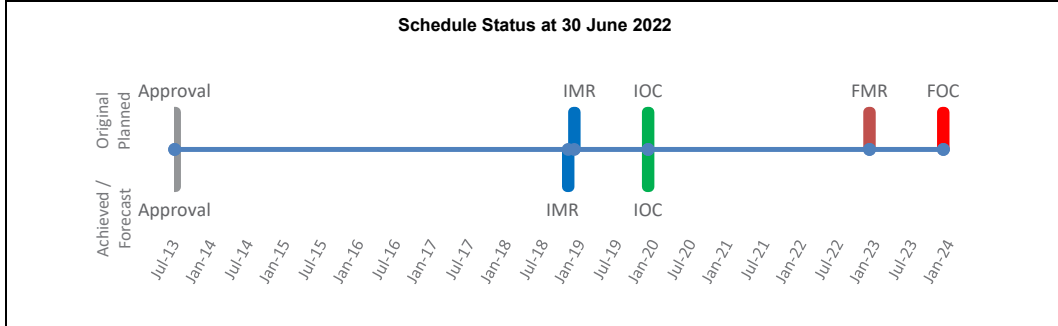
3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
System Integration, Acceptance Test and Evaluation (AT&E)	Vehicles	Jul 16	Aug 18	Nov 22	76	1,2,3,4,7
	Modules (RMMVA)	Nov 15	Jun 17	Jun 21	67	1,2,3,4,5,7
	Trailers	Sep 17	May 18	Jun 18	9	1,6
	Personnel Restraint Module	Nov 23	N/A	Nov 23	N/A	1,8
Notes						
1	All dates represent the Approval of the Acceptance Verification Reports (AVRs) 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 for Vehicles 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 November 2022. Revised Achieved/Forecast date for the Bulk Liquid Modules relates to the resubmission of a number of AVRs. These were approved in June 2021.					
8	Original/contracted date had a logic error. Contract change in progress to correct the logic and update Current Contracted Date.					

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Dec 18	Nov 18	(1)	1
Initial Operational Capability (IOC)	Dec 19	Dec 19	0	2
Final Materiel Release (FMR)	Dec 22	TBA	N/A	3
Final Operational Capability (FOC)	Dec 23	TBA	N/A	3

Notes				
1	Initial Materiel Release was achieved one month earlier than forecast due to all elements of Initial Materiel Release being satisfied and agreed with the Capability Manager in November 2018.			
2	Operational Capability (IOC) was declared with air certification caveat on 12 December 2019.			
3	The impact on the current forecasted dates for FMR and FOC is being assessed in line with the additional time required to finalise the user requirements and delivery of the specialist modules, the ongoing work required to achieve air certification and the impact of COVID-19 on the DTR schedule.			



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

Section 4 – Materiel Capability/Scope Delivery Performance

4.1 Measures of Materiel Capability/Scope Delivery Performance

Traffic Light Diagram: Percentage Breakdown of Materiel Capability/Scope Delivery Performance	
	Green: The project is currently meeting materiel capability requirements as expressed in the MAA and in accordance with the requirements of the relevant Technical Regulatory Authorities.
	Amber: IOC was achieved with caveats due to delays in achievement of air certification. Achieving air certification by FOC remains a medium risk after mitigation. Schedule management remains a key focus and is being closely managed by CASG and the Capability Manager.
	Red:

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

4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	IMR requires the following to be delivered: 659 medium and heavy vehicles, 436 modules, 57 trailers, sufficient training for operators and maintainers to support Army's introduction into service plan and adequate logistic support arrangements. Achieved November 2018.	Achieved
Initial Operational Capability (IOC)	IOC requires the following to be delivered: Based on a Battle Group, which is approximately 100 vehicles, deployed on a Major Defence Training activity (Exercise TALISMAN SABRE or equivalent). IOC was declared by Chief of Army in December 2019 with an air certification caveat.	Achieved with an air certification caveat
Final Materiel Release (FMR)	FMR requires the following to be delivered: 2,707 medium and heavy vehicles, 3,858 modules and 1,753 trailers, achieve the Directed Training Requirement across the entire medium and heavy capability for operators and maintainers and logistic support arrangements.	Not yet achieved

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	Forecast achievement TBA. The impact on the current forecasted date for FMR is being assessed in line with the additional time required to finalise the user requirements and deliver the specialist modules, the ongoing work required to achieve air certification and the impact of COVID-19 on the DTR schedule.	
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 TBA. The impact on the current forecasted date for FOC is being assessed in line with the additional time required to finalise the user requirements and deliver the specialist modules, the ongoing work required to achieve air certification and the impact of COVID-19 on the DTR schedule.	Not yet achieved

Section 5 – Major Risks and Issues

5.1 Major Project Risks

Identified Risks (risk identified by standard project risk management processes)	
Description	Remedial Action
MGA/MGS, PRM and CPH delivery delays There is a chance that a combination of technical complexity, contractual complexity, and certification requirements will delay the delivery of modules past the agreed date. That date is FMR and FOC under MAA version 2.2.	RFT for the MGA/MGS has been released and plans are progressing to mitigate the schedule risk associated with Verification & Validation (V&V) testing. This issue will be revisited and addressed post the RFT closing date in October 2022. The CPH OCD and User Requirements are currently being reviewed by the Capability Manager. A contract was signed in December 2021 with United Rentals Australia Pty Ltd, for the delivery of a 170 PRM modules.
MGA/MGS – Access to FMS Data There is a chance that the MGA/MGS will not be delivered as required to meet MAA milestones due to the lengthy period required to obtain approvals to access FMS data.	This risk has been closed as access to FMS data has been approved and will be removed at the next MPR.
Hazards from carrying Ammunition on communications enabled Gun Tow Vehicle The Gun Tow Vehicle (GTV) is fitted with a communications node. Some ammunition components are sensitive to electromagnetic radiation emitted by the communications node. There is a chance that designing to reduce the risk that the fitted communications node will damage or initiate ammunition components on the GTV, may delay MGA design, incur unidentified / unbudgeted costs and constrain or lessen desired capability.	This risk is still ongoing as it is linked to the design of the MGA/MGS, which is currently out for tender. This risk will be reassessed as the project progresses through Tender Evaluation, Detailed Design and prototyping. This risk will be revisited post the RFT closing date in October 2022. Suitable risk treatments have been identified and will be implemented through the design and verification process with the preferred tenderer.
Emergent Risks (risk not previously identified but has emerged during 2021–22)	
Description	Remedial Action
Tyre Changing Station (TCS) Development Risk. There is a chance that the TCS Commercial Off the Shelf (COTS) equipment will fail to operate as required in environments that the equipment was not designed for. This will result in the inability of the TCS to change tyres and / run flats.	This risk was identified and created in July 2021. Since July 2021, the TCS COTS equipment has undergone extensive vibration and climate testing. All major issues identified during vibration testing have been remediated and testing is to be repeated for V&V. Consequently this risk was re-assessed and downgraded and will be removed at the next MPR.

5.2 Major Project Issues

Description	Remedial Action
Finalisation of User Requirements for Uncontracted Modules There is a risk that uncontracted modules may not have robust User Requirements, which can be taken to industry to satisfy the Capability need. This may lead to Cost, Schedule or Capability risks for the Project and Capability Manager.	Operational Concept Document (OCD) and Functional Performance Specification (FPS) have been completed for MGA/MGS and the associated RFT was released. The CPH OCD and User Requirements are currently being reviewed by the Capability Manager.

	Whilst the majority of the Medium Heavy Capability has been delivered on time, a delay in issue and approval of the OCDs will result in a risk to schedule for the delivery of the modules. The issue continues to be managed closely with key stakeholders via Integrated Project Team and Project Management Stakeholder Group meetings. Options will be explored with the preferred tenderers to optimise the delivery schedule.
Air Movements Training and Development Unit (AMTDU) certification There is a chance that Air transportability will affect project schedule, performance and cost. IOC has been declared with air certification caveats.	Nearly all Modules have received full clearance and most Vehicles have received caveated clearance. Work continues to address AMTDU Requests for Information (RFIs) to resolve the caveats. Semi-Trailer clearance work has not yet commenced and no significant roadblocks to certification are expected. 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. CASG has engaged RMMVA to conduct additional analysis work to address AMTDU RFIs. This includes detailed Finite Elements Analysis on all Tie Down Points. This issue is still active but is being effectively managed.
Impact of COVID-19 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.	Close collaboration with stakeholders. 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. The achievement of DTR has been impacted by COVID-19, along with ADF support provided to extreme weather events, and this may delay FMR. Given the ongoing nature of the pandemic, this risk will continue to be managed with stakeholder groups and key Industry Partners. This issue is still active but is being effectively managed and will be reviewed prior to the next MPR.

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

Section 6 – Lessons Learned

6.1 Key Lessons Learned

Description	Categories of Systemic Lessons
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 LAND121 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
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	Contract Management

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negotiations and potential variation, to ensure all items on the contracted GFE list are available and sourced.	
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 LAND121 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. LAND121 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
Durability testing of Commercial Off The Shelf (COTS) equipment early in the project life-cycle (pre Preliminary Design Review) helped mitigate project risk through early identification of defects and hardening of equipment. Rigorous testing of COTS equipment early in the project life-cycle is encouraged.	Requirements Management
Establish and maintain defined level of competency in project management, requirements analysis and specification, and systems engineering to help ensure consistent delivery of capability across large projects. This may require on-going skills analysis and plan to achieve and maintain the required skills set of the project team.	Resourcing
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
Projects of this size and scale will often have numerous dependent projects, many of which will rely on the bigger project running to schedule. The number of requests for information from numerous stakeholder groups sometimes requires prioritisation in order to remain focused on project priorities. This needs careful management to ensure wider Defence priorities and objectives are achieved/supported.	Governance
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.	Resourcing
The vehicle user nation working group (RMMVUNG) has proven valuable in building an understanding of the CONOPS, issues and challenges faced by different user nations with the same vehicle fleet. There have been lessons learnt by CASG and AHQ from these conferences and there are efforts to reduce support costs by sharing development, refresh and acquisition activities.	Governance

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2022

Unit	Name
Division	Land Systems
Branch	Land Vehicle Systems

Project Data Summary Sheet¹⁴⁸

Project Number	AIR555 Phase 1
Project Name	Airborne Intelligence, Surveillance, Reconnaissance and Electronic Warfare (ISREW) Capability
First Year Reported in the MPR	2021-22
Capability Type	New
Capability Manager	Chief of Air Force
Government 1st Pass Approval	Dec 15
Government 2nd Pass Approval	Sep 17
Budget at 2nd Pass Approval	\$2,166.3m
Total Approved Budget (Current)	\$2,233.6m
2021-22 Budget	\$306.5m
Complexity	ACAT II



Section 1 – Project Summary

1.1 Project Description

AIR555 Phase 1 (AIR555PH1) will deliver four first of type MC-55A Peregrine aircraft, being modified Gulfstream Aerospace Corporation (GAC) G550 platforms. The aircraft will incorporate the next evolution of an operationally proven Airborne Intelligence, Surveillance, Reconnaissance and Electronic Warfare (ISREW) capability.

The capability will be a critical enabler for the Australian Defence Force's (ADF's) 5th generation war fighting platforms and will conduct routine and rapid surveillance in order to provide real time threat warning and intelligence support to the ADF, and will be a primary contributor of information to support Intelligence Mission Data (IMD) production.

AIR555PH1 is predominately a Foreign Military Sales (FMS) Program through the United States Air Force (USAF). The USAF's Prime Contractor for the acquisition of AIR555PH1 is L3Harris.

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

AIR555PH1 facilities will be located at four locations. The main operating base facilities will be built as a component of the ISREW Precinct at RAAF Base Edinburgh. Construction of the facilities commenced at RAAF Base Edinburgh in 2020. Facilities at three forward operating bases will also be delivered.

1.2 Current Status

Cost Performance

In-year

Financial year 2021-22 expenditure was \$220.5m against the budget of \$306.5m. The variation is associated with Aircraft one Phase 1 modifications, Group B material buys, and Phase 2 modification, integration, testing and data (MITD) activities.

Project Financial Assurance Statement

As at 30 June 2022, project AIR555PH1 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 did not apply contingency in the financial year 2021-22.

The project applied \$78.3m contingency in the 20/21 financial year primarily for the treatment of technical performance issues outlined in Section 5.2 of this Project Data Summary Sheet.

148 Notice to reader

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

Schedule Performance

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

In consultation with the Sponsor and USAF, the Project has assessed mitigation strategies to minimise schedule delays and interim milestone deliveries within the Materiel Acquisition Agreement (MAA). Based on the resultant schedule review, AIR555PH1 provided a re-baselined schedule for Sponsor and Government approval in November 2021. This has resulted in an adjustment to project schedule for Initial Operational Capability (IOC).

The updated MAA milestone dates were approved in the 2021 Bi-Annual Update to the Integrated Investment Plan (IIP). Following the November 2021 Government approval, the updated MAA was approved by Head of Air Force Capability (HAC) and Head of Air Services Division (HASD) in April 2022.

The program has significant engineering, integration and flight test activities yet to be completed, which have the potential to impact the program schedule. The commencement of an initial series of flight test activities are scheduled in 2022. The completion of these critical milestone events will inform the Project on the residual schedule risks associated with achieving the IOC/Final Operational Capability (FOC) milestones.

Materiel Capability/Scope Delivery Performance

As at 30 June 2022, this project has not delivered any materiel capability.

The AIR555PH1 facilities build at Edinburgh is being managed with consideration of the Intelligence, Surveillance and Reconnaissance (ISR) Enterprise at the RAAF Base. The Interim Operating Facility, the first facility to be delivered through E&IG, will be complete in Quarter 4 2022, which will support the integration and test of ground systems for AIR555PH1.

Note

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

1.3 Project Context

Background

AIR555PH1 will deliver an Airborne Intelligence Surveillance and Reconnaissance Electronic Warfare (ISREW) capability to Defence through a Foreign Military Sales (FMS) Case.

The initial (Government Gate Zero) project approval took place in July 2014. The scope for Gate 0 activities was to engage Defence Materiel Organisation (now Capability Acquisition and Sustainment Group (CASG)) contractor support to enable documentation production and risk reduction activities prior to AIR555PH1 First Pass consideration.

In November 2014, the Capability Gate Review Board (CGRB) delayed AIR555PH1 until the Force Structure Review (FSR) and Defence Capability Plan (DCP) 2015 were released.

The In-Service Date (ISD) of the AIR555PH1 solution was aligned with the Planned Withdrawal Date (PWD) of related capabilities; however, the CGRB-directed delay to First Pass resulted in an IOC date for AIR555PH1 which differed from the original project assumptions. This formed the basis of the project delivery schedule through the Government approval process.

The Smart Buyer Process was introduced to Defence during 2016 and became a mandatory requirement for Defence projects during 2017 and onwards. As the new process was introduced after AIR555PH1 had approached the market, it was not feasible to implement the guidelines within the timeframe available.

The Government Gate 1 (First Pass) project approval occurred in December 2015. AIR555PH1 First to Second Pass work included development of a detailed acquisition schedule, high quality cost estimate (HQCE) and technical risk reduction activities (RRAs). These were conducted under FMS Cases through the US Air Force (USAF) Big Safari ISREW program managed by the 645th Aeronautical Systems Group (AESG), with L3Harris Mission Integration as the prime contractor.

The costs developed through the HQCE, when combined with the inability to change the AIR555PH1 IIP allocation and phasings, necessitated a further review of the project by the Capability Manager Gate Review (CMGR) and Investment Committee (IC). The results of this review were a review of the number of aircraft, and a revised IOC and Final Operational Capability (FOC) dates.

The HQCE, including risk reduction activities and initial design effort to validate the rough order of magnitude (ROM) costs provided pre first pass, were higher than the ROM cost estimates. However, the cost fidelity was validated through the first to second pass activities and represented a higher quality of cost estimation based on initial engineering assessments and consideration of risk.

The CMGR and IC also agreed to purchase two unmodified G550 aircraft during First Pass activities, which in turn were to be delivered to L3Harris Mission Integration.

AIR555PH1 achieved Gate 2 (Second Pass) Government approval in September 2017. Government approved the production of four MC-55A Peregrine aircraft, two aircraft capability extension systems (ACES), two secure access control systems, one mission crew training system and one ground data processing system. CASG was also to arrange for four ACES crews, training and standardisation staff, maintenance crews, operational test and equipment, accredited main operating base and forward operating bases, achieve airworthiness requirements and establish a Systems Program Office.

Uniqueness

AIR555PH1 is a FMS acquisition program from the USAF, however, it is not a traditional FMS program. AIR555PH1 will deliver a first of type, complex, developmental program integrating new ISR systems, antennae, power system modifications, communications systems and extensive modifications to a commercial Gulfstream G550 outer mold line.

The program will incorporate multiple phases of the major modification at the aircraft manufacturer (Gulfstream), followed by a comprehensive mission system integration and test program at L3Harris. Both of these activities will require Federal Aviation Authority (FAA) airworthiness certification (Supplemental Type Certification (STC)). In addition, there will be a military certification process to follow for specialist military equipment installed during the modification program.

AIR555PH1 design changes to the outer mold line will require significant engineering to be compliant with the AIR555PH1 design requirements (size, weight, weight distribution and power). These extensive modifications include additional power within the aircraft and a modification of the Rolls Royce engine, cooling and an increase of maximum zero fuel weight for the airframe.

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Major Risks and Issues

The project is a developmental program with significant engineering, integration and flight test activities yet to be completed. These high risk activities have the potential to result in schedule delays to initial product delivery, with a high likelihood that additional contingency will be required.

The major program risks are associated with:

- Phase 1 modification and flight test schedule;
- platform aerodynamic stability and structural life;
- Ground Mission System (GMS);
- certification and accreditation;
- hazardous substances being delivered within FMS items; and
- the Flight Test Program identifying issues that require additional non-recurring engineering and testing.

Other Current Related Projects/Phases

Nil

Note

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

Section 2 – Financial Performance**2.1 Project Budget (out-turned) and Expenditure History**

Date	Description	\$m	Notes
Project Budget			
Aug 14	Original Approved (Government Interim Approval)	3.2	
Apr 15	Real Variation (Real Cost Increase)	3.4	1
Jan 16	First Pass Approval (Government Approval)	102.1	2
Jan 16	Real Variation (Real Cost Increase)	149.7	2
Feb 18	Government Second Pass Approval	1,907.9	
	Total at Second Pass Approval		2,166.3
May 19	Real Variation (Budgetary Adjustments)	(2.9)	3
Aug 21	Real Variation (Transfer)	0.4	4
Sep 21	Real Variation (Transfer)	2.0	5
Jun 22	Exchange Variation	67.8	
Jun 22	Total Budget		2,233.6
Project Expenditure			
Prior to Jul 21	Contract Expenditure – ATDQCS	(803.9)	
	Contract Expenditure – ATDSAB	(247.1)	
	Contract Expenditure – ATDSAA	(132.9)	
	Contract Expenditure – ATDGCA	(78.2)	
	Other Contract Payments/Internal Expenses	(15.9)	6
			(1,277.9)
FY to Jun 22	Contract Expenditure – ATDQCS	(107.2)	
	Contract Expenditure – ATDSAB	(100.2)	
	Contract Expenditure – ATDGCA	(0.5)	
	Contract Expenditure – Rolls Royce	(8.1)	
	Other Contract Payments/Internal Expenses	(4.5)	7
			(220.5)
	Total Expenditure		(1,498.4)
Jun 22	Remaining Budget		735.2
Notes			
1	Update to pre first pass Project Development Fund to progress the project through continued engagement with stakeholders.		
2	Post 1st pass guidance transfer to procure two aircraft and conduct risk reduction activities to inform Second Pass. This amount is inclusive of the First Pass approval amount.		
3	Budgetary adjustment correction to re-profile journal.		
4	Transfer of Air Force Head Quarters project administrative contingency budget to CASG to manage.		
5	Transfer of Air Force Head Quarters project administrative budget to CASG to manage.		
6	Includes project administration activities (\$1.3m), travel (\$1.8m), above the line contractor support (\$9.4m) and other ad hoc expenditure (\$3.4m).		
7	Includes project administration activities (\$0.0m), travel (\$0.4m), above the line contractor support (\$3.8m) and other ad hoc expenditure (\$0.3m).		

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
294.5	310.0	306.5	The increase in estimate from PBS to PAES is primarily due to the acceleration of Aircraft 2 modifications and Aircraft 3 induction and updated payment schedules from sub-contractors. The reduction in estimate from PAES to Estimate Final Plan is due to exchange fluctuations change to PBS 22/23.

Variance \$m	15.5	(3.5)	Total Variance (\$m): 12.0
Variance %	5.3	(1.1)	Total Variance (%): 4.2

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
			Australian Industry	Financial year 2021-22 expenditure was \$220.5m against the budget of \$306.5m. The variation is associated with Aircraft one Phase 1 modifications, Group B material buys, and Phase 2 modification, integration, testing and data (MITD) activities.
		(86.0)	Foreign Industry	
			Early Processes	
			Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
306.5	220.5	(86.0)	Total Variance	See para 1.2
		(28.1)	% Variance	

2.3 Details of Project Major Contracts

3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes		
		Signature \$m	30 Jun 22 \$m					
FMS Case - ATDGCA	Dec 15	81.8	79.4	Reimbursement	FMS	1		
FMS Case - ATDSAA	Dec 15	134.4	133.0	Reimbursement	FMS	1		
FMS Case - ATDQCS	Aug 17	0.4	1,100.1	Reimbursement	FMS	1,2		
FMS Case - ATDSAB	Jan 18	546.5	692.4	Reimbursement	FMS	1,3		
Rolls Royce – Spare Engine	Aug 21	18.3	18.1	Firm	Standard Defence Contract	1,4		
Notes								
1	Variations due to exchange rate fluctuations.							
2	Original FMS Case ~\$0.4m to engage USAF contractors to commence contractual documentation in anticipation of executable contract at AIR555PH1 Second Pass. Amendment 1 ~\$1,032.0m update includes modification and delivery of the first two MC-55A aircraft, associated ground systems, long lead items and period of performance extensions to comply with new IOC date agreed to by National Security Committee of Cabinet. Amendments 2 and 3 were administrative changes to the contract, nil increase in value. Amendment 4 ~\$41.4m was to account for a Flight Simulator Training Device. ~\$40.8m of this Purchase Order is funded from Sustainment.							
3	Original FMS Case ~\$546.5m to procure, modify and deliver remaining two MC-55A aircraft, also delivery of remaining ground systems and integrated logistics support to meet FOC requirements. Amendment 1 ~\$222.1m for spares, support and test equipment, fly away kits and initial training for airborne and ground based operator crews. ~\$87.5m of this Purchase Order is funded from Sustainment.							
4	Direct Commercial Sale for the procurement of a GAC spare engine.							
Contractor	Contracted Quantities as at		Scope			Notes		
	Signature	30 Jun 22						
FMS Case - ATDGCA	N/A	N/A	To provide First to Second Pass program management, technical and engineering services to support AIR555PH1 schedule and technical Risk reduction activities.					
FMS Case - ATDSAA	2	2	Procure two (2) green unmodified Gulfstream G550 aircraft					
FMS Case - ATDQCS	2	2	Modification of two (2) aircraft and associated support equipment					
FMS Case - ATDSAB	2	2	Procure, modify & deliver two (2) green unmodified Gulfstream G550 aircraft including remaining ground mission systems, Integrated Logistics Support to support FOC			1		
Rolls Royce	1	1	Procurement of Spare Engine.					
Major equipment accepted and quantities to 30 Jun 22								
Nil								
Notes								
1	A Flight Simulator Training Device is procured under this FMS Case but funded and accounted for within the Sustainment Budget and therefore is not included in this table.							

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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	Aircraft Phase 1	N/A	N/A	Oct 16	N/A	1
	Aircraft Phase 2	N/A	N/A	Dec 16	N/A	1
Preliminary Design	Aircraft Phase 1	N/A	N/A	Jun 17	N/A	1
	Aircraft Phase 2	N/A	N/A	Jun 19	N/A	1
Critical Design	Aircraft Phase 1	N/A	N/A	Nov 17	N/A	1
	Aircraft Phase 2	N/A	N/A	Sep 20	N/A	1
Notes						
1	The Commonwealth is not in contract for the above major reviews, nor similar reviews with the USAF due to being a FMS Case arrangement. The USAF (prime) and L3Harris (subcontractor) have contractual arrangements in place with each other that does include similar major reviews. However, the Commonwealth is not privy to these contractual arrangements.					

3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
System Integration	Completion of Ground System #2 ICT Integration in Australia	NFP	N/A	NFP	NFP	1
	Completion of Ground System #1A ICT Integration in Australia	NFP	N/A	NFP	NFP	1
	Completion of Ground System #3 ICT Integration in Australia	NFP	N/A	NFP	NFP	1
	Completion of Ground System #1B ICT Integration in Australia	NFP	N/A	NFP	NFP	1
Acceptance	Completion of CIOG AT&E	NFP	N/A	NFP	NFP	1,2
Notes						
1	NFP - Dates associated with capability realisation are not for public release					
2	AT&E acceptance by CIOG is an internal Defence milestone, with no associated contract					

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Sub Progress Toward Materiel Release and Operational Capability Milestones				
Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	NFP	NFP	NFP	1,2,4
Initial Operational Capability (IOC)	NFP	NFP	NFP	2,4
Final Materiel Release (FMR)	NFP	NFP	NFP	3,4
Final Operational Capability (FOC)	NFP	NFP	NFP	
Notes				
1	IMR definition was expanded from only being arrival of Aircraft #1, to include initial operating ground systems and a Forward Operating Base, which resulted in a forecast variance required to achieve the milestone.			
2	IMR & IOC have been re-baselined due to Phase 1 engineering and COVID-19 workforce issues. An updated Material Acquisition Agreement was approved by the Capability Sponsor in April 2022.			
3	FMR definition was expanded from only being arrival of Aircraft #4, to include operating ground systems, 3 forward operating bases, one deployable system and completion of OT&E, which resulted in a forecast variance required to achieve the milestone			
4	NFP - Dates associated with capability realisation are not for public release			
Not For Publication				

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

Section 4 – Materiel Capability/Scope Delivery Performance

4.1 Measures of Materiel Capability/Scope Delivery Performance

Traffic Light Diagram: Percentage Breakdown of Materiel Capability/Scope Delivery Performance	
	Green: The AIR555PH1 Project Office expects to provide all deliverables and capability requirements as per agreement with Government.
	Amber: N/A
	Red: N/A

Note		
This Traffic Light Diagram represents Defence's expected capability delivery. Capability assessments and forecast dates are excluded from the scope of the Auditor-General's Independent Assurance Report.		
4.2 Constitution of Materiel Release and Operational Capability Milestones		
Item	Explanation	Achievement
Initial Materiel Release (IMR)	<ul style="list-style-type: none"> One MC-55A Peregrine aircraft available for Training and Operations; Ground Systems installed, integrated, and available to support one MC-55A; and One Forward Operating Base (FOB) sufficient to support operations. 	<p>Not yet achieved</p> <p>Forecast is NFP, as dates associated with capability realisation are not for public release</p>
Initial Operational Capability (IOC)	<ul style="list-style-type: none"> Two MC-55A crews; One ground based mission crew; Two Maintenance Crews; In Service Support available to support operation of one MC-55A; Established project office; and One MC-55A Flight Simulation Training Device (FSTD) 'Stage 1' Available for Training. 	<p>Not yet achieved</p> <p>Forecast is NFP, as dates associated with capability realisation are not for public release</p>
Final Materiel Release (FMR)	<ul style="list-style-type: none"> Total of Four MC-55A Peregrine aircraft available for training and operations; Ground Systems installed, integrated, and available to support one MC-55A; Accredited Forward Operating Base facilities; One Modular Processing System (MPS) available to deploy from the Main Operating Base (MOB); and Completion of operational test and evaluation (OT&E). 	<p>Not yet achieved</p> <p>Forecast is NFP, as dates associated with capability realisation are not for public release</p>
Final Operational Capability (FOC)	<ul style="list-style-type: none"> MC-55A crews available to support operation of four MC-55A; ACES Crews available to support operation of one MC-55A; Maintenance Crews available to support operation of four MC-55A; Training and Standardisation staff; Achievement of all airworthiness requirements to support scope of intended operations; Establishment of all initial operational support, logistics & commercial maintenance arrangements to support the scope of intended operations; Established SPO to support the full capability; and MC-55A Flight Simulation Training Device (FSTD) Upgrade to 'Stage 2' Available for Training. 	<p>Not yet achieved</p> <p>Forecast is NFP, as dates associated with capability realisation are not for public release</p>

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 MC-55A Phase 2 modification will be impacted by unforeseen design and integration complications, leading to an impact on cost and schedule.	The AIR555 RPT will conduct a review of the L3Harris design against the AIR555PH1 FPS and will monitor system performance through insight into laboratory test activities.
There is a chance that MC-55A BFOB capability may be limited at FOC, leading to additional expenditure in order to achieve the required capability.	The AIR555 PO will continue to investigate existing ADF deployable solutions and work through issues to develop a suitable Beyond Forward Operations Base (BFOB) capability. The PO will also maintain engagement with ASD regarding deployable secure facilities.
There is a chance that the communications design will not meet operational needs, leading to an impact on sustainment costs IOT achieve the capability.	The AIR555 RPT is engaging with USAF to understand current system design limitations, with a design review to be completed to inform future decisions. The RPT will review Ph2 Flight Test data to understand any additional CIOG support requirements.
There is a chance that ICT network availability will be affected by a lack of help desk support, leading to a degraded capability.	The AIR555 PO will maintain engagement with related projects and look to retain current contractor support. This Risk was rated High, but has been downgraded to Medium due to reduction of likelihood
There is a chance the Australian airworthiness authorities will require additional information to satisfy Australian Defence Aviation Safety Regulations, requiring rectification that impacts on schedule and cost.	The AIR555 PO has regular engagement with the regulator and USAF certification authorities to understand where issues might present. The PO will provide a dedicated workforce to cover the high intensity review period between flight testing and certification.

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There is a chance that the AIR555PH1 Workplace Health and Safety compliance will be affected by a misalignment between Australian and American safety standards, culture and programs, leading to an impact on system compliance and safety.	FPS requirements reflect Australian WHS requirements. AIR555 has also provided additional guidance to L3 on Australian WHS requirements. AIR555 PO participates in quarterly US led System Safety meetings to ensure key stakeholders understand the full scope of effort required to identify all hazardous material in the delivered system. Australian reviews of deliverables will ensure requirements have been met across the entire modified aircraft and ground systems.
There is a chance that the AIR555PH1 ICT integration will be affected by differences between the US and Australian certification and accreditation standards, leading to schedule delays in approvals.	The AIR555 PO has initiated a Certification and Accreditation Working Group with L3H/MPI/CASG/ASD to work through the differences. Also, CIOG-MPI are developing Certification & Accreditation (C&A) timelines and resourcing requirements. CIOG-MPI are also engaging with certification agencies at senior levels to improve engagement and response.
There is a chance that the AIR555PH1 Ground Mission Systems operation will be affected by inadequate design information, leading to delayed integration with Australian networks.	The AIR555 PO has re-established Technical Interchange Meetings (TIM's) to increase data exchange between the US and CIOG to ensure CoA has access to the required design information.
There is a chance that the MC55 Publications manuals and technical Data will contain some deficiencies during initial in-service, leading to an impact on capability and aircraft delivery.	The AIR555 RPT is working with L3 on the content, look and feel of the Aircraft's Flight Manuals to ensure an adequate solution is delivered. The RPT is also working to ensure that any L3H Publication Management System meet CoA Requirements. During the training period in 2023, Australian staff will review the manuals and procedures to ensure they are fit for purpose.
Emergent Risks (risk not previously identified but has emerged during 2021–22)	
Description	Remedial Action
There is a chance that the MC-55A Simulator certification and accreditation may not meet Air Force requirements leading to an impact on Tactics, Training and Procedures (TTPs).	The AIR555 RPT to continue liaising with USAF/L3H to ensure CoA certification and accreditation requirements are included in the USAF contracts to meet the CoA MC-55A Simulator certification and accreditation requirements.
There is a chance that Mission Crew training System (MCTS) will be impacted by a lack of available scenarios, resulting in inadequate crew training.	The AIR555 PO will engage with USAF regarding agreement to access existing scenarios. This Risk was rated High but has been downgraded to Medium due to reduction of consequence

5.2 Major Project Issues

Description	Remedial Action
The MC-55A Ph1 design has been affected by unforeseen complications, with the CoA unique design requirements requiring additional non-recurring engineering, leading to an impact on cost and schedule	The project applied contingency in the 20/21 financial year for the treatment of technical performance issues. The AIR555 Resident Project Team (RPT) will maintain engagement with the USAF/L3/GAC during testing to understand the impacts of any design shortfalls and how to minimise the cost and schedule impacts. The RPT has sought additional structural substantiation data in order to support risk characterisation and understand potential impacts for the in-service structural life limits (ongoing airworthiness).
The MC-55A design has been impacted by airframe structural exceedances, which required additional structural analysis and aircraft modifications leading to an impact on cost and schedule	The project applied contingency in the 20/21 financial year for the treatment of technical performance issues. Gulfstream Aircraft Corporation (GAC) has conducted analysis and is incorporating design changes where necessary.
American Government and/or Contractors deliverables have been affected by the COVID-19 pandemic leading to the delayed delivery of Aircraft 1 & 2 and therefore delayed achievement of IOC. (Note - The risk pertains primarily to prime contractors L3Harris, Gulfstream and sub-contractors)	Due to being an FMS acquisition, there is little the CoA can do to mitigate this issue. Though a detailed review of schedule to IOC has been conducted, minimal mitigation actions have been determined. IOC has been delayed from the original date. Note that analysis of the schedule identified delays only impacting IOC and FOC is not impacted at this stage due to AIR555PH1 being an FMS acquisition.

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

Section 6 – Lessons Learned

6.1 Key Lessons Learned

Description	Categories of Systemic Lessons
Have a well-established Workforce Plan (based on the resourced schedule scope) in place for current and future demands depending on the stage of the Capability Life Cycle and project requirements. Allow for contingencies in your plan in the event that the specified resources are unavailable within the APS or ADF. These contingencies can include reservists, contractors, shared resources with similar organisations, etc. Additional funding within the budget should be factored in for some of these contingencies, such as contractors.	Resourcing
Maintaining collaboration, transparent communication and disciplined engagement with all stakeholders is critical for managing technical requirements and facilitating risk management across the program.	Governance

Ensure the project scope is represented by a well maintained Work Breakdown Structure. Improving the maturity of project management artefacts (Work Breakdown Structure, schedule, risk register), and maintaining consistent tracking and reporting against these. Layers of analysis of the schedule and risk register has allowed a consistent forecasting and reporting framework.	Governance
Maintain a robust, consistent configuration management system to ensure project activities remain within project scope, including cost and schedule.	Governance

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2022

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

Project Data Summary Sheet¹⁴⁹

Project Number	AIR7000 Phase 1B
Project Name	MQ-4C TRITON REMOTELY PILOTED AIRCRAFT SYSTEM
First Year Reported in the MPR	2019-20
Capability Type	New
Capability Manager	Chief of Air Force
Government 1st Pass Approval	Jul 06
Government 2nd Pass Approval	Jun 18 (Tranche 1) Mar 19 (Tranche 2) May 20 (Tranche 3) Nov 20 (Tranche 4)
Budget at 2nd Pass Approval	\$2,067.8m (Tranche 4)
Total Approved Budget (Current)	\$1,999.5m
2021-22 Budget	\$269.7m
Complexity	ACAT II



Section 1 – Project Summary

1.1 Project Description

AIR7000 Ph1B will acquire up to six MQ-4C Triton aircraft and support systems through a Cooperative Program with the United States Navy (USN). The Triton is a High Altitude Long Endurance (HALE) Remotely Piloted Aircraft System (RPAS) that will complement the P-8A Poseidon to deliver the Maritime Patrol and Response capability. Second Pass approval for the acquisition of three MQ-4C Triton aircraft and associated support systems was provided through a series of tranche approvals from 2018 through 2020. Acquisition of further three aircraft and associated support is subject to future Government approvals.

1.2 Current Status

Cost PerformanceIn-year

The project spent \$251.5m against an in-year budget of \$269.7m. The variance of (\$18.2m), (6.7%), is due to delays in USN contracting activity; however, this will not impact the delivery of Australian systems.

Project Financial Assurance Statement

As at 30 June 2022, project AIR7000 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 current financial year.

Schedule Performance

The project was declared a Project of Interest (POI) in March 2020 due to the United States Navy (USN) announcing a two year production funding pause, in February 2020, for its Triton program (US Fiscal Years 2021 and 2022). The United States (US) budget decisions have delayed some aspects of the Triton program for the US but Defence has always planned for Triton to enter into service later than the USN allowing time for unforeseen schedule delays such as this Budget decision. Production funding has now been lifted and US has confirmed its funding commitment to Triton program. The situation has significantly improved in the last two years and in the near future, the project will be considered for removal from the POI list.

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

The acquisition of the first three air vehicles has been approved to meet planned In Service Date (ISD) of FY 24/25 and Initial Operating Capability (IOC) date of FY25/26. The acquisition of additional aircraft to meet FOC requirements will be considered by Government in 2023.

Defence is currently on track to achieve the revised IOC of 2025-26, albeit with increasing schedule risk. The flow-on effect of a one year delay was detailed in the May 2020 CABSUB and accepted by Government.

Due to the uncertainty surrounding the future of the Triton production line, Defence was unable to proceed to the Public Works Committee (PWC) in Mar 2020 to commence construction of the planned facilities. Schedule risk remains until PWC approval has been obtained through Security and Estate Group (SEG) proposed for Q4 2022.

149 Notice to reader

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

Material Capability/Scope 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.

The USNs delivery of Incremental Functional Capability (IFC 4.0) has been split into 2 increments. The capabilities included in IFC 4.0 Increment 1 are all required to meet Australia's IOC and will be included in the baseline configuration for Australia's first three aircraft. It is expected that IOC will be achieved with the delivery of Increment 1. Increment 2 will deliver new and upgraded capabilities to the MQ-4C Triton Multi-Int platform including a Sense and Avoid functionality.

Note

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

1.3 Project Context

Background

The AIR7000 Program 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 RPAS (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 deferred Phase 1B due to delays in the USN BAMS program but continued to monitor Triton performance in the USN program.

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

The Government reaffirmed the need for Triton in the 2016 Defence White Paper stating that up to seven Triton will be acquired – six are planned in AIR7000 Phase 1B, with acquisition of one additional aircraft planned in a later phase if needed.

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. Second Pass approval (Tranche 2) for the second air vehicle was provided in March 2019.

In February 2020 the US Federal Defense budget proposed a pause in production funding for the USN MQ-4C Triton project for two years (US Fiscal Years 2021-22). US Congressional approved budget reduced the impact of the proposed budget cuts, however uncertainty in the US Program delayed the decision to proceed with the facilities program for AIR7000 Phase 1B. As a result, facilities for the forward operating base will not be completed on time to support the arrival of the first air vehicle and an interim solution has since been developed. During 2020, Government approved a third air vehicle (Tranche 3) and interim support services for the initial seven years of operations (Tranche 4).

The project will update the MAA by Q3 2022 to align FOC dates with those approved by Government in 2020. In November of 2021, the US Federal Budget reinstated production and development funding for the US Navy MQ-4C Triton project which has restored confidence and reduced risk associated with the acquisition strategy.

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 MQ-4C Triton is a developmental platform and the IFC 4.0 configuration is still undergoing flight test activities for the USN. Full engineering and technical documentation for the IFC 4.0 configuration will not be available until FY22/23. The Australian engineering, verification and validation and acceptance planning will remain in development while the USN completes their developmental activities.

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

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

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

Major Risks and Issues

The project is currently managing the following major risks:

- Single Information Environment (SIE) ICT Integration
- Triton Operating Permit Process
- Immature data to adequately quantify Sustainment Costs
- Facilities Design, Schedule and Construction Costs
- Initial System Qualification
- Facilities are incomplete to achieve Interim Operating Capability

Emergent Risks

- N/A

Other Current Related Projects/Phases

AIR7000 Phase 2 – Maritime Patrol and Response Aircraft System: acquisition of 14 P-8A Poseidon and Through Life Support system. Triton and Poseidon will form part of a 'Family of Systems' to replace the AP-3C Orion Capability.

JP2289 – Joint Information Environment

Note

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

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Section 2 – Financial Performance

2.1 Project Budget (out-turned) and Expenditure History

Date	Description	\$m	Notes
	Project Budget		
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
Jun 18	Real Variation – Transfer	1.0	6
Apr 19	Real Variation – Transfer	0.7	6
Jul 19	Government Second Pass Approval – Tranche 2	320.8	7
Jun 20	Real Variation – Real Cost Decrease	(2.2)	8
Jul 20	Government Second Pass Approval – Tranche 3	626.1	7
Mar 21	Government Second Pass Approval – Tranche 4	197.8	9
	Total at Second Pass Approval	2,067.8	
Sep 21	Real Variation – Budgetary Adjustment	17.7	10
Jul 10	Price indexation	0.2	11
Jun 22	Exchange Variation	(86.3)	
Jun 22	Total Budget	1,999.5	12
	Project Expenditure		
Prior to Jul 21	Triton Prime Contract	(145.8)	12
	DPS MoU	(126.3)	
	Sense and Avoid Capability	(63.5)	
	Diminishing Manufacturing Source Items	(13.4)	
	USN Production Engineering and Logistics Support	(5.3)	
	Other Contract Payments / Internal Expenses	(54.6)	
		(408.8)	
FY to Jun 22	Triton Prime Contracts	(153.6)	13
	DPS MoU	(55.1)	
	USN Production Engineering and Logistics Support	(14.6)	
	Diminishing Manufacturing Source Items	(1.6)	
	Other Contract Payments / Internal Expenses	(26.7)	
		(251.5)	
Jun 22	Total Expenditure	(660.3)	
Jun 22	Remaining Budget	1,339.2	
Notes			
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 Systems, 2 Forward Operating Base Mission Control Systems 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 and 3 to fund a total of two additional aircraft and associated support systems.		
8	Force Structure Plan (FSP) amendment in June 2020.		
9	Tranche 4 approved initial sustainment funding for the first 7 years.		
10	AFHQ budgetary adjustment made to allow for greater flexibility for reprogramming and reduce pressure on the Air Force operating budget.		
11	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.		
12	Other contract payments/internal expenses to 30 June 2021 were comprised of Major Service Provider Expenses \$19.1m, Pre-2 nd pass approval expenses \$13.7m, Other Cooperative Program Expenses to United State of Navy \$8.5m, NITE of \$6.7m and Project Management Expenses \$6.6m.		
13	Other contract payments/internal expenses to 30 June 2022 were comprised of Major Service Provider Expenses \$9.1m, Other Cooperative Program Expenses to United State of Navy \$9.0m, NITE of \$3.5m, and Other Project Management Expenses \$5.1m.		

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
319.8	272.6	269.7	PBS – PAES: The variation is due to changes in the United States Navy spares delivery schedule and foreign exchange updates. PAES – Final Plan: The variance is due to foreign currency exchange adjustments.
Variance \$m	(47.2)	(2.9)	Total Variance (\$m): (49.1)
Variance %	(14.8)	(1.1)	Total Variance (%): (15.3)

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
			Australian Industry	The project spent \$251.5m against an in-year budget of \$269.7m. The variance of (\$18.2m), (6.7%) is due delays in USN contracting activity; however, this will not impact the delivery of Australian systems.
			Foreign Industry	
			Early Processes	
			Defence Processes	
		(18.2)	Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
269.7	251.5	(18.2)	Total Variance	
		(6.7)	% Variance	

2.3 Details of Project Major Contracts

Contractor		Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
			Signature \$m	30 Jun 22 \$m			
US Government (DPS MoU)		Jun 2018	200.0	207.1	Cost Ceiling (Capped)	MoU	1
US Government (Diminishing Manufacturing Source Items)		Nov 2018	0.5	21.1	Variable	MoU	2,3
US Government (Triton Prime Contracts)		May 2019	37.5	473.6	Variable	MoU	3,4
US Government (USN Production Engineering and Logistics Support)		May 2019	0.7	55.4	Variable	MoU	3,5
US Government (PA-1 Sense and Avoid Capability)		May 2019	61.3	63.5	Cost Ceiling (Capped)	MoU	1,6
Notes							
1	DPS MoU and Project Arrangement 1 (PA-1) funding is limited to a cost ceiling, which can only be changed upon mutual written consent of the Participants. Australia is responsible for paying a proportion of the total costs based on the relative number of Australian aircraft in the overall fleet.						
2	Diminishing Manufacturing Source (DMS) Items is a US Government managed program to address availability and obsolesce of components. Additional Australian aircraft and the developmental nature of the program required an uplift to the initial funded amount.						
3	Contract value as at 30 June 2022 is based on actual expenditure to 30 June 2022 and remaining commitment at current budget exchange rates. This includes adjustments for indexation (where applicable). The incremental funding of these activities will see a progressive increase to the Price.						
4	In May 2020 the scope of the contract was expanded to include three Air Vehicles, one Main Operating Base (MOB) Mission Control System (MCS) and one Forward Operating Base (FOB) MCS.						
5	Production Engineering and Logistics Support requests are made on an annual basis. The value of this contract will increase annually.						
6	PA-1 Sense and Avoid Capability has fully expended all funding to the US Government.						
Contractor	Contracted Quantities as at		Scope				Notes
	Signature	30 Jun 22					
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 System (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.				

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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.	
Major equipment accepted and quantities to 30 Jun 22				
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.			

Section 3 – Schedule Performance

3.1 Design Review Progress

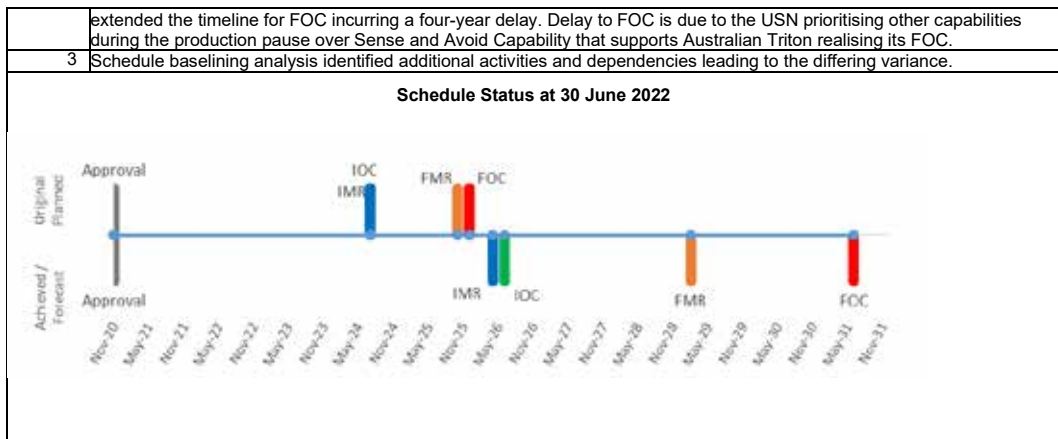
Review	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
System Requirements	Triton Multi-INT System Requirements Review 2	N/A	N/A	Dec 15	N/A	1
Preliminary Design	Triton Multi-INT Preliminary Design Review	N/A	N/A	Dec 16	N/A	1
Critical Design	Triton Multi-INT Critical Design Review	N/A	N/A	Nov 17	N/A	1
Notes						
1	These milestones were achieved by the USN as part of the developmental program schedule prior to AIR7000 Phase 1B Second Pass approval and Australia joining the Cooperative Program.					

3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
System Integration	IFC-4.0 Initial OT&E	N/A	N/A	N/A	N/A	1
	IFC-4.0 Increment 1 Operational Assessment to Support IOC	Jun 23	N/A	Aug 23	2	2
	IFC-4.0 Increment 2 Operational Assessment to Support IOC	Sep 28	N/A	Sep 28	0	3
Acceptance	Delivery to Edinburgh of Main Operating Base (MOB) Mission Control System #1 (MOB MCS#1)	Oct - Dec 21	Mar 22	Nov 23	25	1,5
	Commencement of crew training with the USN.	Jul - Sep 22	N/A	Nov 22	4	6
	Issue of Airworthiness Instrument (Unmanned Aircraft System Operating Permit).	Mar - May 23	N/A	Nov 24	20	
	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	7
Notes						
1	This was a USN and Northrop Grumman Systems Engineering milestone, originally forecast for August 2021, for the Incremental Functional Capability (IFC 4.0), the baseline configuration for the ADF. IFC 4.0 has now been split into 2 increments per the revised USN delivery schedule.					
2	As a result of the Incremental approach to the delivery of IFC-4.0, the forecast date for achievement of the Operational Assessment has changed to account for the revised capability delivery.					
3	Increment 2 funding has been approved by the US Government and will deliver upgraded capabilities along with a Sense and Avoid functionality to meet the requirements of PA-1.					
5	One year delay from original schedule due to production funding pause announcement preventing Public Works Committee referral in March 2020. Facilities design was paused until Government approval in May 2020. The change in basing for aircraft from Edinburgh to Tindal resulted in a redesign which has also contributed to the amendment of dates, however the MCS will still be delivered to Edinburgh. Despite the forecast variance, IOC is still achievable as currently planned/ forecast.					
6	Training needs analysis in consultation with the US has revealed a change to the training requirements and hence the schedule amendment.					
7	Maritime Patrol and Response submission for Government approval is being staffed. Subject to Government approval, project milestone definitions and the project schedule will be re-baselined through an MAA update.					

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
In-Service Date (ISD)	Jul 23	Jul 24 – Jun 25	23	1,3
Initial Materiel Release (IMR)	May – Jul 24	May 25 – Apr 26	23	1,3
Initial Operational Capability (IOC)	Jul 24	Jul 25 – Jun 26	23	1
Final Materiel Release (FMR)	Aug – Oct 25	Aug 28 – Feb 29	41	2
Final Operational Capability (FOC)	Dec 25	Jul 30 – Jun 31	66	2
Notes				
1	In Second Pass (Tranche 3) Government Approval, ISD was amended by 12 months (and consequently IMR and IOC by 24 months against the Original Planned) due to the impacts of the USN production funding pause announcement in February 2020, resulting in pause of facilities progression.			
2	As at November 2020, FOC has changed to align with the Tranche 4 approval. An incremental approach to acquisition has			

**Note**

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

Section 4 – Materiel Capability/Scope Delivery Performance**4.1 Measures of Materiel Capability/Scope Delivery Performance****Traffic Light Diagram: Percentage Breakdown of Materiel Capability/Scope Delivery Performance**

	Green: The project expects to meet the current capability requirements as expressed in the Materiel Acquisition Agreement, noting that the full capability is yet to be approved by Government.
	Amber:
	Red:

Note

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

4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	<ul style="list-style-type: none"> 2 x Triton Air Vehicles delivered to Australia. 2 x Main Operating Base Mission Control Systems including a Secondary site incorporating a Mission System Trainer installed and ready for use at Edinburgh. 1 x Forward Operating Base Mission Control System installed and ready for use at Tindal. Initial Distributed Operator functionality enabled and ready for use. Initial US trained crew (initial focus will be on Test & Evaluation and tactics development). Sufficient Network Technicians to meet the planned rate of effort. Facilities as required to enable commencement of flying operations. Support systems, equipment and spares as required. <p>IMR is forecast to be achieved May 2025 – April 2026.</p>	Not yet achieved
Initial Operational Capability (IOC)	<p>The Triton system is able to safely sustain one orbit in a maritime surveillance role, at a rate of effort to support initial operations.</p> <p>IOC is forecast to be achieved in July 2025 – June 2026.</p>	Not yet achieved
Final Materiel Release (FMR)	<ul style="list-style-type: none"> All Triton Air Vehicles delivered to Australia. All Main Operating Base and Forward Operating Base Mission Control Systems installed and ready for use. 1 x Forward Operating Base configured for expeditionary use. 	Not yet achieved

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	<ul style="list-style-type: none"> All Mission System Trainers installed at Edinburgh and ready for individual and collective training. All crews trained. Full complement of Network Technicians trained and available to meet the planned rate of effort. All support systems, equipment and spares. <p>FMR is forecast to be achieved August 2028 – February 2029.</p>	
Final Operational Capability (FOC)	<p>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.</p> <p>FOC is forecast to be achieved in July 2030 – June 2031.</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
Single Information Environment (SIE) Integration 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.	<p>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, other network infrastructure projects.</p> <p>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.</p> <p>Control and responsibility of the delivery of SIE allocated to CIOG-MPI allowing effective control of the relevant deliverables with clear articulation of responsibilities under a Memorandum of Understanding between CIOG-MPI and Australian Signals Directorate (ASD).</p>
Triton Operating Permit process 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.	<p>The project established a Triton UAS Operating Permit Working Group to undertake deliberate tailoring activities and facilitate engagement with the Defence Aviation Safety Authority and other stakeholders to ensure an integrated approach to technical and operational considerations, and an Operating Permit process that is aligned with Defence Aviation Safety Regulations.</p>
Immature data to adequately quantify Sustainment Costs 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.	<p>The project continues to work closely with the USN, Northrop Grumman Corporation and the Surveillance and Response System Program Office to identify sustainment cost drivers, investigate opportunities for sustainment efficiencies, validate logistics modelling assumptions, and implement lessons learned from other USN sourced systems. Sustainment data will continue to mature as the USN Triton operational tempo increases. The project is also working with Northrop Grumman Australia to develop an affordable 'Interim Support Services Contract' for Australian based support.</p>
Initial system qualification 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.	<p>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.</p> <p>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.</p> <p>It is expected that moderate icing certification will be achieved prior to Australian operations, enabling Triton operations in moderate icing conditions. Extreme icing conditions will be risk managed as agreed in the UASOP.</p>
Facilities Design and Construction Costs There is a chance that facilities design and construction management costs will affect the affordability of Triton facilities.	<p>Security and Estate 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.</p>
Facilities Schedule to Achieve Initial Operational Capability Facilities schedule currently on the critical path. A number of issues including a pause to the facilities program due to US Triton program uncertainties and a change of operational concept have contributed to the current position.	<p>Capital Facilities and Infrastructure (CFI) Branch is invoking early works utilising funding transferred to AIR555 for shared works at EDN. Tindal design contractor has now been appointed and has commenced work. CFI Branch working towards Public Works Committee referral and expediency as early as possible post-delivery of Tindal 30% design expected Q3 2022.</p>

Emergent Risks (risk not previously identified but has emerged during 2021–22)	
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 – Lessons Learned

6.1 Key Lessons Learned

Description	Categories of Systemic Lessons
N/A	N/A

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2022

Unit	Name
Division	Aerospace Systems
Branch	Aerospace Surveillance and Response

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Project Data Summary Sheet¹⁵⁰

Project Number	LAND121 Phase 4
Project Name	Protected Mobility Vehicle – Light
First Year Reported in the MPR	2016-17
Capability Type	Replacement
Capability Manager	Chief of Army
Government 1st Pass Approval	Oct 08
Government 2nd Pass Approval	Aug 15
Budget at 2nd Pass Approval	\$1,945.0m
Total Approved Budget (Current)	\$1,962.9m
2021-22 Budget	\$338.5m
Complexity	ACAT I



Section 1 – Project Summary

1.1 Project Description

LAND121 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. The PMV-L will replace around one third of the current Land Rover fleet, and represents a brand new capability that will provide the Australian Defence Force (ADF) with a highly protected and deployable light vehicle fleet designed to provide an optimum balance of six fundamental requirements: survivability, mobility, useability, payload, sustainability and communications.

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 Integral Computing System (ICS).

1.2 Current Status

Cost Performance

In-year

As at 30 June 2022, financial year 2021/22 expenditure was \$341.1m against the budget of \$338.5m. The variation of \$2.6m is primarily due to foreign exchange for the financial year 21/22.

Project Financial Assurance Statement

As at 30 June 2022, LAND121 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.

Contingency Statement

The project has not applied contingency in the financial year.

Schedule Performance

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

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

Army endorsed the declaration of IMR with caveats on 26 May 2020. The caveats related to delays in the delivery of some elements of the Hawkei Support System, and Verification and Validation activities, primarily due to COVID-19 restrictions. As at 30 June 2021, all caveats had been resolved.

¹⁵⁰ Notice to reader

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

Hawkei	<p>Defence formally advised Thales on 30 September 2020 that it had been granted approval to exit Stage 2 – Low-Rate Initial Production and enter Stage 3 – Full Rate Production.</p> <p>Army's declaration of IOC was deferred a further six months, pending resolution of a vehicle safety incident that occurred on 23 November 2020. Defence temporarily suspended the use of the Hawkei fleet on 25 November 2020 until the issue was resolved. The incident involved the application of the Anti-Lock Braking System (ABS) under specific operating conditions. Thales developed a technical solution to resolve the issue, which was to be implemented by June 2022. Additional testing of the ABS software solution has delayed the implementation across the Hawkei fleet until November 2022 and administrative controls remain in place to allow the safe operation of the vehicle.</p> <p>The Hawkei commenced Phase-In into the Protected Mobility Family of Vehicles Through Life Support Contract on 03 May 2021.</p> <p>Army declared IOC for the Hawkei on 20 May 2021.</p> <p>Thales Australia successfully completed all Phase in Activities, and the Hawkei Operative Date under the Through Life Support Contract formally commenced on 26 November 2021.</p>
	<p>Material Capability/Scope Delivery Performance</p> <p>16 PMV-L pre-production baseline vehicles and nine trailers were delivered for development and testing purposes under Stages One and Two. The acceptance process for the 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 784 vehicles and 752 trailers.</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>Thales advised the Commonwealth on 29 November 2018 that the Hawkei engine supplier, Steyr Motors, had entered into voluntary administration, which would result in a delay in the supply of engines. Thales 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. The IMR milestone was re-scheduled 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 commenced in November 2019 at the Army School of Electrical and Mechanical Engineers. A Hawkei Operational Test and Evaluation activity was successfully conducted in August 2020 to inform Army's declaration of IOC. The Systems Acceptance Audit (SAA) was conducted in two parts on 8 September 2020 and 1-3 December 2020. SAA Part One confirmed that the Hawkei mission and support systems met the required specification. Thales Australia was granted approval to exit SAA Part One on 16 September 2020.</p> <p>SAA Part Two confirmed the Hawkei FRP design baseline and associated support system is delivered as contracted. Thales Australia was granted approval to exit SAA Part Two on 20 August 2021.</p> <p>LAND121 Phase 4 has rolled out 233 Hawkei vehicles as at 30 June 2022, to Army units in Perth, Adelaide, Brisbane, Darwin and Townsville, as well as to Army training units in Puckapunyal and Bandiana.</p>
	<p>Note</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>Background</p> <p>LAND121 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> <p>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 LAND121 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 LAND121 Phase 4 project budget. First to Interim Pass funding was provided in November 2009 following approval of Materiel Acquisition Agreement (MAA) V2.0, where Government agreed that LAND 121 Phase 4 would return to Government for an Interim Pass decision on which option was to be pursued to Second Pass.</p> <p>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 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.</p> <p>At Interim Pass in December 2011, Government refined its direction to the following:</p> <ul style="list-style-type: none"> 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. <p>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.</p> <p>The acquisition contract mandates that a minimum of fifty percent of the production or manufacturing costs are to be incurred in Australia.</p> <p>In August 2015, Government provided Second Pass Approval for LAND121 Phase 4 to acquire Thales Australia's PMV-L. Second Pass funding was provided in September 2015. Subsequently, LAND121 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:</p>

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<ul style="list-style-type: none"> 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. 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. <p>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.</p> <p>In October 2021, Government approved a reduction to project scope of two Hawkei vehicles for buy-back by Thales to support a potential export opportunity. The reduction in the total quantity of vehicles to be delivered to the Commonwealth from 1100 to 1098 will be formalised through an update to the MAA and a change in the acquisition contract.</p>
<p>Uniqueness</p> <p>LAND121 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:</p> <ul style="list-style-type: none"> 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 - ICS. Utilise a modular armour system to enable enhanced protection based on mission specific roles.
<p>Major Risks and Issues</p> <p>The Project currently has three 'high' rated risks and one 'high' rated issue (pre-mitigation rating).</p> <p>The three 'high' rated risks in section 5.1 are:</p> <ul style="list-style-type: none"> There is a chance that disruptions as a result of the COVID-19 pandemic will cause delays in the achievement of project milestones. There is a chance that the integration of interdependent projects onto the Hawkei will delay the rollout of vehicles to Army. There is a chance there will not be time to train the quantity of personnel required to undertake Hawkei Introduction Into Service Training to achieve Army's Directed Training Requirement (DTR) by FOC. <p>The one 'high' rated issue in section 5.2 is:</p> <ul style="list-style-type: none"> There is a chance that the rollout of the PMV-L and the establishment of its support system will be impacted by constrained resourcing, impacting the delivery of Engineering and Integrated Logistics Support Deliverables.
<p>Other Current Related Projects/Phases</p> <p>LAND121 is a multi-phased program providing the ADF with current-generation high-capability field vehicles, modules and trailers. The other current LAND121 projects are:</p> <ul style="list-style-type: none"> LAND121 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. LAND121 Phase 5B – This project is a follow-on acquisition from LAND121 Phase 3B, and is providing the ADF with an additional 1,044 medium and heavy vehicles, 872 modules and 812 trailers. <p>LAND200 Tranche 2 – This project expands LAND200 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. Refer to Section 2.3 for further information relating to the contractual arrangements between LAND200 Tranche 2, LAND121 Phase 4 and Thales Australia.</p> <p>LAND154 Phase 4 – This project replaces the ADF's existing Force Protection Electronic Counter Measures (FPECM) capability through improved Military off the Shelf technology, procured via the United States Foreign Military Sales program. FPECM mission systems will include both a Dismounted system and a Vehicle Mounted System (VMS). The VMS will be integrated onto a range of ADF mobility platforms, including the Hawkei.</p> <p>LAND19 Phase 7B – This project will acquire a new short range ground based air defence capability, replacing Army's existing RBS-70 system. Under the scope of LAND19 Phase 7B, the tactical radar and high mobility launcher system will be integrated onto the Hawkei mission system.</p>
<p>Note</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
Project Budget			
May 08	Original Approved (Government Real	1.8	
Nov 09	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	
Total at Second Pass Approval		1,945.0	4

Jul 10	Price Indexation		0.4	5
Jun 22	Exchange Variation		17.7	
Jun 22	Total Budget		1,962.9	
	Project Expenditure			
Prior to Jul 21	Contract Expenditure – Thales Australia (Prime Contract)	(1,042.8)		
	Contract Expenditure – Thales Australia prototyping activities (MSA Stage One and Stage Two Contract)	(58.7)		
	Other Contract Payments / Internal Expenses	(84.5)		7
			(1,186.0)	
FY to Jun 22	Contract Expenditure – Thales Australia (Prime Contract)	(319.8)		
	Other Contract Payments / Internal Expenses	(21.3)		8
			(341.1)	
Jun 22	Total Expenditure		(1,527.1)	
Jun 22	Remaining Budget		435.8	9

Notes				
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 LAND121 Phase 4 project budget.			
5	Up until July 2010, indexation was applied to project budgets on a periodic basis. The cumulative impact of this approach was \$0.3m. In addition to this amount, the impact on the project budget as a result of out-turning was a further \$0.1m having been applied to the remaining life of the project			
6	These expenditures relate to pre Second Pass costs associated with exploring the Government initiated MSA Option (Option Three) and the contracts are now closed.			
7	Expenses comprise of: MAV prototyping activities (\$17.7m); External Service Providers (\$25.4m), Non-Prime contracts (\$17.9m); costs related to testing / trials (\$8.0m); Project administrative costs (\$5.8m); Support Contract Phase-In Payments (\$5.8m); Legal costs (\$2.2m) and US JLTV Program (\$1.8m).			
8	Expenses comprise of: Non-Prime contracts (\$11.7m); External Service Providers (\$7.0m); Support Contract Phase-In costs (\$2.5m); Admin and legal costs (\$0.1m).			
9	Totals in the columns may not total due to rounding.			

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
548.1	341.1	338.5	PBS – PAES: The variation is primarily due to the schedule delays caused by the braking problem. PAES – Final Plan: The variation is primarily due to Foreign Exchange updates.
Variance \$m	(207.0)	(2.6)	Total Variance (\$m): (209.6)
Variance %	(37.8)	(0.8)	Total Variance (%): (38.2)

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
			Australian Industry	The variation is primarily due to Foreign Exchange updates.
			Foreign Industry	
			Early Processes	
		2.6	Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
338.5	341.1	2.6	Total Variance	
		0.8	% Variance	

2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 22 \$m			
Thales Australia	Jul 10	9.0	58.7	Firm	Standard Defence Contract	3
Thales Australia	Oct 15	1,328.5	1,566.8	Fixed	Standard Defence Contract	1, 2, 4, 5, 6, 7
Notes						
1	Price variation from Contract Signature is due to approved Contract Change Proposals (CCP), predominantly to progress the development and integration of ICS.					
2	Contract value as at 30 June 2022 is based on actual expenditure to 30 June 2022 and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable).					

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3	Price variation from contract signature was to exercise the MSA Stage Two option.			
4	The contract has been re-evaluated as being a 'fixed' price because the contract value is 'fixed', plus price escalation.			
5	The contract price and scope were increased under CCP078 to incorporate the LAND200 Tranche 2 design work.			
6	Costs related to the LAND200 Tranche 2 design, procurement and installation will be funded by LAND200 (\$12.5m), while this project contributes \$2.0m primarily for the design, development and installation of the vehicle installation harnesses for Royal Australian Air Force (RAAF) and Protected Mobility Integrated Capability Assurance (PMICA) vehicles.			
7	The contract incorporates liquidated damages received during 2020-21 of \$6.2m via CCP086.			
Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 22		
Thales Australia	2 PMV-L	8 PMV-L	Design, develop and demonstrate prototype vehicles	
Thales Australia	1100 PMV-L and 1058 Trailers	1100 PMV-L and 1058 Trailers	Thales Australia is contracted to deliver 1100 PMV-L (635 4-Door and 465 2-door vehicles) and 1058 Trailers.	Note 1&2 below, Note 6 above
Major equipment accepted and quantities to 30 Jun 22				
Defence received 10 pre-production baseline vehicles and five trailers from Thales Australia on schedule for the purpose of various test and evaluation activities under Stage One (Engineering and Manufacturing Development) of the LAND121 Phase 4 Acquisition Contract. Defence received an additional six pre-production baseline vehicles and four trailers for reliability testing, and verification & validation activities in Stage Two. The Commonwealth has accepted 784 vehicles and 752 trailers as at 30 June 2022, which includes the 138 vehicles and 138 trailers required for Initial Materiel Release.				
Notes				
1	The 16 test vehicles and nine test trailers for development and testing activities are in addition to the 1,100 PMV-L and 1058 trailers.			
2	In October 2021, Government approved a reduction to project scope of two Hawkei vehicles for buy-back by Thales Australia to support a potential export opportunity. The reduction in the total quantity of vehicles to be delivered to the Commonwealth from 1100 to 1098 will be formalised through an update to the MAA and a CCP, which will be executed in FY22/23.			

Section 3 – Schedule Performance

3.1 Design Review Progress

Review	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/F orecast	Variance (Months)	Notes
Detailed Design	PMV-L and Trailer	Mar 16	N/A	Apr 16	1	1
	ICS	Jan 17	N/A	Dec 16	(1)	2
Preliminary Design	ICS	Sep 16	N/A	Sep 16	0	
Critical Design	PMV-L, Trailer and ICS	Apr 17	Aug 17	Oct 17	6	3
Support System Detailed Design (Operator)	Support System	Jun 17	Jun 18	Aug 18	14	4,5
Support System Detailed Design (Maintainer)	Support System	Jun 17	Jan 19	Jun 20	36	5,6
Notes						
1	The variance is caused by the Contractor's delay in closing out the action items.					
2	The Contractor and the project agreed to conduct the Review early, thus the early achievement. The Commonwealth approval of ICS Detailed Design Review Minutes of Meeting was achieved on 19 December 2016.					
3	The variance is due to the vehicle performance exceeding the number of critical failures allowable under RGT. Stage One (Engineering and Manufacturing Development) was extended by a four month period via CCP032 (executed 05 April 2017) to allow Thales Australia to remediate the critical failures and to undertake an additional RGT in order to fulfil the contractual requirements under Stage Two.					
4	The variance of Support System Detailed Design Review (SSDDR) of 14 months is due to the LRIP baseline not being ready for review until Critical Design Review exit in October 2017 and the contractor failed to meet the entry criteria in the SSDDR Checklist.					
5	The SSDDR was split into separate 'Operator' and 'Maintainer' reviews after the execution of CCP055 in November 2018 to align the training deliverables with the Introduction Into Service of the capability.					
6	An additional eight month delay to SSDDR (Maintainer) occurred due to delays in finalising the Hawkei Reliability Program, which impacted the finalisation of the Full-Rate Production vehicle baseline. The Commonwealth confirmed formal exit of SSDDR to Thales on 19 June 2020.					

3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/F orecast	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
Final Maintenance Evaluation	PMV-L, Trailer and ICS	TBA	N/A	TBA	N/A	5,6
Acceptance Verification and Validation (AV&V)	PMV-L, Trailer and ICS	Jun 18	Jan 19	Jul 20	25	7,8
Production Reliability Acceptance Test (PRAT)	PMV-L and Trailer	Jun 18	Jan 19	Jun 20	24	8,9
Low-Rate Initial Production (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	Oct 22	24	7,8,10
Notes						
1	The variance is due to the Commonwealth rejecting the first two versions of the Maintenance Demonstration Acceptance Verification Reports (AVR) submitted on 24 January 2017 and 30 March 2017. The approved version of the report was submitted to the Commonwealth on 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"> 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. 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. RGT Number Three (May to July 2017) followed this, which demonstrated reliability improvements on a number of sub-systems, but a number of recurring failures were evident. 					
3	Thales Australia was granted exit of Stage One (Engineering and Manufacturing Development) on 5 September 2017, with the caveat that Thales Australia continued to address the reliability issues. The Reliability Demonstration Trial 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 nine months delay in completing RDT is due to the delay in remediating the outstanding reliability issues.					
4	As part of the extension of Stage One (Engineering and Manufacturing Development), DT&E was extended to facilitate further development testing and to mitigate against the AV&V activities required under Stage Two (LRIP).					
5	The approval of AVR for the Initial Maintenance Evaluation (ME) was delayed by seven months due to the initial submission of the report being rejected by the Commonwealth, primarily due to the incompleteness of the Interactive Electronic Technical Publication (IETP) presented by Thales Australia.					
6	Thales' compliance against the deficiencies identified in the initial ME were addressed in the second ME. Subsequent ME have been conducted to address engineering changes as the vehicles design developed. The Final ME will be scheduled when the final list of engineering changes to be included has been determined.					
7	AV&V was delayed by 25 months due to the requirement to extend reliability testing, which impacted on the date that the LRIP vehicle build state was established between the Commonwealth and Thales. The delay in establishing the vehicle build state impacted on vehicle availability to conduct AV&V activities. The reliability issues, design maturity and production delays further impacted the completion of AV&V. Sea, air and rail Verification and Validation activities were previously delayed by COVID-19 movement restrictions, but were completed prior to the declaration of IOC. The External Airlift Trial demonstrated the Hawkei can be airlifted under a CH-47. Further airlift trials are required to complete the characterisation of the Hawkei in all configurations.					
8	As part of the extension of Stage One (Engineering and Manufacturing Development), the start dates of some Stage Two (LRIP) and Stage Three (FRP) activities were delayed.					
9	PRAT was finalised on 10 June 2020 with the Commonwealth's approval of the Integrated Reliability Maintainability and Testability Report from Thales Australia.					
10	Defence is assessing in detail the project's revised vehicle delivery schedule from Thales against the projects milestones. The revised schedule factors in delays due to Thales' Full-Rate Production capacity, the requirement to uplift early production vehicles to the contracted product baseline, the vehicle braking safety issue, and COVID-19 global supply chain challenges					

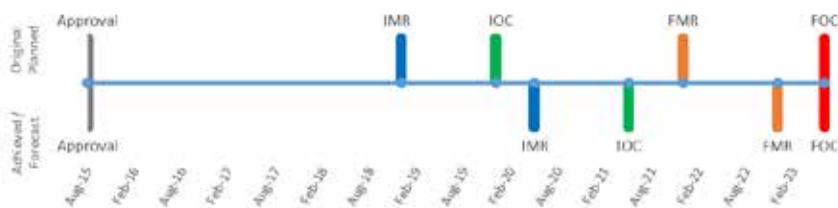
3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Dec 18	May 20	17	1,2
Initial Operational Capability (IOC)	Dec 19	May 21	17	1
Final Materiel Release (FMR)	Dec 21	Dec 22	12	3,4
Final Operational Capability (FOC)	Jun 23	Jun 23	0	4
Notes				
1	IMR was initially deferred by five months to enable the conduct of an additional vehicle reliability demonstration activity (four months) and the extension of Introduction into Service Training and the associated increase in vehicle deliveries (one month). IMR and IOC were re-scheduled by 12 months to May 2020 and December 2020 respectively, due to Hawkei reliability issues, design maturity and production delays caused by Steyr Motors entering voluntary administration. IOC was further deferred until June 2021, pending resolution of the vehicle safety incident. IOC was declared on 20 May 21.			
2	IMR was declared with caveats in May 2020. These caveats have now been resolved.			
3	FMR has been forecast for December 2022 due to vehicle integration dependencies. Please refer to note 10 of Section 3.2 above.			
4	Defence and Thales are assessing the ability to achieve the Final Material Release and Final Operating Capability milestones in accordance with the current schedule of December 2022 and June 2023 respectively, in light of challenges meeting Full-Rate Production and uplift capacity, DTR and COVID-19 related disruptions to global supply chains.			

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Schedule Status at 30 June 2022

**Note**

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

Section 4 – Materiel Capability/Scope Delivery Performance**4.1 Measures of Materiel Capability/Scope Delivery Performance**

Traffic Light Diagram: Percentage Breakdown of Materiel Capability/Scope Delivery Performance

	Green: The project expects to meet the materiel capability requirements as expressed in the Materiel Acquisition Agreement and in accordance with the requirements of the Technical Regulatory Authorities.
	Amber:
	Red: In October 2021, Government approved the reduction to project scope of two Hawkei vehicles to support an export opportunity. This represents a reduction of 0.2% of the number of vehicles to be delivered by the Project. This reduction has not yet been updated within the MAA. Defence continues to support Thales' pursuit of export opportunities, and will receive royalty fees from any future overseas sales of the Hawkei.
Note This Traffic Light Diagram represents Defence's expected capability delivery. Capability assessments and forecast dates are excluded from the scope of the Auditor-General's Independent Assurance Report.	

4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	IMR was achieved with caveats in May 2020. As at 30 June 2021, all of these caveats have been resolved. The below was delivered at IMR: <ul style="list-style-type: none"> 108 PMV-L and 108 Trailers to be delivered in accordance with the Force Generation Cycle; 22 PMV-L and 22 Trailers for Introduction Into Service Training (increased from 14 PMV-L and 14 Trailers); Eight PMV-L and eight Trailers for the conduct of Verification and Validation (V&V), and PRAT; and Logistics support arrangements, including Training, Supply and Maintenance Systems. 	Achieved
Initial Operational Capability (IOC)	IOC was declared in May 2021. Declaration of IOC was made by the Capability Manager following the conduct of a Battle Group sized Operational Test and Evaluation (OT&E) activity to validate the Hawkei Fundamental Input to Capability components.	Achieved
Final Materiel Release (FMR)	FMR is a future dated milestone projected for December 2022. By FMR, the following will be delivered: <ul style="list-style-type: none"> 1100 PMV-L and 1058 Trailers; and Introduction Into Service (IIS) Training and transfer of IIS training packages. 	Not yet achieved

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Final Operational Capability (FOC)	FOC is a future dated milestone projected for June 2023. Declaration of FOC will be made by the Capability Manager supported by the results of OT&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.	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 chance that misalignment of interdependent project schedules to support Hawkei integration will delay the rollout to Army.	<ul style="list-style-type: none"> Thales Australia to complete an early Long Lead Time Item procurement for LAND200 components. Establishment of a LAND200 communications suite that can be fitted with T1 or T2 radios.
There is a chance that disruptions as a result of the COVID-19 pandemic will cause delays in the achievement of project milestones.	<ul style="list-style-type: none"> Project and Branch senior leadership continue to provide oversight and regularly engage with Thales leadership to review actions plans. Close engagement between the Project Officer and Capability Manager to ensure the milestones requirements and capability delivery priorities are aligned. This risk has been reclassified from medium to high risk rating.
There is a chance that there will not be enough time to train the quantity of personnel required to undertake Hawkei Introduction Into Service Training to achieve Army's Directed Training Requirement (DTR) by FOC.	<ul style="list-style-type: none"> Adjustment of training milestones in the MAA, as agreed to between the Project Office and the Capability Manager. Establishment of regional training teams to increase training throughput. Working group convened between the Project Office, Capability Manager and Army Logistic Training Centre to develop solutions to address the issue. Working group meets periodically to track DTR achievement. Remedial actions continue to be implemented to achieve DTR in accordance with the current project schedule. This issue is now being managed as a risk.
Emergent Risks (risk not previously identified but has emerged during 2021–22)	
Description	Remedial Action
N/A	N/A

5.2 Major Project Issues

Description	Remedial Action
There is a chance that the rollout of the PMV-L and the establishment of its support system will be impacted by constrained resourcing, impacting the delivery of Engineering and Integrated Logistics Support Deliverables.	<ul style="list-style-type: none"> Monitoring of deliverables against agreed schedule. Weekly progress meetings between the Project team and the vendor. Fortnightly meetings between senior Commonwealth and vendor representatives.

Note

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

Section 6 – Lessons Learned

6.1 Key Lessons Learned

Description	Categories of Systemic Lessons
<p>Developmental Capability. The PMV-L is a technically complex development project that requires active engagement with the contractor, multiple interagency stakeholders and projects from other domains.</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>Adequate Resourcing. 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>	<p>Governance</p> <p>Contract Management</p> <p>First of Type Equipment</p>

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<p>Support from External Subject Matter Experts. 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. The Project should engage external Subject Matter Expertise during the Sustainment Phase to ensure the ongoing improvement and sustainability of a complex platform, and to seek efficiencies using a programmatic approach.</p>	First of Type Equipment
<p>Integrated ICS Team. 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"> • PMV-L project staff • Staff from other interrelated communication projects • Capability Manager specialists • External subject matter experts/contractors • Specialist staff such as engineers. 	Resourcing Contract Management
<p>Vehicle Acceptance Resourcing and Planning. The early planning and generation of dedicated Commonwealth Production Liaison and Vehicle Acceptance staff (and processes) enables improved planning in conjunction with the 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>Hawkei Reliability Growth. Reliability programs must incorporate sufficient schedule for reliability growth of the capability to set the conditions for a successful outcome. Reliability fixes must be supported by Objective Quality Evidence before proceeding to the next reliability test.</p>	Schedule Management Requirements Management

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2022

Unit	Name
Division	Land Systems
Branch	Land Vehicle Systems Branch

Project Data Summary Sheet¹⁵¹

Project Number	AIR8000 Phase 2
Project Name	LIGHT TACTICAL FIXED WING
First Year Reported in the MPR	2013-14
Capability Type	Replacement
Capability Manager	Chief of Air Force
Government 1st Pass Approval	Apr 12
Government 2nd Pass Approval	Apr 12
Budget at 2nd Pass Approval	\$1,156.5m
Total Approved Budget (Current)	\$1,421.6m
2021-22 Budget	\$74.9m
Complexity	ACAT II



Section 1 – Project Summary

1.1 Project Description

This project was approved to replace the retired Caribou capability and provide an enhanced intra-theatre and regional airlift capability through acquisition of a fleet of ten new C-27J aircraft.

Project acquisition includes the ten aircraft, a training system, support system materiel elements, and three years of initial training and support services from the aircraft In-Service Date (ISD), through Initial Operational Capability (IOC) and Final Operating Capability (FOC).

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.

The project has delivered 10 aircraft, the initial training, system support services, an interim training system, and the support system materiel elements.

Government agreed in 2016 to delay FOC to 2019 and accept mature training system and Structural Substantiation Project (SSP) deliverables beyond FOC.

During 2020 Defence completed a capability revalidation activity for the C-27J. The outcomes have resulted in changes to the capability definition which are incorporated into updated arrangements between responsible units. Operational use of the aircraft has pivoted from Battlefield Airlifter to Light Tactical Fixed Wing (LTFW) capability with minor changes to acquisition scope for the simulator. A Missile Approach Warning system study completed in 2019 informed the LTFW decision.

The Project is currently meeting capability materiel requirements as per the Joint Project Directive, and Materiel Acquisition Agreement.

Future deliveries include; the flight training device simulator, further training aids, contracting for simulator sustainment, avionics upgrade, Military Type Certificate aligned with LTFW, and outcomes from the Structural Substantiation Program.

1.2 Current Status

Cost Performance

In-year

The end of financial year variance of \$(16.0m) was driven in the main by global supply chain issues causing delays in milestone deliveries for spares procurements and training devices.

Project Financial Assurance Statement

As at 30 June 2022, project AIR8000 Phase 2 has reviewed the project's approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial 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

Initial Materiel Release (IMR) and IOC were declared with caveats in December 2016. The IOC declaration encompassed the materiel 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; the delayed start to US-based training in 2014; reduced training throughput due to aircraft availability; and commensurate delays associated with establishing facilities at the Main Operating Base at RAAF Base Amberley. Under a revised schedule agreed by Government in 2016, 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

¹⁵¹ Notice to reader

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

training system. Final Materiel Release (FMR) was not achieved in October 2019, and FOC was not declared in December 2019. Key activity in 2021-22 was achievement of Final Materiel Release (FMR) in line with Governments 2020 capability decision; and support to Air force declaration of FOC. Specifically, this included contracting for the Flight Training Device, acceptance of a Propeller Training aid, acceptance of a Landing Gear Training aid, contracting of Aircrew and Loadmaster Training services, contracting of Training Systems Facility services, upgrade to IFF Mode 5, acceptance of the Flight Loads Test Program report, cancelation of the full scale fatigue test activity of SSP, and replanning the approach to SSP. The project continues to work towards Materiel Release 3 (June 2025) and Materiel Release 4 (December 2032) acquisition scope as noted in Section 4.2 below.

Materiel Capability/Scope Delivery Performance

The C-27J aircraft is a relatively mature and well tested in production aircraft. Notwithstanding, the project office has been working through a number of capability considerations identified post-establishment of the acquisition arrangements. 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.

Following Defence's capability revalidation activities in 2020, Air Force and CASG analysed the outcomes resulting in a change to aircraft operational profile and acquisition scope in the Materiel Acquisition Agreement (MAA).

During 2021-22 the project progressed activities in line with the MAA resulting in FMR – primarily contracting for a less complex flight simulator, acceptance of a number of training aids, contracting of training services and Training Support Facility management, completion of IFF Mode 5 modification to all ten aircraft, and a reduction in the Structural Substantial Program scope.

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.

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 modified the aircraft to the US JCA configuration adding selected military equipment to improve the platform's Battlefield Airlift capabilities.

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 materially increased the cost, effort and schedule risk associated with the project achieving MTC. The Commonwealth 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. A MTC covering basic flight operations was achieved in June 2020 albeit with some technical limitations which are the subject of further mitigation work.

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. Following the LTFW decision the Resident Project Team was reduced to three persons.

The project was unable to achieve FOC as planned during 2019. Defence formally advised Government of the inability to achieve FOC and provided capability revalidation outcomes to the project for implementation.

In Dec 2020 Government decided to pivot the aircraft's role from Battlefield Airlifter to Light Tactical Fixed Wing, with the scope of acquisition changes documented in an updated MAA in 2021-22.

In Jun 2022 the CASG achieved FMR, and Air Force declared FOC.

Uniqueness

The C-27J is a mature aircraft acquisition requiring 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 2012 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.

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The current major project residual risk relates to a possible late delivery of the Flight Training Device. The project has mitigated this risk by establishing a performance incentive for early delivery, and liquidated damages for late delivery in the acquisition contract. The project continues to actively review overall contractor performance including schedule on a monthly basis.

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
Project Budget			
Apr 12	Original Approved (Second Pass Approval)	1,156.5	
Nov 19	Real Variation – Transfer	(1.0)	4
Aug 21	Real Variation – Transfer	(2.3)	5
Jun 22	Exchange Variation	268.4	
Jun 22	Total Budget	1,421.6	
Project Expenditure			
Prior to Jul 21	Contract Expenditure – US Government	(659.5)	1
	Contract Expenditure - Leonardo – Mode 5 IFF Upgrade	(21.7)	1
	Contract Expenditure – Leonardo – Flight Loads Test Program	(13.6)	1
	Contract Expenditure – Leonardo – Management of Services	(11.8)	1
	Other Contract Payments / Internal Expenses	(236.3)	2
		(942.9)	
FY to Jun 22	Contract Expenditure – Leonardo – Flight Training Device	(20.6)	1
	Contract Expenditure – Leonardo – Flight Loads Test Program	(5.6)	1
	Contract Expenditure – Leonardo – Mode 5 IFF Upgrade	(0.9)	1
	Contract Expenditure – Leonardo – Management of Services	(5.0)	1
	Other Contract Payments / Internal Expenses	(26.8)	3
		(58.9)	
Jun 22	Total Expenditure	(1,001.9)	
Remaining Budget			
Jun 22		419.7	

Notes

- The scope of these contracts is explained further in Section 2.3 – Details of Project Major Contracts. Note, the contractor is subject to performance incentive and liquidated damages clauses based on scheduled delivery performance.
- Other expenditure comprises: \$106.7m for Other Leonardo contract expenditure previously reported above (comprised of \$72.1m for Leonardo Intellectual Property and Technical Data, \$18.6m for Structural Substantiation Program Fuselage, and \$15.9m for Avionics Risk Reduction Activity), \$63.3m for Support and Test Equipment, spares and global freight costs, \$35.4m for contractor support costs for Structural Substantiation Program, loadmaster seat development, aircraft modification and certification purposes, \$8.4m for training devices related procurement and support costs, and \$22.5m for other project management support and administrative costs.
- Other expenditure comprises: Support and Test Equipment, spares and global freight costs (\$1.7), contractor support costs for Structural Substantiation Program, loadmaster seat development, aircraft modification and certification purposes and Increment 4 spares and capability assurance items \$15.2m), training devices related procurement and support costs (\$5.4m), and other project management support and administrative costs (\$4.5m) contribute to the other expenditure.
- Transfer to Defence Science and Technology Group to fund FY19/20 and FY20/21 of a multi-year arrangement for the provision of ongoing contractor technical support for the Structural Substantiation Program.
- Transfer to Defence Science and Technology Group to fund FY21/22 and FY22/23 of a multi-year arrangement 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
61.3	75.5	74.9	PBS - PAES: The variation is primarily due to adjustments to the training device delivery schedule, the replanning of the Structural Substantiation Program and the Avionics Block Upgrade, and procurement of increment 4 spares and capability assurance items. Other minor changes apply.

			PAES - Final Plan: Variance is due to further refinement of Increment 4 spares & capability assurance items requirements, latest training device delivery schedules and further updates the Structural Substantiation Program schedule.
Variance \$m	14.2	(0.6)	Total Variance (\$m): 13.6
Variance %	23.2	(0.8)	Total Variance (%): 22.2

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
			Australian Industry	The end of financial year variance of \$(16.0m) was driven in the main by global supply chain issues causing delays in milestone deliveries for spares procurements and training devices.
		(1.7)	Foreign Industry	
			Early Processes	
		(13.9)	Defence Processes	
		(0.4)	Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
74.9	58.9	(16.0)	Total Variance	
		(21.3)	% Variance	

2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 22 \$m			
US Government	May 12	882.4	664.1	Reimbursement	FMS	1,2,3
Leonardo Flight Training Device	Dec 21	85.3	84.7	Firm Price	Standard Defence Contract	1
Leonardo Management of Services	Feb 19	27.4	26.9	Firm price	Standard Defence Contract	1
Leonardo Flight Loads Test Program	Mar 19	19.8	19.7	Firm price	Standard Defence Contract	1
Leonardo Mode 5 IFF	Sept 17	18.7	24.1	Firm Price	Standard Defence Contract	1,4
Other Leonardo Contracts	Various	95.1	107.3	Firm Price	Standard Defence Contract	1,5

Notes

1	Prevailing budget exchange rates at contract signature used to calculate Price at Signature. Contract value as at 30 June 2022 is based on actual expenditure to 30 June 2022 and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable).
2	Amendment 4 to FMS case AT-D-SGU was approved in May 2017 reducing the case value to USD655.5m. 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.
3	Amendment 5 to FMS case AT-D-SGU was approved on 2 July 2018 reducing the FMS Case value to USD617.7m. 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 USD601.9m. There were no amendments to the case in the 2021-22 financial year. The change to the contract value from the prior year is due to foreign exchange movements.
4	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.
5	"Other Leonardo Contracts" is a consolidation of completed contracts for IP Tech Data, Aircraft Fuselage and Avionics Risk Reduction contracts previously identified as Major Contracts in Sec 2.1. Contracts have been fully delivered and expended in prior financial years and are now closed.

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 22		
US Government	10	10	10 C-27J Aircraft and associated training, training equipment, spares, ground support equipment and initial support	
Leonardo Mode 5 IFF	10	10	Mode 5 IFF modification for 10 C-27J aircraft	
Leonardo Management of Services	N/A	N/A	Provision of Project Management Services in support of the Enduring Leonardo Contract (ELC)	
Leonardo Flight Loads Test Program	1	1	Provision of a Flight Loads Test Program in support of the C-27J Structural Substantiation Program	
Leonardo Flight Training Device	1	1	Provision of a C-27J Flight Training Device	

Major equipment accepted and quantities to 30 Jun 22

Ten aircraft including supplies, support and test equipment, a fuselage trainer, a propeller trainer, a landing gear trainer, SSP fuselage, nacelle and wing test articles, IFF Mode 5 hardware and software have been accepted plus a substantial amount of the IP rights and Technical data including Avionics Risk Reduction information and the SSP flight loads test plan report.

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Notes	
1	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	Flight Training Device	Apr 22	N/A	May 22	1	1
Preliminary Design	Flight Training Device	Sep 22	N/A	Oct 22	1	1
Detailed Design	Flight Training Device	Feb 23	N/A	Mar 23	1	1
Notes						
1	Delays were experienced with the System Requirements Review taking longer to finalise that planned which are expected to be made up over the balance of the project.					

3.2 Contractor Test and Evaluation Progress

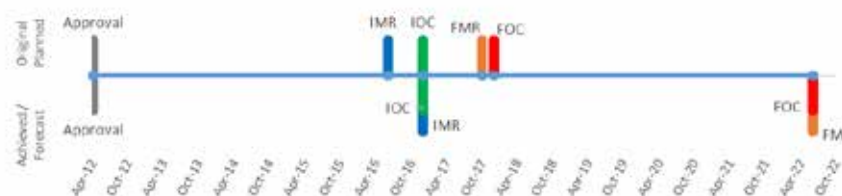
Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
System	Flight Training Device	N/A	N/A	N/A	N/A	1,3
Integration	Fuselage Trainer	May 20	N/A	Dec 20	7	2,7,8
Acceptance	C-27J Aircraft 1 (A34-001)	Jul 14	N/A	Nov 14	4	
	C-27J Aircraft 2 (A34-002)	Sep 14	N/A	Dec 14	3	
	C-27J Aircraft 3 (A34-003)	Nov 14	N/A	Aug 15	9	4
	C-27J Aircraft 4 (A34-004)	Feb 15	N/A	Mar 16	13	5
	C-27J Aircraft 5 (A34-005)	Aug 15	N/A	Aug 16	12	6
	C-27J Aircraft 6 (A34-006)	Oct 15	N/A	Nov 16	13	6
	C-27J Aircraft 7 (A34-007)	Dec 15	N/A	Mar 17	15	6
	C-27J Aircraft 8 (A34-008)	Feb 16	N/A	Aug 17	18	4,6
	C-27J Aircraft 9 (A34-009)	Apr 16	N/A	Oct 17	18	4,6
	C-27J Aircraft 10 (A34-010)	May 16	N/A	Dec 17	19-	4,6
	Flight Training Device	Dec 24	N/A	Mar 25	3	2,3
	Fuselage Trainer	May 20	N/A	Dec 20	7	2,7,8
Notes						
1	The LTFW C-27J capability does not require any integration of the Flight Training Device with other training assets or networks.					
2	The acquisition contract for the Fuselage Trainer was established on 29 July 2019. The Fuselage Trainer was a commercial off the shelf purchase, no design reviews were required. Contracts for the acquisition of the remaining training devices were established during 2021-22.					
3	The project completed tender evaluation of the Leonardo Full Flight Mission Simulator and advised Leonardo the proposal was unsuitable. From 30 June 2021 and as a result of the capability revalidation outcomes, collaborative development of detailed requirements for a reduced scope Flight Training Device acquisition has resulted in a refined Statement of Work submission to Leonardo S.p.A. Contract negotiations were completed during 2021 with contract signature in December 2021.					
4	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).					
5	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.					
6	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.					
7	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.					
8	COVID-19 travel restrictions came into force in March 20 immediately prior to the commencement of formal acceptance testing which was paused subject to interstate travel restrictions. Once travel restrictions were lifted, there was 2 months of activity to achieve acceptance.					

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	Jun 22	57	4,5
Final Operational Capability (FOC)	Dec 17	Jun 22	54	4,5
Materiel Release 3	Jun 25	Jun 25	0	6
Materiel Release 4	Dec 32	Dec 32	0	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 2016 and in 2020 Government agreed to delay Final Operating Capability (FOC). In 2020 Air Force advised CASG of the capability revalidation outcomes for the project which re-defined FMR and FOC. The project achieved FMR/FOC during 2021-22 in accordance with Government approval.
5	Defence formally proposed revised C-27J capability options and FMR/FOC schedule to Government after reviewing available options during 2020. The revalidated FMR and FOC requirements are; 10 aircraft modified with an upgraded IFF system; all supplies; all support, test and role equipment; all publications; a fuselage trainer; a Landing Gear training aid, a Propeller Training aid; aircrew training services contracted; maintenance training services contracted, acceptance of Structural Substantiation Program items; updated Type Certificate; and ability to conduct revised capability roles and missions. Post FOC scheduled deliveries include; a Flight Training Device; an Engine Training aid; a Virtual Maintenance Training system; Mode 5 IFF software update; Avionics Safety of Flight update; an updated Type Certificate; and final Structural Substantiation Program outcomes. Progress as of 30 June 2022 is; 10 aircraft delivered; all support, test and role equipment; all publications; accepted the fuselage trainer and the Structural Substantiation Program test articles. The project continues activities to complete all outstanding requirements.
6	Products requiring long lead time to acquire or achieve, such as the Flight Training Device and Structural Substantiation Program data, are planned for delivery and employment post FOC. The Full Scale Fatigue Test component of Structural Substantiation Program was cancelled in lieu of an analytical approach. Delivery of artefacts post FOC as part of MR3 and MR4 have no impact to the operational capability of the platform.

Schedule Status at 30 June 2022



Note

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

Section 4 – Materiel Capability/Scope Delivery Performance

4.1 Measures of Materiel Capability/Scope Delivery Performance

Traffic Light Diagram: Percentage Breakdown of Materiel Capability/Scope Delivery Performance

	Green: The Project is currently meeting capability materiel requirements as per the Materiel Acquisition Agreement.
	Amber: N/A
	Red: N/A

Note

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

4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	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

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Final Materiel Release (FMR)	The project achieved FMR in 2021-22 The project successfully executed activities towards the FMR date of June 2022. Key FMR requirements include delivery of all 10 aircraft delivered to RAAF Amberley with the upgraded Mode 5 IFF fitted, all supplies identified in FMS/DCS, all S&TE and role equipment, publications and technical data/IP, the Fuselage Trainer and selected training aids and training service contracts, and acceptance of test article and flight loads plans to support SSP.	Achieved
Final Operational Capability (FOC)	The project achieved FMR enabling Air force to declare FOC. The project executed activities towards achievement of revised FOC capabilities and schedule of June 2022. Key requirements included ability to conduct effective and sustained Operations, Roles and Missions. 10 C-27J Aircraft operating from RAAF Amberley. All 10 aircraft fitted with Mode 5 IFF. Mature operational support, maintenance and training system. Infrastructure to support LTFW operations.	Achieved
Materiel Release 3 (MR3)	The following MR3 items are due to be delivered by June 2025: <ul style="list-style-type: none"> Flight Training Device, supportability upgrade to the Fuselage Trainer, various training aids, and support contracts. IFF Mode 5 software upgrade. Military Type Certificate aligned with LTFW. Commonwealth Avionics Upgrade. Structural Substantiation Project analysis of loads and crack models. 	Not yet achieved
Materiel Release 4 (MR4)	The following MR4 items are due to be delivered by December 2032: <ul style="list-style-type: none"> Structural Substantiation Project final directions for ongoing airworthiness. 	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
Training. There is a risk the Flight Training Device will not be delivered by MR3.	The project has entered into a fixed priced contract with an incentivised delivery schedule resulting in final acceptance before MR3. The post mitigation risk is assessed as low.
Emergent Risks (risk not previously identified but has emerged during 2021–22)	
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 – Lessons Learned

6.1 Key Lessons Learned

Description	Categories of Systemic Lessons
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 in production 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.	Contract Management

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.	
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 AIR8000 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.	Resourcing
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 AIR8000 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
Although C-27J is a mature in production aircraft the project was required to update a number of systems to achieve the directed outcomes for FMR/FOC. 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.	Requirements Management

Section 7 – Project Line Management

7.1 Project Structure as at 30 June 2022

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

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Project Data Summary Sheet¹⁵²

Project Number	LAND19 Phase 7B
Project Name	SHORT RANGE GROUND BASED AIR DEFENCE
First Year Reported in the MPR	2020-21
Capability Type	Replacement
Capability Manager	Chief of Army
Government 1st Pass Approval	Feb 17
Government 2nd Pass Approval	Feb 19
Budget at 2nd Pass Approval	\$1,274.3m
Total Approved Budget (Current)	\$1,216.3m
2021-22 Budget	\$144.2m
Complexity	ACAT II



Section 1 – Project Summary

1.1 Project Description

LAND19 Phase 7B Short Range Ground Based Air Defence (SRGBAD) Project will introduce into service the Army-operated component of the Integrated Air and Missile Defence (IAMD) capability to achieve an enhanced Ground-Based Force Protection system. The primary objectives of the project are to deliver a scalable SRGBAD capability that can sense, warn, manage and counter weapons and sensor effects of fixed and rotary wing platforms, unmanned aerial systems (UAS), stand-off weapons, Rocket Artillery Mortar (RAM) and missiles within the required environments. The capability being acquired is an enhanced version of the jointly developed Raytheon-Kongsberg National Advanced Surface to Air Missile System (NASAMS), which is currently in-service with a number of nations. The capability is being acquired through a contract with Raytheon Australia. Two NASAMS Batteries are being acquired, each consisting of three Fire Units, with additional sub-systems for training purposes. A single Fire Unit consists of missile launchers, sensors, and a command & control centre, and is capable of protecting a specified area from a range of airborne threats. A single battery is capable of meeting the operational requirements, with the second battery being used for training purposes.

1.2 Current Status

Cost Performance

In-year

As at 30 June 2022, financial year 2021-22 expenditure was \$183.8m against a budget of \$144.2m. The EOFY variance of \$39.6m is primarily due to an early achievement of Raytheon Contract milestones.

Project Financial Assurance Statement

As at 30 June 2022, project LAND19 Phase 7B has reviewed the approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial and contractual obligations of Defence, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget including contingency remaining for the project to complete against the agreed scope.

Contingency Statement

The project has applied for contingency funds in the financial year, primarily for the treatment of project delays due to COVID-related impacts, as identified in the Issues at Section 5.

Schedule Performance

The project completed the design phase for NASAMS during 2020, with successful completion of the Detailed Design Review on schedule in December 2020. During 2021, manufacture of the first radar and canister launcher systems was completed, with additional systems and test events scheduled for completion throughout 2022 and early 2023. The CEA Detailed Design Review was also completed in August 2021.

There have been delays in the provision of some items of Government Furnished Materiel (GFM) to Raytheon Australia, primarily due to longer than anticipated export approvals. Despite mitigation strategies, these delays created a risk of future schedule delays and associated cost increases.

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

152 Notice to reader

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

In October 2021, the project assessed the original Initial Materiel Release (IMR) date in light of the cumulative impact of the above delays, and determined a revised date. The Initial Operating Capability (IOC) was subsequently revised. These changes were advised to Government in the first quarter 2022 Bi-annual Update, and captured in a revised Materiel Acquisition Agreement. The Final Operating Capability (FOC) remains on schedule, despite the delay to IOC.

Materiel Capability/Scope Delivery Performance

The project is on track to deliver against all agreed capability outcomes for the Final Operating 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

LAND19 Phase 7B was one of the first projects to be considered under the new Capability Life Cycle, and the Smart Buyer framework was still being defined at this time. The project participated in a pilot Smart Buyer workshop, and the principles identified in this were applied as part of the First Pass Approval process. This workshop identified risk in financial, requirements, integration, and schedule components of the project. These risks were subsequently considered as part of the project's acquisition strategy, and addressed in the Risk Mitigation Activity (RMA) between First Pass and Second Pass.

The project received First Pass Approval from Government in February 2017. This approval included release of a Single Supplier Limited Tender to Raytheon Australia as Prime Systems Integrator (PSI) for the acquisition and sustainment of the SRGBAD capability, as well as for the conduct of a RMA between First Pass and Second Pass to reduce technical risks associated with system integration and assess the environmental durability of key sub-systems. This approval also included direction to investigate the Canberra-based company CEA Technologies' (CEA) sensors for use in a ground-based air defence environment between First Pass and Second Pass.

The preferred capability option presented at Second Pass was based on the NASAMS baseline but with significant enhancements. This option provided an enhanced capability, addressed obsolescence risks, provided greater Australian industry content, and as a result was assessed as being better value for money. This option was approved by Government in February 2019. The following major procurement activities have since occurred:

- Contract signature was achieved with Raytheon Australia as PSI in June 2019;
- Contract signature was achieved with CEA Technologies for the provision of operational and tactical radars in November 2019;
- The Foreign Military Sales (FMS) offer for the purchase of missiles was accepted by the Commonwealth in March 2020;
- Contract signature was achieved with Raytheon Australia as the Support Contractor in December 2020

Uniqueness

NASAMS is an established and mature ground based air defence capability, however under LAND19 Phase 7B, Defence is undertaking a number of enhancements, which make it unique. The most significant of these is replacing the standard NASAMS radar with radars from Australian company CEA Technologies. Other modifications, which are not common across the international user base, include integration with Army in-service vehicles and radios and interfacing with existing Land and Joint information networks.

Major Risks and Issues

The project is currently managing the following major risks:

- Integration and test activities delayed due to Government-supplied systems, resulting in increased technical risk, with potential cost increases and delays to IOC;
- Longer than planned development and testing of system interfaces, leading to delays to IOC;
- A heavily constrained operational test and evaluation timeline (this risk is now low, as noted in Section 5)

The project is currently managing the following issue:

- There is a chance that COVID-19 impacts (including international travel restrictions) will continue to prevent effective collaboration between subcontractors, resulting in delays to critical integration and test events. Note that a delay to IOC has already eventuated, and the project schedule has been adjusted accordingly. The risk of further delays to IOC due to COVID still exists, but is now assessed as low.

Other Current Related Projects/Phases

LAND121 Phase 4 will acquire and deliver into service Protected Mobility Vehicles – Light (PMV-L) and companion trailers for command, liaison, reconnaissance and utility roles; and the associated training and support systems. Elements of LAND19 Phase 7B tactical radar and high mobility launcher system being acquired for this capability will be integrated onto the Hawkei mission system.

Note

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

Section 2 – Financial Performance

2.1 Project Budget (out-turned) and Expenditure History

Date	Description	\$m	Notes
Project Budget			
May 17	Original Approval (Government First Pass Approval)	25.9	
Jun 19	Government Second Pass Approval	1,248.4	
	Total at Second Pass Approval	1,274.3	
Jun 22	Exchange Variation	(58.0)	
Jun 22	Total Budget	1,216.3	
Project Expenditure			
Prior to Jul 21	Contract Expenditure – Raytheon Australia	322.0	
	Contract Expenditure – CEA Technologies	113.3	
	Contract Expenditure – US Government (AT-D-YAI)		1, 2
	Other Contract Payments / Internal Expenses	12.9	2
		448.2	

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FY to Jun 22	Contract Expenditure – Raytheon Australia Contract Expenditure – CEA Technologies Contract Expenditure – US Government (AT-D-YAI) Other Contract Payments / Internal Expenses	154.2 21.9 7.6	1, 2 2
Jun 22	Total Expenditure	183.8 631.9	
Jun 22	Remaining Budget	584.4	

Notes

- | | |
|---|---|
| 1 | Price and expenditure related to missile procurement is classified. This expenditure has been reported as part of Other Contract Payments / Expenses. |
| 2 | Other Contracts Payments/Internal Expenses comprises: Risk Mitigation Activities, operating expenditure, contractors, consultants, and other capital expenditure not attributable to the aforementioned contracts |

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
162.4	143.1	144.2	PBS-PAES: The variation is primarily due to delays in the manufacture of the CEA radars, foreign exchange variation and the reprogramming of minor project activities. PAES-Final Plan: Forecast expenditure is in line with the 2021-22 PAES with only minor variation due to Global Price Update (FOREX rate changes).
Variance \$m	(19.3)	1.1	Total Variance (\$m): (18.2)
Variance %	(11.9)	0.8	Total Variance (%): (11.2)

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		39.6	Australian Industry	The variance of \$39.6m is predominately due to an early achievement of Raytheon Contract milestones valued at \$42m which was phased in July 2022, and this was offset mainly by delays in the manufacture and assembly of CEA radars.
		-	Foreign Industry	
		-	Early Processes	
		-	Defence Processes	
		-	Foreign Government Negotiations/Payments	
		-	Cost Saving	
		-	Effort in Support of Operations	
		-	Additional Government Approvals	
144.2	183.8	39.6	Total Variance	
		27.5	% Variance	

2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 22 \$m			
Raytheon Australia	Jun 19	680.1	724.0	Fixed Price	Standard Defence Contract	1
CEA Technologies	Nov 19	137.1	153.2	Fixed Price	Standard Defence Contract	2
US Government (AT-D-YAI)	Mar 20	-	-	Reimbursement	FMS	3

Notes

- | | |
|---|--|
| 1 | Raytheon contract value as at 30 June 2022 is based on actual expenditure and remaining commitment, and includes adjustments for indexation (where applicable). The price increase since contract signature is primarily due to indexation and foreign exchange rate variation (\$43.9m), and also includes an \$8m increase due to project delays, as noted in Section 5. |
| 2 | CEA contract value as at 30 June 2022 is based on actual expenditure and remaining commitment, and includes adjustments for indexation (where applicable). The price increase since contract signature is primarily due to indexation and foreign exchange rate variation. |
| 3 | Pricing related to missile procurement is classified. |

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 22		
Raytheon Australia	7	7	NASAMS Fire Units plus training equipment	
CEA Technologies	Tactical Radars Operational Radars	Tactical Radars Operational Radars	Radars plus training and support equipment	
US Government	Classified	Classified	Missiles	
Major equipment accepted and quantities to 30 Jun 22				
Nil				

Section 3 – Schedule Performance

3.1 Design Review Progress

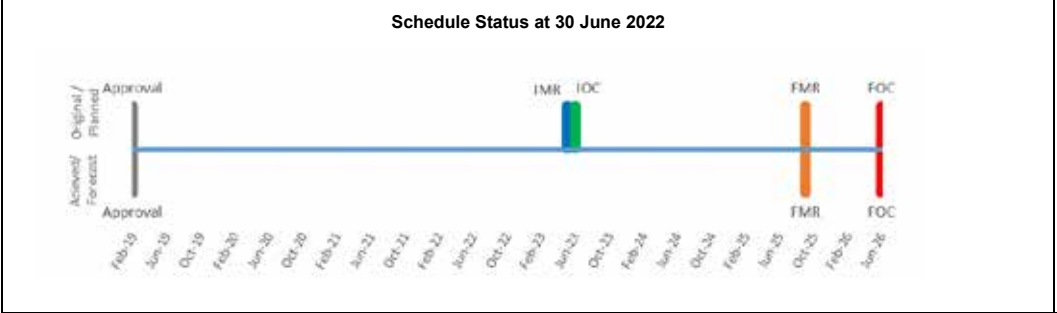
Review	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
System Requirements	NASAMS	Oct 19	N/A	Oct 19	0	
	CEA Radars	Apr 20	N/A	Apr 20	0	
Preliminary Design	NASAMS	May 20	N/A	May 20	0	1
Detailed Design	NASAMS	Dec 20	N/A	Dec 20	0	
	CEA Radars	Jul 21	N/A	Aug 21	1	
Notes						
1 Preliminary Design aspects for CEA Radars were covered in the NASAMS PDR.						

3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
System Integration	First of Type (FoT) Canister Launcher Factory Acceptance Test (FAT)	Jan 22	Nov 21	Nov 21	(2)	1
	FoT Fire Distribution Centre FAT	Apr 22	Aug 22	Aug 22	4	2
	Flight Trial	Jun 22	Apr 23	Apr 23	10	2
Acceptance (NASAMS Fire Units)	Fire Unit 1 (first)	Mar 23	Delayed	Delayed	NFP	2, 3
	Fire Unit 7 (final)	May 24	N/A	May 24	0	
Acceptance (CEA Radars)	Tactical Radar (first)	Mar 23	N/A	Mar 23	0	
	Tactical Radar (final)	Jun 24	N/A	Jun 24	0	
	Operational Radar (first)	Mar 23	N/A	Mar 23	0	
	Operational Radar (final)	Apr 24	N/A	Apr 24	0	
Notes						
1 This milestone was achieved early because the exit criteria was modified to allow completion in Norway, with subsequent shipment to Australia. This shipment commenced in April 2022.						
2 This milestone was adjusted as a result of COVID-related delays, including workforce quarantine measures and travel restrictions, as noted in the issues in Section 5.						
3 Fire Unit composition varies per Fire Unit (i.e. number and type of launchers and other major systems).						

3.3 Progress Toward Materiel Release and Operational Capability Milestones


Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	May 23	Delayed	NFP	1
Initial Operational Capability (IOC)	Jun 23	Delayed	NFP	1
Final Materiel Release (FMR)	Sep 25	Sep 25	0	
Final Operational Capability (FOC)	Jun 26	Jun 26	0	
Notes				
1 COVID-19 has had a significant impact on the project, including international travel restrictions, GFM delays, and workforce quarantine measures. In October 2021, the project assessed the original Initial Materiel Release (IMR) date in light of the cumulative impact of the above delays, and determined a revised date. The Initial Operating Capability (IOC) was subsequently revised.				



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



Section 4 – Materiel Capability/Scope Delivery Performance

4.1 Measures of Materiel Capability/Scope Delivery Performance

Traffic Light Diagram: Percentage Breakdown of Materiel Capability/Scope Delivery Performance	
	Green: The project expects to meet capability requirements as expressed in the Materiel Acquisition Agreement.

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	Amber: N/A
	Red: N/A
Note	
This Traffic Light Diagram represents Defence's expected capability delivery. Capability assessments and forecast dates are excluded from the scope of the Auditor-General's Independent Assurance Report.	

4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	<ul style="list-style-type: none"> Fire Unit with Tactical Radar Classroom Trainer installed Basic Support Equipment Initial Spares Systems accepted and certified Support Contract in operation 	Not yet achieved
Initial Operational Capability (IOC)	<ul style="list-style-type: none"> One operationally deployable Fire Unit Vehicles to support Fire Unit Operator and maintainer training Completion of Operational Test & Evaluation 	Not yet achieved
Final Materiel Release (FMR)	<ul style="list-style-type: none"> All Fire Units All Radars All spares and support equipment <p>FMR is expected to be achieved in September 2025.</p>	Not yet achieved
Final Operational Capability (FOC)	<ul style="list-style-type: none"> Complete mission system comprising all materiel elements defined in IMR and FMR Doctrine published All certification and accreditation complete Facilities complete <p>FOC is expected to be achieved in June 2026.</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
<p>There is a chance that there will be insufficient time for Army to conduct Operational Test and Evaluation (OT&E), following acceptance of equipment, and completion of initial training.</p> <p>Noting the complex introduction into service for this capability, and potential for corrective actions following acceptance testing, there is insufficient time in this schedule.</p>	<p>The IOC footprint is the minimum for an effective operational capability, to allow for a scaled introduction into service through to FOC.</p> <p>A number of opportunities have been identified to increase Army involvement in activities leading up to introduction into service, thereby reducing the emphasis on the final OT&E.</p> <p>Further detailed planning on OT&E will confirm opportunities such as placement of Army personnel in the Raytheon team, Army participation in acceptance testing, and combining training exercises with OT&E.</p> <p>IOC has now been delayed, which has created more time to conduct OT&E. This risk remains, but is now assessed as low.</p>
Emergent Risks (risk not previously identified but has emerged during 2021–22)	
Description	Remedial Action
<p>There is a chance that delays to provision of Government-supplied systems will lead to integration and testing delays, with potential cost increases and delays to IOC.</p>	<p>The timely provision of these systems is required as early as possible in the testing phase, to ensure that technical risk is not transferred to later stages. A temporary loan of equipment has been requested for integration testing which, if approved, will mitigate this risk.</p> <p>Additional integration testing is occurring on legacy equipment, which will enable early testing of a significant amount of functionality.</p>
<p>There is a chance that the development and testing of the system interfaces will take longer than planned, impacting other system level tests, and leading to IOC delays.</p>	<p>System interface testing is prioritising critical functionality, which has the greatest potential to impact subsequent testing stages.</p> <p>Industry capacity is being managed through appropriate governance arrangements, to ensure that prioritisation is effectively implemented.</p>

5.2 Major Project Issues

Description	Remedial Action
There is a chance that COVID-19 impacts (including	Some critical integration and test activities have been able to be

international travel restrictions) will continue to prevent effective collaboration between subcontractors, resulting in delays to critical integration and test events. This will increase the technical risk during acceptance testing and compress the schedule, leading to an increased risk of defects and schedule delays in the lead-up to IOC.	conducted remotely over networks, and this will continue. International travel (with quarantine at each end) has occurred for certain integration activities, however this is not always possible or practical (and varies with each country/state's COVID situation). Some resequencing of the schedule is occurring, including reduced review times for contract deliverables. Air freight in lieu of sea freight is also under consideration. Note that a delay to IOC has already eventuated, and the project schedule has been adjusted accordingly. The risk of further delays to IOC due to COVID still exists, but is now assessed as low.
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Note
Major risks and issues in Section 5 are excluded from the scope of the Auditor-General's Independent Assurance Report.

Section 6 – Lessons Learned

6.1 Key Lessons Learned

Description	Categories of Systemic Lessons
<p>The COVID shutdown provided an opportunity to improve the use of ICT collaboration tools. This has seen an increase in productivity and reduced reliance on travel. However, there are still limitations in what can be achieved between Defence systems and industry systems, primarily due to security and accreditation issues.</p> <p>The project team is now able to work collaboratively from multiple remote locations. This would be further improved by extending ICT collaboration tools to our industry partners. While this presents significant security accreditation issues to resolve, an investment now would yield much improved collaboration in future.</p> <p>Plan for future ICT collaboration tools to be extended to trusted industry partners.</p>	Resourcing
<p>Mandated System Reviews (MSRs) in large projects can cover many complex issues, over several days. They require review of large amounts of data in advance. Lead-in reviews are a great way to focus attention of relevant stakeholders on particular issues. They can be conducted months in advance of the MSR.</p> <p>A lead-in review is a separate meeting or workshop held to discuss a particular MSR agenda item. They can often be used to gain concurrence on a particular issue, thereby saving time in the MSR, and giving stakeholders a chance to consider. They also help focus reviewers on key issues prior to the MSR.</p> <p>Conduct lead-in reviews as a standard part of preparation for large MSRs.</p>	Contract Management
<p>Risk Mitigation or Risk Reduction activities are often completed during First Pass to Second Pass, usually to investigate technical feasibility or capability definition. Extending these activities to include formal requirements development and system definition can place the project in a much more mature state at Contract Signature.</p> <p>Contracts can sometimes be established with immature requirements, and requirements definition completed post effective-date may result in cost, schedule or capability adjustments post-Second Pass. By focusing on system specification refinement between First Pass to Second Pass, this risk can be mitigated.</p> <p>Include formal and funded system definition activities between First Pass to Second Pass.</p>	Requirements Management
<p>As widely recognised, with minimal warning COVID measures ceased planned domestic and international travel to enable design, collaboration and integration outcomes which drove all projects to adapt process and procedures. Key observations include:</p> <ul style="list-style-type: none"> - Defence efforts to adapt and introduce remote working practices and tools through 2020/21 were significant enablers. - Some physical collaboration remained essential with Norway and US, particularly complex engineering and integration tasks. Defence endorsement of Essential International Travel was critical, with travel able to be justified in a limited number of cases to enable progress. - Regular collaboration with wider project team and industry, as well as project team internal, were both of equal importance to maintain situational awareness, individual welfare, design priorities, and travel planning. - Remote working and collaboration tools remain important despite AUS transition to a COVID Normal setting in 2022. Regular sync meetings are still conducted online as they enable a much wider participation which is not limited by physical space or travel constraints. - For complex issues requiring input across a diverse range of stakeholders to drive key decisions, physical meetings remain the preference. <p>CASG should conduct ongoing review of COVID work practices in order to incorporate strong lessons and capabilities developed through 2020 - 2022.</p>	Resourcing

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2022

Unit	Name
Division	Land Systems Division
Branch	Land Manoeuvre Systems Branch

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Project Data Summary Sheet¹⁵³

Project Number	AIR2025 Phase 6
Project Name	JINDALEE OPERATIONAL RADAR NETWORK (JORN) MID-LIFE UPGRADE
First Year Reported in the MPR	2020-21
Capability Type	Upgrade
Capability Manager	Chief of Air Force
Government 1st Pass Approval	Dec 15
Government 2nd Pass Approval	Dec 17
Budget at 2nd Pass Approval	\$1,117.9m
Total Approved Budget (Current)	\$1,146.2
2021-22 Budget	\$63.3m
Complexity	ACAT II



Section 1 – Project Summary

1.1 Project Description

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

The project addresses obsolescence, improves system performance, provides a more contemporary system architecture and reduces the Total Cost of Ownership. The tranches of execution are systems engineering and design including the upgrade of the first radar and delivery of a new Command and Control system (IOC Tranche); and serial upgrade of the remaining two radars (Tranches 3 and 4).

1.2 Current Status

Cost Performance

In-year

As at 30 June 2022, financial year 2021-22 expenditure is \$61.9m against the forecast planned expenditure of \$63.3m. The variation was due to a number of factors including delays in entering into contract for two planned enhancement activities partly offset by an early material purchase by the Prime Contractor.

Project Financial Assurance Statement

As at 30 June 2022, Project AIR2025 Phase 6 has reviewed the approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial contractual obligations of Defence for this project, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget including contingency remaining for the project to complete against the agreed scope.

Contingency Statement

The project has not applied contingency in the financial year.

Schedule Performance

While good progress has been made in software development and receiver hardware, the Project experienced persistent lag in execution of the systems engineering program. Delays were first identified when the Systems Requirements Review (SRR) and Systems Definition Review (SDR) were not achieved as planned in January 2019. The delays are considered unrecoverable and will impact the schedule to Initial Operational Capability (IOC) and Final Operational Capability (FOC). As a result of the delays, the project was declared a 'Project of Interest' in September 2019.

The key drivers for the delays are predominantly attributed to the underestimation of JORN systems engineering complexity and required design effort. In addition, the ability for industry to recruit, prepare and organise a sufficiently technically capable team to execute the systems engineering program within the contracted timeframes has also contributed.

To address the delays, Defence and BAE Systems Australia (BAESA) commenced a series of workshops and agreed in June 2020 on a revised incremental program delivery strategy (known as the 'Alternative Delivery Strategy (ADS)'). The ADS seeks to capitalise on the good progress in software development and receiver hardware by rolling out product incrementally onto the live radar system, which will better address technical risk. This approach sees elements of the upgrade introduced as soon as they are ready rather than awaiting the slowest element of the system design to be completed.

From May 2020, Defence has supported a series of workshops to capture the new approach and develop new project cost and schedule baselines.

153 Notice to reader

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

<p>A Contract Change Proposal, reflecting the revised delivery schedule, cost and risk baseline has been executed by both parties in December 2021, reflecting changes to both Acquisition and Support contracts to support the ADS.</p>
<p>Materiel Capability/Scope Delivery Performance</p> <p>This project has not delivered any materiel capability to date.</p> <p>The current JORN capability remains fully operational while the project is progressing. As part of the ADS, elements of the system will be introduced incrementally, designed to accelerate the delivery of upgraded capability to Air Force. The strategy will see the JORN Battlespace Surveillance Centre located at RAAF Base Edinburgh upgraded first, and a series of prototype receiver systems progressively delivered culminating in the upgrade of the radar receiver systems.</p> <p>The scope of this project is planned to increase in future Government approvals, to allow for further JORN enhancements and to expand surveillance to Australia's eastern approaches.</p>
<p>Note</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>Background</p> <p>Whilst a number of countries have over-the-horizon radar technology, JORN is the most sophisticated and capable over-the-horizon radar system in the world. A similar capability cannot be acquired as an off-the-shelf system. The ongoing development of JORN by Defence in partnership with Industry represents a long term national investment in a unique capability.</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 AIR2025 Phase 6 approached the market and the project adequately captured the acquisition, sustainment and project management strategies, a formal Smart Buyer review was not conducted.</p> <p>AIR2025 Phase 6 achieved Second Pass Government approval in December 2017. Government approved a core system upgrade, plus eleven separate capability enhancements. Six of these enhancements were negotiated into the contract at signature, with the remaining five to be deferred until the technology is sufficiently mature. The prime contractor is BAE Systems Australia (BAESA) with Lockheed Martin Australia (LMA) providing additional specialist engineering services to Defence.</p> <p>As a complex sovereign development program requiring integration of Defence Science and Technology Group (DSTG) developed technology, a collaborative relationship between Defence and the prime contractor, BAESA, is critical to success. Despite the ongoing positive client-supplier relationship, the project has experienced significant schedule challenges, particularly within the systems engineering program (other key streams of activity including hardware and software development remain on track).</p> <p>As a result of the persistent delays, AIR2025 Phase 6 became a Project of Interest in September 2019.</p> <p>Following completion of a bottom-up re-baseline of the schedule in late 2019 which indicated a potential significant delay to IOC, Defence and BAESA agreed to collaboratively undertake an analysis to understand the cause of additional effort estimates and identify a new approach to deliver the project.</p> <p>As a result, the Alternative Delivery Strategy (ADS) was developed which retains an optimisation of the systems engineering artefacts under the original delivery approach; however, it also takes advantage of:</p> <ol style="list-style-type: none"> Mature and proven product development completed to date Rolling out elements of the system as they are developed for early feedback from the end-user and to progressively retire risk, prior to formal acceptance Design decisions and justification based on actual performance. <p>Implementation of the ADS is being complemented by organisational change (structure, plans, processes and culture) given the significant tailoring of the development approach and to ensure key lessons of the past are appropriately addressed.</p> <p>Following approval of the Options Paper in May 2020, BAESA and Defence determined how to put the broad aims of the ADS into practice. This was subsequently guided by a Heads of Agreement Deed (signed December 2020) which defined the key commercial and remediation principles for the revised strategy, which:</p> <ol style="list-style-type: none"> address and support the revised delivery approach to the Project; help reduce the likelihood of future delivery problems; and develop and foster a greater whole of enterprise approach to optimising capability outcomes and sustainment performance. <p>BAESA delivered its costed Acquisition and Sustainment Contract Change Proposals (CCPs) to incorporate the ADS as the new program Performance Measurement Baseline into the Contracts on 30th April 2021. Defence conducted a detailed evaluation of the submission and found a number of issues that required remediation. Following negotiations the CCP was refined through a process of collaborative workshops and BAESA submitted the revised CCP in September 2021 which was reassessed by Defence and executed in December 2021.</p>
<p>Uniqueness</p> <p>With initial experimentation and development commencing over 50 years ago within the Defence Science and Technology Group (DSTG), a world-leading Over The Horizon Radar (OTHR) capability has been established in collaboration with Australian industry, providing significant Defence capability and economic value to the nation.</p> <p>Project AIR2025 Phase 6 relies on a highly skilled and specialised workforce to design and develop HF-Radar technology. The ability to attract and retain a skilled Industry and Defence workforce is a key enabler to successful project delivery.</p> <p>Defence, rather than BAESA, retains responsibility for key aspects of the JORN system-level performance under the project arrangement due to Defence providing to BAESA specific hardware and software elements that directly impact the performance of the JORN System.</p>
<p>Major Risks and Issues</p> <p>The current major project risks subject to remedial action are:</p> <ul style="list-style-type: none"> Attraction and retention of staff in the High Frequency Radar Enterprise Continued delays during execution of the project Increased material costs across Tranches 3 and 4 Integration of future phases of AIR2025 (subject to future Government approval) and High Powered Amplifiers (HPA) into the AIR2025 Phase 6 baseline.
<p>Other Current Related Projects/Phases</p>
<p>N/A</p>
<p>Note</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
Project Budget			
Jan 16	Original Approved (Government First Pass Approval)	49.4	1
Dec 17	Government Second Pass Approval	1,068.5	
	Total at Second Pass Approval	1,117.9	
Apr 20	Real Variation – Transfer from E&IG	2.5	2
Jun 20	Real Variation – Scope JORN Enhancement	8.2	3
Sep 21	Real Variation – Budgetary Adjustment	9.5	4
Nov 21	Real Variation – Budgetary Adjustment (Contingency)	2.0	4
Apr 22	Real Variation – Budgetary Adjustment	6.1	3
Jun 22	Exchange Variation	0.0	5
Jun 22	Total Budget	1,146.2	
Project Expenditure			
Prior to Jul 21	Contract Expenditure – BAE Systems Australia (Prime Acquisition)	(131.5)	6
	Contract Expenditure – Lockheed Martin Australia Limited (ESC) Contract Expenditure – Jacobs (IWP)	(13.6)	
	Other Contract Payments	(12.8)	
		(31.5)	
		(189.5)	
FY to Jun 22	Contract Expenditure – BAE Systems Australia (Prime Acquisition)	(46.2)	7
	Contract Expenditure – Jacobs (IWP)	(8.7)	
	Contract Expenditure – Lockheed Martin Australia Limited (ESC)	(2.8)	
	Other Contract Payments	(4.2)	
		(61.9)	
Jun 22	Total Expenditure	(251.4)	
Jun 22	Remaining Budget	894.8	
Notes			
1	Government Second Pass Approval includes an \$18.3m adjustment to be funded from the unspent portion of the previously approved First Pass funding.		
2	Estate and Infrastructure Group (E&IG) received funding to support AIR2025 Phase 6, which included replacing a facility at Radar 3 Transmit site. It was agreed that the replacement facility is best delivered by the JORN Prime Contractor, as it involves specialist fit-out and coordinated delivery within JORN operational constraints.		
3	Early access to funding to enable early capability planning and de-risking activities for the JORN Enhancement scope.		
4	In financial year 2021-22, Air Force transferred all related project operating budgets into the respective CASG-controlled project budget.		
5	The zero value is due to rounding of exchange variation as the majority of the contracts are in AUD.		
6	Other expenditure of \$31.5m consists of \$14.5m for the JORN Priority Industry Capability Support Program, \$6.0m depicting the Integrated Support Contract (pre Branch IWP arrangement), \$1.0m for Project Management Office Costs, and 4.4m Operating Expenditure for AIR2025-6 JORN Enhancement (formerly AIR2025-6A). Capital and Operating Expenditure for Commonwealth costs of 5.6m.		
7	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	Explanation of Material Movements
50.2	63.3	63.3	PBS – PAES: Variation primarily due to expenditure forecasted for two new Prime Contractor milestone payments and additional funding transferred from AFHQ to CASG. . PAES – Final Plan: No Variation
Variance \$m	13.1	0.0	Total Variance (\$m): 13.1
Variance %	26.1	0.0	Total Variance (%): 26.1

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(1.4)	Australian Industry	The project has an End of Year variance due to a combination of the following factors: 1. the delayed commencement of a contracting activity for an additional capability; 2. a slower than planned rate of effort on Enhanced Capabilities; and 3. Engineering Services Contract (LMA) resources being redirected.
			Foreign Industry	
			Early Processes	
			Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
63.3	61.9	(1.4)	Total Variance	
		(2.2)	% 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 22 \$m			
Lockheed Martin Australia	Mar 18	15.1	52.1	Variable	Standard Defence Contract	1,2
BAE Systems Australia	Mar 18	455.9	651.7	Variable	Standard Defence Contract	1,3
Jacobs Australia – Integrated Work Package	Dec 18	25.0	58.2	Variable	Integrated Work Package	4
Notes						
1	Contract value as at 30 June 2022 is based on actual expenditure to 30 June 2022 and remaining commitment at current budgeted exchange rates and includes adjustments for indexation (where applicable).					
2	The price at 30 June 2022 has increased from the initial contract price of \$15.1m to \$52.1m. This change is due to an increase in required contractor personnel to support the program, an increase to the contract term from 3 years to 7 years and the application of an annual price adjustment to the contract.					
3	The Contract Price at signature of \$455.9m (Base Date July 16) has increased by \$68.3m due to projected price escalation to an estimated Contract Price of \$524.2m at signature date, plus an increase of \$118.8m resulting from the JORN Replan (CCP006) and other minor CCPs totalling \$8.7m.					
4	Contract value is the estimated Project share of the Branch IWP contract and is based on the estimate of project expenditure to the end of December 2024.. This contract is expected to increase annually as further work packages are agreed.					
Contractor	Contracted Quantities as at		Scope	Notes		
	Signature	30 Jun 22				
Lockheed Martin Australia	N/A	N/A	Provide specialist engineering resources to facilitate Defence's execution of AIR2025 Phase 6.			
BAE Systems Australia	N/A	N/A	AIR2025 Phase 6 Prime Contractor that includes (but not limited to) the replacement of obsolescent systems, a new human-machine interface and new diagnosis and management systems.			
Jacobs Australia – Integrated Work Package	N/A	N/A	Service based integrated work package.			
Major equipment accepted and quantities to 30 Jun 22						
Nil						

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 Review	JORN Mission and Support System	Jan 19	N/A	Sep 19	8	1, 2
System Definition Review	JORN Mission and Support System	Jan 19	N/A	Jun 20	17	1, 2
Preliminary Design Review	JORN Mission and Support System	Oct 19	NFP	NFP	NFP	3
Detailed Design Review	JORN Mission and Support System	Jun 20	NFP	NFP	NFP	3
Support System Detailed Design Review	JORN Mission and Support System	Dec 20	NFP	NFP	NFP	3
Notes						
1	The original schedule included a Combined System Requirements Review and System Definition Review scheduled for January 2019. These were agreed to be de-coupled in December 2018 and finalised through a Contract Change Proposal. The original contracted date of January 2019 did not change.					
2	The Project experienced persistent lag in execution of the systems engineering program. Key drivers for the delays are predominantly attributed to the underestimation of JORN systems engineering complexity and required design effort.					
3	A Contract Change Proposal to reflect the Alternative Delivery Strategy was executed in December 2021 reflecting revised schedule dates. Forecast dates for capability realisation are not for publication.					

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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
Modification Readiness Review 1	Radar 1 & Operations Centre	Sep 21	NFP	NFP	NFP	1
System Acceptance	Radar 1 & Operations Centre	Jan 24	NFP	NFP	NFP	1
Modification Readiness Review 2	Radar 2	May 24	NFP	NFP	NFP	1
System Acceptance	Radar 2	Mar 26	NFP	NFP	NFP	1
Modification Readiness Review 3	Radar 3	May 26	NFP	NFP	NFP	1
System Acceptance	Radar 3	Jun 28	NFP	NFP	NFP	1

Notes

- 1 A Contract Change Proposal to reflect the Alternative Delivery Strategy was executed in December 2021 reflecting revised schedule dates. Forecast dates for capability realisation are not for publication

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Jan 24	NFP	NFP	1
Initial Operational Capability (IOC)	Apr 24	NFP	NFP	1
Material Release 2 (MR2)	Mar 26	NFP	NFP	1
Operational Capability 2 (OC2)	May 26	NFP	NFP	1
Final Materiel Release (FMR)	Jun 28	NFP	NFP	1
Final Operational Capability (FOC)	Jan 29	NFP	NFP	1

Notes

- 1 A Contract Change Proposal to reflect the Alternative Delivery Strategy was executed in December 2021 reflecting revised schedule dates. Forecast dates for capability realisation are not for publication

**Note**

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

Section 4 – Materiel Capability/Scope Delivery Performance

4.1 Measures of Materiel Capability/Scope Delivery Performance

Traffic Light Diagram: Percentage Breakdown of Materiel Capability/Scope Delivery Performance	
	Green: The project team expects to meet capability requirements as expressed in the Materiel Acquisition Agreement.
	Amber:
	Red:

Note

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

4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	<ul style="list-style-type: none"> - The first JORN radar and supporting systems upgraded with new hardware and software; - New Operations Centre that supports operation of the upgraded Radar and legacy systems. 	Not yet achieved
Initial Operational Capability (IOC)	<ul style="list-style-type: none"> - The first JORN radar and supporting systems upgraded with new hardware and software; - New Operations Centre that supports operation of the upgraded Radar and legacy systems ; - Training to enable sufficient personnel to conduct operations has been provided; - Sufficient sparing and support arrangements are in place to sustain operations; - Support contracts are established for all upgraded and existing JORN systems, radar sites and the JORN Coordination Centre. 	Not yet achieved
Materiel Release 2 (MR2)	The second JORN radar and supporting systems upgraded with the new hardware and software.	Not yet achieved
Operational Capability 2 (OC2)	<ul style="list-style-type: none"> - The second JORN radar and supporting systems upgraded with new hardware and software; - Training to enable sufficient personnel to conduct operations has been provided; - Sufficient sparing and support arrangements; - Support contracts are established for all upgraded and existing JORN systems, radar sites and the JORN Coordination Centre. 	Not yet achieved
Final Materiel Release (FMR)	<ul style="list-style-type: none"> - The third JORN radar and supporting systems upgraded with new hardware and software; - Ionospheric sounder network is upgraded. 	Not yet achieved
Final Operational Capability (FOC)	<ul style="list-style-type: none"> - The third JORN radar and supporting systems upgraded; - Achievement of all Capability Enhancement Elements; - Achievement of the operational parameters as defined in the Operational Concept Document; - Training to enable sufficient personnel to conduct operations in accordance with the defined level of capability and preparedness requirements is provided; - Sufficient sparing and support arrangements are in place to sustain operations in accordance with the defined level of capability and preparedness requirements; - Support contracts are established for all upgraded and existing JORN systems, radar sites and the JORN Coordination Centre; 	Not yet achieved

Section 5 – Major Risks and Issues

5.1 Major Project Risks

Identified Risks (risk identified by standard project risk management processes)	
Description	Remedial Action
There is a risk that resources required to execute the program cannot be applied due to the Enterprise's inability to attract and retain staff.	Defence and BAESA have been collaboratively working together to better understand the resourcing challenges in the defence market, particularly in South Australia. These improved insights are being incorporated into the current program workforce profile (this obligation is in accordance with the Heads of Agreement negotiated in December 2020 with BAESA). A series of workforce metrics have been established under a Workforce System Health Indicator to monitor the recruitment, development and retention of personnel. Improved management of the workforce at a more holistic enterprise level is a key objective of the HF radar enterprise road map that is being developed between BAESA and Defence.
There is a risk of further delays post execution of the re-baselined schedule in the Reprogram CCP.	The new Performance Measurement Baseline (PMB#3) is informed by a number of critical lessons learned from the original program. The revised delivery approach will serve to retire program risk progressively and earlier by rolling out elements of the system as

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	<p>they are developed.</p> <p>A newly established, collaborative-based governance framework will ensure early visibility and elevation of performance issues to enable pro-active remediation.</p> <p>Key areas of focus and risk management relate to assurance of supply chains, timely site works, planning of V&V activities and facility upgrades to support new HPA's.</p>
There is a risk of significant hardware cost increases associated with the upgrade of the remaining two radars (Tranches 3 & 4) post IOC, caused by material costs being higher than originally anticipated and the Heads of Agreement excluding the re-estimation of Tranches 3 and 4.	A technical contingency allocation has been identified for mitigation strategies that relate to design to cost and manufacture. Effective use of a competitive supply chain approach.
There is a risk of delays to the start and integration of future phases of AIR2025 Phase 6 (subject to future Government approval) and HPAs into the Phase 6 Baselines due to resource pressures.	Stakeholder prioritisation required to ensure effective allocation of finite resources from the HF Radar enterprise. Early funding approvals will support workforce certainty and mobilisation. Development of an integrated master schedule will underpin effective cost and risk planning.
Emergent Risks (risk not previously identified but has emerged during 2021–22)	
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 – Lessons Learned

6.1 Key Lessons Learned

Description	Categories of Systemic Lessons
Maintaining collaboration, transparent communication and disciplined engagement with all stakeholders is critical for managing technical requirements and facilitating risk management.	First of Type Equipment
An aggressive schedule developed by industry under competitive pressure resulted in compressed timeframes which exacerbated requirements management and delivery issues.	Schedule Management / Governance
While over-the-horizon radar (OTHR) is technically complex, subject matter experts in Defence and industry were not optimally utilised to supplement and advise inexperienced program personnel and leadership.	First of Type Equipment
Traditional waterfall approaches rely on a single 'big bang' integration event close to the Initial Materiel Release (IMR) milestone which is difficult to mitigate using sequential top-down design phase analysis. More agile approaches to program delivery allow the parties to learn together and adjust to overcome emergent technical issues within schedule and cost parameters.	Schedule Management
Adopting a holistic "enterprise" approach to project delivery, sustainment, future development, requirements and export opportunities ensures that limited resources (including technical expertise) are optimised and waste and capability impacts minimised.	Governance
Sovereign projects of this complexity require dedicated strategic leadership (at SES Band One equivalent) to manage and lead the project to ensure appropriate priority and effective relationships with key stakeholders are maintained.	Governance

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2022

Unit	Name
Division	Rotary, Aerospace and Surveillance Systems Division
Branch	Air and Space Surveillance and Control Branch

Project Data Summary Sheet¹⁵⁴

Project Number	SEA1654 Phase 3
Project Name	Maritime Operational Support Capability (Replacement Replenishment Ships)
First Year Reported in the MPR	2017-18
Capability Type	Replacement
Capability Manager	Chief of Navy
Government 1st Pass Approval	Apr 14
Government 2nd Pass Approval	Apr 16
Budget at 2nd Pass Approval	\$1,004.6m
Total Approved Budget (Current)	\$1,078.0m
2021-22 Budget	\$86.4m
Complexity	ACAT II



Section 1 – Project Summary

1.1 Project Description

The SEA1654 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 2022, the project spent \$64.5m against an in-year budget of \$86.4m. The variance of \$22.0m is primarily due to the prime contract (Navantia), associated with delays to the Contract Change Proposals (CCPs) and Foreign Military Sales (FMS) cases.

Project Financial Assurance Statement

As at end of June 2022, the SEA1654 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.

Schedule Performance

Production of the AOR Ships continued in Spain until the shipyard was shut down for 12 weeks from March 2020 to 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 Ship 1 was 6 months. Consequently, Initial Materiel Release (IMR) was similarly delayed, however Initial Operational Capability (IOC) was delayed by only 5 months. Final Materiel Release (FMR) and Operational Capability (OC) for Ship 2 have also been delayed by approximately 8 months as a result of the shutdown and production delays.

Major SEA1654 Phase 3 Project milestones achieved in 2021-22 include:

- Ship 1 *Supply* achieved Initial Operational Capability (IOC) with caveat October 2021;
- Ship 2 *Stalwart* achieved Ship Acceptance (SA2) August 2021
- Final Materiel Release (FMR) was declared September 2021; and
- Ship 2 *Stalwart* Commissioned into the Royal Australian Navy (RAN) and achieved Operational Release October 2021.

The achievement of Final Operational Capability (FOC) remains forecast in December 2022. This is within the original schedule approved by Government at Second Pass.

Materiel Capability/Scope Delivery Performance

The SEA1654 Phase 3 Project delivered Ship 2 *Stalwart* to the RAN in October 2021. FOC for Ship 1 *Supply* and Ship 2 *Stalwart* is expected to be achieved in December 2022.

154 Notice to reader

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

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 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.
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.
The SEA1654 Phase 3 Project entered into contracts with DSME and Navantia in October 2014, 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.
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. In 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.
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).
In November 2017, the Minister for Defence announced the AOR Ships would be named HMAS <i>Supply</i> and HMAS <i>Stalwart</i> .
Uniqueness
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.
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.
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.
Major Risks and Issues
The remaining major risk disclosed in the 2020-21 PDSS has been closed due to the SEA1654 Phase 3 Project achieving Explosive Ordinance (EO) certification in March 2021 and Armament Certification in October 2021. The remaining issue relating to the delays and deficiencies associated with the supplies of Integrated Logistics Support and the delivery of training has been closed after achieving completion in February 2022. An emergent risk is identified for completion of remaining Category 6 and 7 testing on AOR 2, which requires the availability of other ships with appropriate capability that may delay Operational Capability for the vessel, and hence delay Final Operational Capability (FOC). Additionally, IOC was declared with one caveat relating to the communication system, which still requires further testing and rectification.
Other Current Related Projects/Phases
Project N2262 - Facilities to Support SEA1654 Phase 3 MOSC: The SEA1654 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 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
	Project Budget		
Apr 14	Original Approved (Government First Pass Approval)	13.2	1
Apr 16	Government Second Pass Approval	991.4	2
	Total at Second Pass Approval	<u>1,004.6</u>	
Jun 16	Real Variation – Transfer	69.1	3
Apr 19	Real Variation – Transfer	0.3	5
Jan 20	Real Variation – Transfer	12.0	6
Jun 22	Real Variation – Transfer	(4.9)	8
Jun 22	Exchange Variation	(3.2)	
	Total Budget	<u>1,077.9</u>	
	Project Expenditure		
Prior to Jul 21	Contract Expenditure – Navantia S.A	(734.3)	7
	Contract Expenditure – Raytheon Australia	(43.6)	
	Other Contract Payments/Internal Expenses	(40.3)	4
		<u>(818.2)</u>	7

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FY to Jun 22	Contract Expenditure – Navantia S.A Other Contract Payments/Internal Expenses	(57.7) (6.8)		4, 9
Jun 22	Total Expenditure		(64.5) (882.7)	
Jun 22	Remaining Budget		195.2	
Notes				
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	Transfer of funding from Estate and Infrastructure Group (E&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.			
7	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.			
8	Transfer of approved acquisition funding to sustainment, the residual approved acquisition balance following the transfer is surplus to the acquisition project's needs.			
9	The Other Payments/Internal Expenses for FY 21-22 predominantly consist of: (\$3.5m) - project support including accommodation, travel, meals and incidentals; and (\$3.1m) - material purchases for operation.			

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
49.4	88.2	86.4	PBS-PAES: Variance primarily due to delays with the Prime Contract associated with delayed delivery of Ship 2 Stalwart and the transfer of additional works from Spain to Australia as a result of COVID-19. (\$14.5m) decrease is due to allocated of fund to CCPs that are no longer required. PAES-Final Plan: Variance due to foreign exchange movements.
Variance \$m	38.8	(1.8)	Total Variance (\$m): 37.0
Variance %	78.5	(2.0)	Total Variance (%): 74.8

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
			Australian Industry	In-year variance of \$22.0m to date is primarily due to the prime contract (Navantia), associated with delays for Contract Change Proposals and FMS cases.
		(22.0)	Foreign Industry	
			Early Processes	
			Defence Processes	
			Foreign Government	
			Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
86.4	64.5	(22.0)	Total Variance	
		(25.4)	% Variance	

2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 22 \$m			
Navantia S.A.	May 16	646.8	815.0	Fixed with indices escalation	Standard Defence Contract	1, 2, 3
Raytheon Australia	Nov 16	45.8	44.8	Fixed	Standard Defence Contract	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 end June 2022 is based on actual expenditure to end June 2022 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 22		
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 22				
1 AOR Ship – HMAS <i>Supply</i> was accepted in December 2020 and achieved IOR in April 2021.				
AOR Ship – HMAS <i>Stalwart</i> was accepted in August 2021.				
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 Requirements	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
Notes						
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 in June 2017.					

3.2 Contractor Test and Evaluation Progress

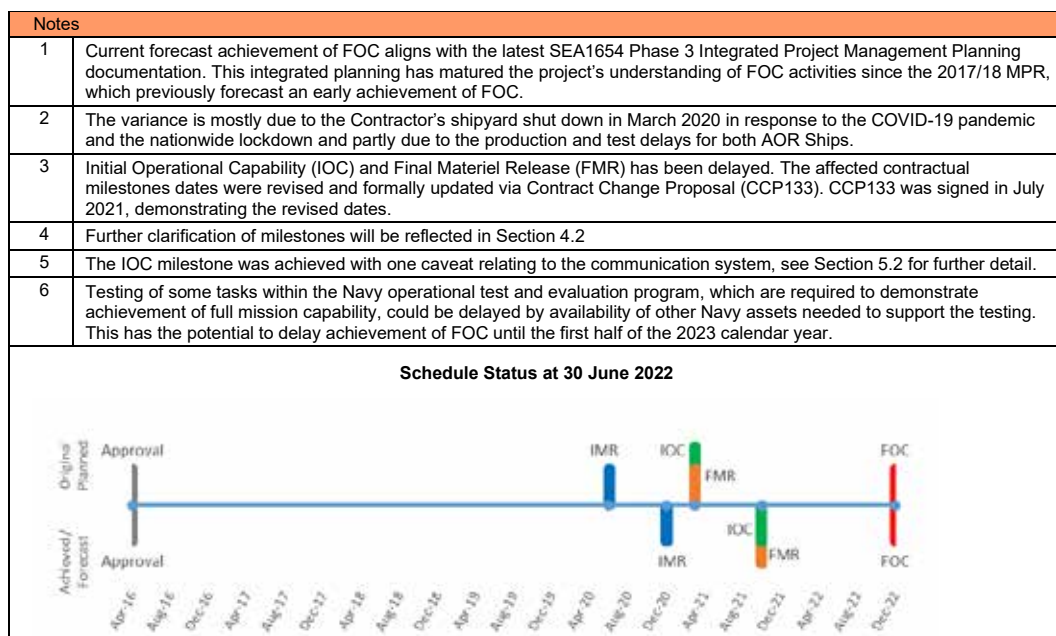
Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
System Integration	AOR Ship 1	Aug 19	N/A	Aug 20	12	1,2,5
	AOR Ship 2	May 20	N/A	Mar 21	9	1,2,5
Acceptance	AOR Ship 1	Sep 19	Dec 20	Dec 20	15	3,4,5, 6
	AOR Ship 2	Jun 20	Aug 21	Aug 21	14	3,4,5,6, 7
Notes						
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 Readiness Review (FACRR), Training Readiness Review (TNGRR), Functional Configuration Audit (FCA), Physical Configuration Audit (PCA), crew Training and the Support System Effectiveness Demonstration (SSED).					
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), delivered by Navantia in July 2021. The Project Integrated Master Schedule reflects this forecast. Delays to System Integration and Acceptance for AOR Ship 1 and Ship 2 against all milestones result from Navantia's shutdown of Shipyard during the Alarm State Covid-19 pandemic crisis.					
6	A Contract Change Proposal (CCP115) was signed in December 2020 which resulted in the AOR Ship 1 contracted Acceptance date change to the end of December 2020 and the AOR Ship 2 contracted Acceptance date change to the end of July 2021.					
7	A Contract Change Proposal (CCP133) was signed in July 2021 which resulted in the AOR Ship 2 contracted Acceptance date change to the end of August 2021.					

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	Oct 21	7	2, 3, 5
Final Materiel Release (FMR)	Q1 2021	Sep 21	6	2, 3
Final Operational Capability (FOC)	2022	Dec 22	0	1, 6

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

Section 4 – Materiel Capability/Scope Delivery Performance

4.1 Measures of Materiel Capability/Scope Delivery Performance

Traffic Light Diagram: Percentage Breakdown of Materiel Capability/Scope Delivery Performance	
	Green: The project expects to meet the Materiel Capability Requirements as expressed in the Materiel Acquisition Agreement (MAA).
	Amber: N/A
	Red: N/A

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

4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	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.	Achieved Dec 20
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.	Achieved with caveat Oct 21
Final Materiel Release (FMR)	AOR Ship 1 and AOR Ship 2 complete in accordance with the Government Approved scope.	Achieved Sep 21
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	Not yet achieved.

	<p>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</p> <p>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.</p> <p>FOC is currently scheduled to be achieved in December 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
<p>EO and Armament Certification</p> <p>There is a chance that certification of the AOR Explosive Ordinance (EO) facilities will not be awarded by the Materiel Acquisition Review Board (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.</p> <p>This risk has been closed as EO and Armament Certification was awarded March 2021 and October 2021 respectively.</p>
Emergent Risks (risk not previously identified but has emerged during 2021–22)	
Description	Remedial Action
<p>Category 6 and 7 Testing delaying OC2 and perhaps FOC</p> <p>There is a risk that limited availability of other Naval ships with appropriate capability will impact the remaining Category 6 and 7 testing on AOR 2, causing a delay to the Operational Capability (OC2) of the vessel, which would then delay FOC.</p>	<p>1. The Project is managing this risk through ongoing discussions with Navy and Integrated Project Team (IPT) meetings.</p> <p>2. Navy will arrange the testing at the first available opportunity.</p>

5.2 Major Project Issues

Description	Remedial Action
<p>Delays and deficiencies with ILS deliverables</p> <p>Delays and deficiencies associated with a range of Integrated Logistic Support (ILS) Supplies.</p> <p>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 SEA1654 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, Commodore Training - COMTRAIN and the 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>This issue is only relevant for Ship 1 as the suite of in-service and product documentations are applicable for both AORs.</p> <p>This issue has been closed as the delivery of the Training Management package was finalised February 2022.</p>
<p>IOC Declaration Caveat</p> <p>IOC was declared with one caveat relating to the Ships communication system</p>	<p>The AOR Ships have received interim communication system accreditation, which allows them to be operational, however some issues require further investigation and remediation prior to award of full accreditation.</p>

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

Section 6 – Lessons Learned

6.1 Key Lessons Learned

Description	Categories of Systemic Lessons
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	Schedule Management

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avoiding negative impacts on schedule.	
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
Paradigm shifts occur in requirements for which project capability managers may not be fully ready to action. This was experienced with respect to the navigation display systems to be installed on the AOR Ships. This has led to an inability to agree specific scope boundaries and impact a project's ability to manage its suppliers delivering the scope. A faster process for the adoption of new technology and management of paradigm shifts in requirements, including security, would ensure the scope can be agreed and projects can progress towards delivery quicker.	Requirements Management
Conducting an offshore build program has cost and management implications associated with travel and attendance requirement as well as impacts of convenience that should be factored in the development of the project throughout the capability life cycle. Travel and associated costs related to attendance at project meetings, enlisting public servant and/or contracted support for production monitoring and time zone inefficiencies should be factored within the project cost model prior to Gate 2 approval and will continue to require active management during the acquisition phase. Projects managing offshore builds would benefit from having an allowance for a 'permanent' project team local to where the build is taking place.	Contract Management

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2022

Unit	Name
Division	Ships
Branch	Ship Acquisition - Specialist Ships

Project Data Summary Sheet¹⁵⁵

Project Number	AIR5431 Phase 3
Project Name	Civil Military Air Traffic Management System (CMATS)
First Year Reported in the MPR	2016-17
Capability Type	Replacement
Capability Manager	Chief of Air Force
Government 1st Pass Approval	Nov 11
Government 2nd Pass Approval	Dec 14
Budget at 2nd Pass Approval	\$731.4m
Total Approved Budget (Current)	\$1,010.8m
2021-22 Budget	\$115.9m
Complexity	ACAT I



Section 1 – Project Summary

1.1 Project Description

AIR 5431 Phase 3 is the Defence component of the Airservices Australia (Airservices)-led joint agency program. AIR 5431 Phase 3 will replace the current Australian Defence Air Traffic System at 12 fixed base Defence locations. The Defence component of the joint project, (eight Civil Military Air Traffic Management System (CMATS) sites and four Airservices Defence OneSKY Tower (ADOT) sites, the ab-initio training simulator at the RAAF School of Air Traffic Control and the Operational Maintenance Trainer At RAAF Amberley) will be delivered through the On Supply Agreement (OSA) contract between AIR 5431 Phase 3 and the Airservices OneSKY project.

To meet this OSA obligation, in addition to providing direct services using internal work packages, Airservices holds the contracts with Thales Australia (Thales), as prime for the CMATS deliveries, and with SAAB Incorporated (Inc) (SAAB) and Frequentis Australia (Frequentis) for subsystems of the ADOT solution.

1.2 Current Status

Cost Performance

In-year

In-year expenditure to 30 June 2022 is \$99.1m against a budget of \$115.9m. The variation is due to a combination of:

- Contract Change Proposal amendments to the Air-Ground-Air contract milestone delivery dates
- Contractor delay on Site Preparation and Support Costs
- Less than anticipated requirement for contracted workforce due to delays in the prime contract
- Less than anticipated operating expenses due to lower Project Management and Air Force Operating costs

Project Financial Assurance Statement

As at 30 June 2022, project AIR5431 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 continues to experience challenges in progressing parallel streams of work under the CMATS contract. Although the COVID restrictions are largely now lifted Thales continues to be challenged to draw down the outstanding work that is preventing the design from reaching maturity in the scheduled timeframe. This is resulting in incremental testing of some areas of the design, which are sufficiently mature, but is creating complexity in managing a system of system test program with multiple baselines. This has already made some testing less effective than would normally be the case.

The deed that gave Thales conditional approval to exit the Release Zero (Rz) Critical Design Review (CDR) in December 2020 was expected to be completed in June 2021. However, the outstanding deliverable, which is the final design release Baseline for Release Zero, will not be delivered until October 2022, and is a precursor to the commencement of formal system testing for Release Zero.

155 Notice to reader

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

In April 2021, Defence agreed with Thales to limited early installation activities at a number of sites where the systems to be installed were assessed to be mature. Thales retains the risk of rework at these sites, should any design changes be identified in any remaining design work, some of which was realised. Thales had to pause installation at East Sale in November 2021 and at Amberley in January 2022 due to a combination of supply chain and design maturity issues. Thales has indicated it will not recommence site activities at those locations until mid Q3 2022.

In July 2021, as a result of reviews by the CASG Independent Assurance Review and the Schedule Compliance Risk Assessment Methodology (SCRAM) team, Thales commenced another schedule review resulting in it declaring further schedule delay to IOC and FOC. Thales incorporated these changes into the October 2021 Contract Master Schedule (CMS), however this has been overtaken by further delays. The CASG Division Head directed an external deep dive review of the subject schedule, which was conducted by an external contractor in early 2022. While there were some areas of ambiguity due to a Work Breakdown Structure (WBS) dictionary not being available as part of the review and the schedule identified as being overly complex that made analysis of critical path very difficult, the report identified similar issues to the SCRAM and considerable concern with the resourcing levels of the CMATS program. The other factor a direction by Thales management to work to a P10 (montecarlo 10% chance of success) working schedule that has driven sub optimal outcomes and created greater instability in the schedule. Airservices intends to contract another external agency to conduct a further Integrated Baseline Review (IBR) in Q3 2022 that should drive another schedule replan by Thales.

In relation to the delivery of the ADOT towers, in June 2022, SAAB identified a number of delays that put the first site, Edinburgh now on, or near, critical path of IOC. In addition, the combined contracts with SAAB and Frequentis still do not fully cover the full suite of system requirements of ADOT. Airservices is currently in negotiation with the ADOT subcontractors for variations to their contracts to take on complete design, integration work and system of system testing, to achieve the full capability solution.

Airservices has commenced work on a number of items associated with its obligations under the collaboration options agreed between Airservices and Defence that resulted from the relocation of Darwin and Townsville approach capability to Brisbane Airservices Area Control Centre and the necessary gateways and networks to allow Oakey Approach to be relocated to Amberley. To date, Airservices negotiations with Air Force headquarters on options is paused due to a wider network systems availability study being conducted by Airservices.

Material Capability/Scope Delivery Performance

This program has not delivered any material capability to date through the On Supply Agreement.

Related Material Capability is also being managed by the Project outside the On Supply Agreement including:

- Air Ground Air (AGA) transition solution delivered by BAE Systems Australia (hardware installed at two sites but cannot be commissioned/accepted until the CMATS systems are installed)
- An ADATS life-of-type extension contract with Raytheon to cater for the schedule delays being experienced, and
- Defence site preparation and support, to support the design requirements of the contractor.

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 2011, based on both Defence and Airservices intending to replace their legacy air traffic control systems, Defence agreed to an opportunity for Defence and Airservices, to harmonise the procurement of Australia's civil and military air traffic management systems so as to deliver improvements in safety, efficiency, flexibility, economy and business continuity.

Airservices and Defence conducted a joint Request For Tender in June 2013. This allowed AIR5431 Phase 3 to achieve 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 contribution for the common and Defence unique elements delivered under the On Supply Agreement.

On 18 August 2017, due to concerns over an inability to finalise negotiations within acceptable cost and schedule risks, AIR5431 Phase 3 was listed as a Project of Concern. In response, Airservices offered a number of collaboration options to Defence, including the relocation of some Defence approach capabilities to their Brisbane centre and replacing four of the Thales supplied towers with a variant of their regional tower program.

In February 2018, AIR5431 Phase 3 was granted a real cost increase (RCI) of \$243.0m (including contingency) to cover Defence contribution for the agreed collaboration options, a transition radio solution (AGAT), Australian Defence Air Traffic System (ADATS) life-of-type extension and facilities preparation costs related to CMATS installation. This RCI allowed Defence to agree to a fixed price contribution for the Defence deliveries under the On Supply Agreement, which allowed Airservices to sign contracts with Thales, and other contractors subsequently, for the joint supplies.

AIR5431 Phase 3 was removed from the Project of Concern list on 08 May 18 as a result of the contract being signed but remained as a Project of Interest with six monthly updates to Government.

Based on the continuing delays and credibility issues with the Thales schedule and the lack of ability to reduce the amount of outstanding technical issues affecting completion of the system design, Chief of Air Force recommended to Government that AIR5431 Phase 3 be relisted as a Project of Concern.

Uniqueness

AIR5431 Phase 3 represents the first time that a Defence project is contributing to a major national infrastructure project. The December 2009 National Aviation White Paper identified the need to implement a harmonised national civil and military 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 joint delivery structure without the benefit of adapting from proven existing models.

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Major Risks and Issues

Airservices and Defence manage risk separately in accordance with their respective risk management frameworks. The CMATS joint program risk register is maintained by Airservices on behalf of the CMATS program and considers risks that may collectively impact both Defence and Airservices. 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. AIR5431 Phase 3 operates a separate risk register for Defence specific/unique risks and issues. All major risks that have an impact on AIR5431 Phase 3 delivery of the Materiel Acquisition Agreement (MAA) have been recorded, regardless of where they are managed.

During the reporting period, the risks identified for AIR5431 Phase 3 and the CMATS joint program have shifted as a result of progress through the system design milestones. The Project's major risks fall into the categories of contractor performance, schedule, resourcing, Customer Furnished (Materials, Supplies, Services, Data) and program delivery, as follows:

- Contractor performance covering system design processes, maturity-based engineering approaches, Human Factors program, adherence to baseline management, quality assurance of technical activities and supporting documentation, compliance with Customer constraints, timely achievement of milestones, delivery of capability, and enabling resource composition required to deliver concurrent priorities.
- Scheduling of activities in accordance with an achievable Integrated Master Schedule, informed by credible contract master schedules to enable the effective management of resources, customer obligations, critical path priorities and constraints.
- Resourcing sufficiency and suitability to effectively deliver on the Customer obligations across the OneSKY program, including adequate support to key contractor-led activities and milestones, such as major design reviews, testing activities and site integration and verification, which may also involve support to onerous and ongoing travel obligations.
- Customer Furnished Materials, Supplies and Services including provision, delivery, non-compliance, delays to, deficiencies in, or unavailability of Defence third-party systems, CIOG and SEG infrastructure and networks.
- Program delivery risks associated with the complexity inherent in the delivery of the collaboration options, delivery of supplies and services in accordance with the On Supply Agreement, design and delivery of ADOT, and management of threats associated with changes or events in the air traffic domain.

The project has seen an overall increase in risk since the previous report, due the increasing cost and schedule impact of addressing critical system design aspects later than planned in the design cycle. Some of the Defence obligations have reduced, in part due to their relationship to milestones in the Thales schedule, which has experienced high levels of delay.

The key issues impacting Defence and requiring active management include:

- The On Supply Agreement (OSA) is not fit for purpose to manage the on-supply and delivery of sustainment services from Airservices Australia.
- The increased cost of the project Major Service Provider resources supporting testing and the introduction into service of new systems as a result of potential delays to the Thales delivery schedule.
- Premature exit of the Critical Design Review with major deficiencies in the Release Zero Design still to be addressed prior to exiting system verification.

Other Current Related Projects/Phases

AIR5431 Phase 1 – Deployable Defence Air Traffic Management Capability will introduce Deployable Air Traffic Management (ATM) command and control systems into the ADF inventory. This phase has no impact on the ability of AIR5431 Phase 3 to deliver its outcomes.

AIR5431 Phase 2 – Fixed Defence Air Traffic Control Surveillance System will replace the existing fixed base defence Air Traffic Control (ATC) surveillance radars. AIR5431 Phase 3 is highly reliant on AIR5431 Phase 2 to deliver ATC surveillance data at some sites.

Note

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

Section 2 – Financial Performance**2.1 Project Budget (out-turned) and Expenditure History**

Date	Description	\$m	Notes
Project Budget			
Dec 14	Original Approved (Government 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
Nov 21	Real Variation Transfer	1.7	4
Dec 21	Real Variation Transfer	15.5	4
Feb 22	Real Variation Transfer	17.6	4
		1,006.9	
Jun 22	Exchange Variation	3.8	
Jun 22	Total Budget	1,010.8	5
Project Expenditure			
Prior to Jul 21	Contract Expenditure – Airservices Australia	(283.2)	
	Contract Expenditure – BAE	(35.6)	
	Contract Expenditure – Jacobs Australia – Integrated Work Package	(28.1)	
	Contract Expenditure – Jacobs		

	Australia – Integrated Support Contract	(27.0)	
	Other Contract Payments / Internal Expenses	(45.9)	
		(419.9)	
FY to Jun 22	Contract Expenditure – Airservices Australia	(73.3)	
	Contract Expenditure – Jacobs Australia – Integrated Work Package	(13.3)	
	Contract Expenditure – BAE	(7.2)	
	Other Contract Payments / Internal Expenses	(5.2)	
Jun 22	Total Expenditure	(99.1)	6
		(519.0)	
Jun 22	Remaining Budget	491.8	

Notes	
1	In addition to these direct project costs, Defence received approximately \$175m for Major Capital Facility costs and enabling ICT costs.
2	This variation is due to administrative decisions to temporarily harvest funds from the project. These funds were returned to the project as part of the RCI approved in February 2018. These funds were part of the original Second Pass approval budget.
3	An RCI of \$249.7m was approved by Government in February 2018 to cover additional costs related to the acquisition. This includes \$2.2m for Air Force to relocate the current Tindal Australian Military Airspace Control Communications System (AMACCS) 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 (LOTE) 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	Air Force Group Project Budget transferred to CASG as part of 21/22 Additional Estimates for financial management purposes. Subsequent transfers include an adjustment for FY 20/21 underspend and a transfer from Security & Estate Group (SEG) to Air Force Group for funding related to existing tower demolition.
5	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 have been incorporated into Section 2.3 as each agreement was reached.
6	Other Contract Payments in FY 21/22 include \$3.6m expenditure on site preparation, \$0.6m on legacy ATC automation system Autotrac II update procurement and the remaining \$1.0m being other contract payments/internal expenses

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
148.1	116.5	115.9	The variation from PAES estimate to final plan was due to exchange rate changes. The variation from final plan to EOFY achievement is primarily due to further delays to the CMATS milestones , and a reduced number of transition radio site rollouts due to COVID-19 travel restrictions
Variance \$m	(31.6)	(0.6)	Total Variance (\$m): (32.2)
Variance %	(21.3)	(0.5)	Total Variance (%): (21.7)

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(16.7)	Australian Industry	The variation is due to: 1) Contract Change Proposal amendments to the Air-Ground-Air contract milestone delivery dates (\$9.7m); 2) contractor delay on Site Preparation and Support Costs (\$2m); 3) less than anticipated requirement for contracted workforce due to delays in the prime contract (\$3.5m); and 4) Less than anticipated operating expenses due to lower Project Management and Air Force Operating costs (\$1.8m).
		-	Foreign Industry	
		-	Early Processes	
		(0.2)	Defence Processes	
		-	Foreign Government Negotiations/Payments	
		-	Cost Saving	
		-	Effort in Support of Operations	
		-	Additional Government Approvals	
115.9	99.1	(16.8)	Total Variance	
		(14.6)	% Variance	

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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 22 \$m			
Jacobs Australia – Integrated Support Contract	Dec 14	107.7	27.0	Variable	Modified Standard Defence Contract	1,2
Airservices Australia	Feb 18	521.0	552.0	Fixed	On Supply Agreement	1,3
Jacobs Australia – Integrated Work Package	Dec 18	47.0	86.2	Variable	Integrated Work Package	1,4
BAE – Air-Ground-Air Transition System	Nov 19	67.4	70.6	Fixed	Support Contract Survey and Quote	1
Notes						
1	Contract value as at 30 June 2022 is based on actual expenditure to 30 June 2022 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. Due to exchange rate variance, the addition of Defence approved scope and the inclusion of Contract (Support), the price of the OSA will increase over time.					
4	The project workforce structure is based on the CASG First Principles Review with 80% of the project staff being delivered under the IWP contract. Contract value is the estimated Project share of the Branch IWP contract and is based on the estimate of project expenditure for work packages to the end of December 2024.					
Contractor	Contracted Quantities as at		Scope	Notes		
	Signature	30 Jun 22				
Jacobs Australia	N/A	N/A	Service based integrated support.	1		
Airservices Australia	N/A	N/A	Through the OSA Airservices will deliver: CMATS combined control tower and approach centres at Amberley (including Oakey approach), East Sale, Williamtown, Tindal and Nowra; consolidated Darwin and Townsville approach services at Airservices Brisbane approach centre; CMATS control tower systems at Darwin, Townsville and Pearce; Tower systems sourced by Airservices at Richmond, Oakey, Edinburgh and Gin Gin; a simulator system at SATC and an Operational Maintenance Trainer at Amberley			
Jacobs Australia	N/A	N/A	Serviced based integrated work package.			
BAE Systems	N/A	N/A	Procurement, design, integration and installation of an Air Ground Air Transition system across the twelve Defence Sites. This includes the procurement and integration of radio communications equipment that will supplement the existing AMACCS (currently sustained by BAE) to enable transition of CMATS.			
Major equipment accepted and quantities to 30 Jun 22					Nil	
Notes						
1	This was a result of revised schedule Control tower systems for Oakey, Gingin, Richmond and Edinburgh (also previously referred to as the Four Alternate Tower Solution (FATS) now referred to as the Airservices Defence OneSKY Tower System (ADOT) will be delivered within the agreed fixed-price cap of \$521.0m. The obligation for Airservices to provide ADOT was established through the OSA signed 22 February 2018. The ADOT Statement of Work and Functional Performance Specification are the subject of negotiations between Defence and Airservices					

Section 3 – Schedule Performance

3.1 Design Review Progress

Review	Major System/ Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
System Requirements	CMATS System Requirements Analysis	Aug 17	N/A	Jan 18	5	1
Preliminary Design Rz	CMATS	Oct 19	N/A	Dec 19	2	2, 4
Critical Design Rz	CMATS	Apr 20	Sep 20	Dec 20	8	2,5
Design Release Baseline Review Rz (Block 1)	CMATS	Apr 21	Jun 21	Jun 21	2	7,5
Support System Critical Design Review Rz	CMATS	Apr 20	Jun 21	Nov 21	19	
Preliminary Design Review R1 final	CMATS	Jan 22	Mar 22	TBA	2	3,8
Critical Design Review R1	CMATS	Sep 22	Jan 23	TBA	4	3,8
Preliminary Design Review R2	CMATS	Jun 23	Nov 23	TBA	5	3,8
Critical Design Review R2	CMATS	Feb 24	Jul 24	TBA	5	3,8
System requirements	Alternate Towers Via Airservices	Not Yet Agreed	N/A	N/A	N/A	6

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	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.
3	Thales is currently conducting a significant schedule replan of the CMATS deliverables. This will also affect the timing of when the ADOT sites can be delivered. The project expects this replan to be commenced by in Q3 2022 on completion of the IBR and the project will then update this table. The variance column has been retained to track the last reported variances
4	Although the design review was exited in December 2019, a number of technical issues were not resolved but were due to be completed by August 2020. This was not achieved and the issues rolled into CDR activities.
5	CMATS CDR was exited with a number of significant deficiencies. These are being managed through a new process called a design release baseline review (DRBR). DRBR was completed in June 2021 but the specifications at DRBR still require updating to meet the entry criteria for the formal Rz System Verification activity. Thales now expects these deliverables to be provided October 2022.
6	Airservices signed contracts with SAAB and Frequentis in December 2020. While these contractors have provided some schedules, they focus mainly on the early design activities, as the rollout of these sites must be managed in concert with the Thales rollout, which has yet to be settled sufficiently.
7	This milestone is not part of the original contract milestones and is specific to the Deed negotiated with Thales to complete the significant number of outstanding actions arising from CDR Rz. However, the DRBR in June 2021 was for an interim Specification and did not meet the entry criteria for entry into TRR Rz.
8	Thales have provided schedule analysis for dates associated with IMR, IOC, FMR and FOC, based on a 90% probability of achieving those dates. These Intermediate milestones have not yet been through that process and will need to be updated when that information is available.

3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
Rz System verification	CMATS	N/A	Mar 22	TBA	TBA	4
System Acceptance	School of Air Traffic Control - CMATS	Jan 22	Feb 23	TBA	13	3
	RAAF Base East Sale - CMATS	May 22	May 23	TBA	12	3
	RAAF Base Amberley - CMATS	Jun 22	Jun 23	TBA	12	3
	RAAF Base Edinburgh - ADOT	Jun 22	TBA	TBA	TBA	1,3
	RAAF Base Pearce - CMATS	Oct 22	Nov 23	TBA	13	3
	RAAF Base Gingin - ADOT	Oct 22	TBA	TBA	TBA	1
	RAAF Base Tindal - CMATS	Nov 22	Nov 23	TBA	12	3
	Army Aviation Centre Oakey - ADOT	Nov 22	TBA	TBA	TBA	1,3
	RAAF Base Townsville - CMATS	Nov 23	Jan 25	TBA	14	3
	Naval Air Station Nowra - CMATS	Mar 24	Mar 25	TBA	12	3
	RAAF Base Williamtown - CMATS	Apr 24	Feb 25	TBA	10	3
	RAAF Base Darwin - CMATS	Apr 24	Jan 25	TBA	9	3
	RAAF Base Richmond - ADOT	May 24	TBA	TBA	TBA	1
Rz System Acceptance	CMATS	Aug 22	Jul 23	TBA	11	2
R1 System Acceptance	CMATS	Jul 24	May 25	TBA	10	3
R2 System Acceptance	CMATS	Feb 25	Nov 25	TBA	9	3
Final Acceptance	CMATS	Aug 25	Feb 26	TBA	6	3

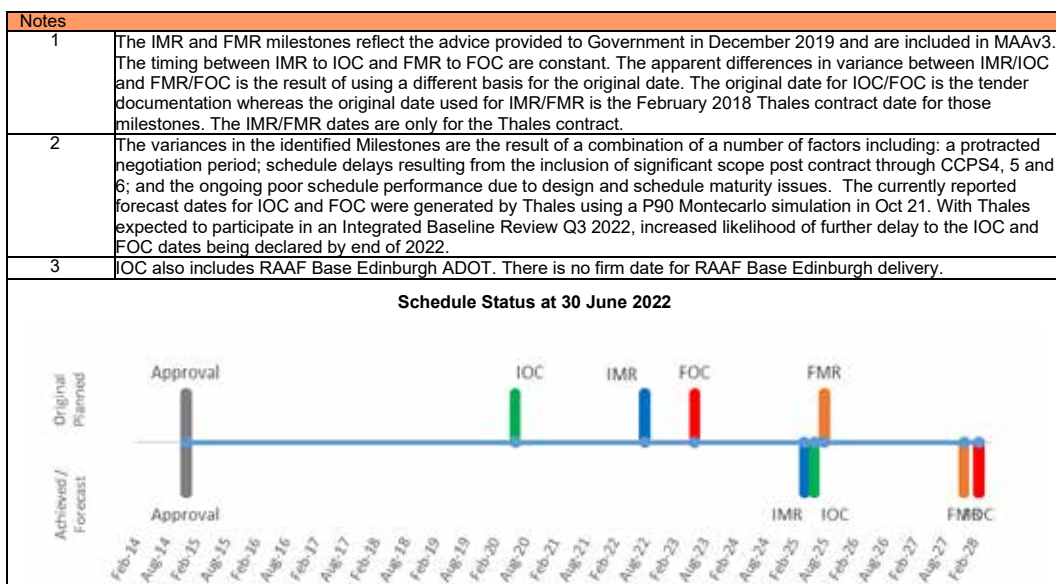
Notes	
1	The planned date was based on the original contract before these sites were de-scoped from the Thales contract. Forecast dates are expected to be updated once the ADOT schedules have been agreed
2	Rz System Acceptance includes East Sale Tower and Approach (including the School of Air Traffic Control (SATC)), Amberley Tower and Approach including consolidated Oakey Approach and Edinburgh ADOT Tower. The selected sites constitute the AIR5431 Phase 3 IOC, as the combination of these sites demonstrates all possible system variants for Defence's portion of the CMATS system.
3	An Integrated Baseline Review is scheduled to commence in Q3 2022 which should prompt a schedule replan by Thales of the CMATS deliverables. The variance column has been retained to track the last reported variances
4	Due to the RZ design being incomplete, and the level of detail in the Thales schedule, it is difficult to provide a firm forecast. However, SV RZ is now not expected to be achieved until sometime Q2 2023

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Aug 22	Q1 2025	31	1,2,
Initial Operational Capability (IOC)	Jun 20	Q2 2025	60	2,3,
Final Materiel Release (FMR)	Aug 25	Q4 2027	28	1,2,
Final Operational Capability (FOC)	Jun 23	Q1 2028	57	2.

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

Section 4 – Materiel Capability/Scope Delivery Performance

4.1 Measures of Materiel Capability/Scope Delivery Performance

Traffic Light Diagram: Percentage Breakdown of Materiel Capability/Scope Delivery Performance	
	Green: The project expects to meet the capability requirements as expressed in the Joint Project Directive, Materiel Acquisition Agreement and relevant Technical Regulatory Authority. While a number of changes in the way Defence scope is to be delivered through the collaborations options initiated by Airservices, these will not impact on the safe delivery of Defence air traffic services.
	Amber: N/A
	Red: N/A
Note	
This Traffic Light Diagram represents Defence's expected capability delivery. Capability assessments and forecast dates are excluded from the scope of the Auditor-General's Independent Assurance Report.	

4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	Amberley, East Sale (including SATC) and Edinburgh transitioned from ADATS. Forecast achievement date Q1 2025.	Not yet achieved
Initial Operational Capability (IOC)	Amberley, East Sale, SATC and Edinburgh have been accepted into Operational service. Forecast achievement date Q2 2025.	Not yet achieved
Final Materiel Release (FMR)	Delivery of all materiel system elements configured to the final system build for both ADOT and CMATS mission systems. Forecast achievement date Q4 2027.	Not yet achieved
Final Operational Capability (FOC)	All Defence Sites have been accepted into operational service. Forecast achievement date Q1 2028.	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, or delays to, Customer Furnished Materials, Supplies and Services including non-compliance of, deficiencies in, or unavailability of CIOG and SEG infrastructure and networks, will result in the customer impacting the contracted schedule.	Delays declared by Thales alleviate potential schedule impacts of the customer furnished items contributing to this risk, including aspects related to the commissioning of AIR5431 Phase 2 radars. Customer liability for Defence network delivery, is being managed through a 12 month design constraint applied to Thales due to their late delivery of network design requirements.	
Delays to the Air Ground Air transition solution, which includes any modifications to existing gantries, may result in the AGA capability not available to enable CMATS and ADOT transition within the agreed contract schedule.	This risk has been downgraded from High to Medium as a result of meaningful Site Installation progress. East Sale has achieved Design Acceptance with a number of sites following in quick succession. Availability of an AGA transition capability is no longer threat to CMATS transition.	
Transition of remote radios may be affected by an inability of the AGA Transition Project to modify existing remote radio interfaces with CMATS.	The project has worked with the System Program Office (SPO) to establish a contract to transition the remote radios to an IP based solution, which has resulted in an overall risk reduction to medium.	
Dependency complexity inherent in the delivery of the collaboration options may lead to divergent goals and a lack of required oversight and control, exposure of cost, scope and schedule thresholds, misalignment of delegations, or a breach of OSA obligations by either party, resulting in limitations of rights and protections and failure to satisfy customer capability expectations.	Ensure that no extant rights and protections are watered down through subsequent variations to the OSA through clearly articulated variations, and that the Defence team understand how the OSA applies to their role and the work they do.	
Airservices Defence OneSKY Tower (ADOT) system at Richmond, Edinburgh, Gingen and Oakey, may be affected by a lack of comprehensively documented scope, fragmented planning and a lack of sufficient resourcing, leading to a delayed ADOT delivery.	Defence is working closely with Airservices to ensure full coverage of Defence requirements are met in accordance with the ADOT Functional Performance Requirements Specification and On Supply Agreement obligations.	
Implementation of CMATS within the Defence ATM environment may be impacted by the functional availability of other Defence third-party delivered systems, limiting the ability of the ATM solution to achieve certification or 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 Joint Acquisition Statement of Work (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.	
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.	
A lack of Defence and Airservices project resources may impact oversight of system design work as it relates to PDR unresolved technical issues and the Critical Design Review (CDR) milestone, and impact on system design.	This risk is now being managed within the "insufficient Defence and Airservices project resources" risk and will not appear in this current form in next year's PDSS.	
Insufficient Defence and Airservices project resources, with adequate specialist training and experience across program, commercial, engineering and operations, may result in quality and schedule impacts to key activities and milestones, such as major design reviews, testing activities and site integration and verification.	Timely sourcing of additional resources through the Major Service Provider (Jacobs), relevant training and improved resource allocation to work packages are being used to enhance flexibility within the CMATS program and ensure resources are available to address strategic priorities against maturity goals.	

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CMATS system of systems maturity due to outstanding technical activities and documentation (such as Acceptance Test Procedures) not yet resolved, may be inadequate to achieve Allocated Baseline (ABL) at Mandated System Review milestones (CDR and Test Readiness Review (TRR)), resulting in delays to verification at R2 sites, with the potential for flow on effects to R1 and R2.	The customer continues to focus on oversight and assurance of the system maturity profiles, areas of outstanding technical activities not yet resolved and reinforce Thales' role as the Prime System Integrator.
The maturity-based engineering approach adopted for CMATS requirements analysis may not align with the software design model, increases the complexity of baseline management and design assurance activities prescribed by the relevant industry standard.	Software design assurance objectives are managed between the Customer and Thales and involve conformance checks between key documents, with a current focus on plans and procedures associated with the test and evaluation program.
Thales' resource profile lacks flexibility and the necessary composition of skills to concurrently deliver the requirements for the Mandated System Review milestones, 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 conducted through the Program Review Board. Independently, Thales continue recruitment and retention activities to address the high staff turnover and shortages.
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.	Recruitment of suitably skilled resources within proximity of each site is a key strategy available to the Major Service Provider to meet the requirements of each work-package. Defence continue to enforce Thales compliance with the Joint Acquisition Statement of Work (JASOW) constraint that limits the number of parallel site activities.
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.	This risk is now being managed within the "Thales' prioritisation of schedule over quality" risk and will not appear in this current form in next year's PDSS.
Thales' prioritisation of schedule over quality results in additional work for the Customer to ensure documentation and processes related to design, testing and installation are fit for purpose, leading to an increase to the cost of Defence's Major Service Provider arrangement.	Continue to enforce Thales' obligation to undertake their own quality control and design analysis, as well as limiting the number of incremental reviews being conducted.
Sustained COVID-19 international and domestic restrictions are impacting Thales productivity and their ability to bring specialist resources into country with a potential consequence of schedule delays.	This risk has been partially mitigated by a relaxation of government travel protocols, improved and normalised remote oversight of contractors, and establishment of state-based V&V teams. Risk is now rated Medium.
Emergent Risks (risk not previously identified but has emerged during 2021–22)	
Description	Remedial Action
Lack of a credible Integrated Master Schedule for OneSKY, impacted by poor quality Contract Master Schedules for CMATS and ADOT, may lead to misalignment and convergence of CMATS and ADOT activities, divergence between Defence and Airservices priorities, impacts to the timely and accurate provision of customer furnished services, supplies, equipment and facilities, and potential flow-on effects for installation including inadequate resourcing of concurrent transition and OT&E activities.	Continue to leverage existing program governance and controls to articulate the impacts of continuing to proceed with a non-credible schedule.
Thales' Human Factors strategy and engineering processes may not support OneSKY outcomes, including improving fitness for purpose based on user-centred design and optimised effectiveness of user performance.	Active management of this risk involves participation of Joint Program Team Subject Matter Experts and operational end user representatives in Human Factors Working Groups, along with clear escalation paths. Two additional Joint Program Team FTE are driving Thales progress, with the combination of treatments proving effective.
The OneSKY Program may be impacted by third party initiated changes or events in the air traffic domain, including ATM, aerodromes, airspace workforces, customers.	Close coordination with sponsor, System Program Office and user groups to collaborate on future capability intent and scanning of industry to identify trends and changes in the air traffic domain.

5.2 Major Project Issues

Description	Remedial Action
Premature exit of the Critical Design Review with major deficiencies in the Release Zero Design still to be addressed.	Airservices as the lead agency, have accepted the risks and liabilities associated with the decision to exit Critical Design Review with known major deficiencies in the Release Zero design that will still require remediation.
The increased cost of the project Major Service Provider resources supporting testing and the introduction into service of new systems as a result of potential delays to the Thales delivery schedule.	The Project will effectively on-board resources at timings which align, as far as possible, with revised Thales schedules to minimise any inefficiencies and additional costs to Defence. This will require the project to seek some level of contingency within the next 2 financial years.

AIR5431 Phase 3 is unable to introduce CMATS into service without impacting current operations due to insufficient dependent Air Ground Air transition system assets.	As a result of meaningful Site Installation progress, and East Sale achieving Design Acceptance with a number of sites following in quick succession, availability of an AGA transition capability is no longer threat to CMATS transition and has been retired.
Delays to the delivery of the Fixed Base Radar system under AIR5431 Phase 2 has impacted development and transition into service of CMATS due to the need to have sensor data from those radars available for interface testing prior to CMATS installation at sites.	This issue has been retired on the basis of suitable recordings provided to Thales of radar data, to enable CMATS design, test and evaluation and verification and validation to progress.
The OSA is not fit for purpose to manage the on-supply and delivery of sustainment services from Airservices Australia.	Engage with Airservices to commence an update to the OSA to incorporate an appropriate cost-sharing regime and governance arrangement for on-supply of sustainment services.

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

Section 6 – Lessons Learned

6.1 Key Lessons Learned

Description	Categories of Systemic Lessons
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 the 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 7 – Project Structure

7.1 Project Structure as at 30 June 2022

Unit	Name
Division	Rotary, Aerospace and Surveillance Systems
Branch	Air and Space Surveillance and Control

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Project Data Summary Sheet¹⁵⁶

Project Number	LAND200 Tranche 2
Project Name	BATTLEFIELD COMMAND SYSTEM
First Year Reported in the MPR	2019-20
Capability Type	Upgrade
Capability Manager	Chief of Army
Government 1st Pass Approval	Aug 13
Government 2nd Pass Approval	Sep 17
Budget at 2nd Pass Approval	\$930.0m
Total Approved Budget (Current)	\$966.2m
2021-22 Budget	\$57.0m
Complexity	ACAT I



Section 1 – Project Summary

1.1 Project Description

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

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

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

1.2 Current Status

Cost Performance

In-year

For financial year 21/22 the project spent \$19.8m against a planned budget of \$57.0m, resulting in a variance of (\$37.2m). The variation has two sources. Firstly, the BMS contract experiencing significant delay. The delay is a result of the Project being unable to agree the achievement of the Release 1.1 Software Release Review milestone and the ongoing consequences of Commonwealth inability to provide some items of Government Furnished Materials (GFM) during previous reporting periods. The Commonwealth and Elbit continue to work together to address the impact of these delays. Secondly, the Variance is also impacted by L3Harris's inability to conduct Acceptance Test and Evaluation, affected in part by the Commonwealth's inability to provide some GFM.

Project Financial Assurance Statement

As at 30 June 2022, project LAND200-2 has reviewed the project's approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial contractual obligations of Defence for this project, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget, including contingency, remaining for the project to complete against the agreed scope. The project is still in negotiation to resolve open issues with Elbit and L3Harris, the impact of these amendments to the project budget is yet to be determined.

Contingency Statement

The project has not applied contingency in the financial year.

Schedule Performance

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

156 Notice to reader

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

Part 3. Project Data Summary Sheets	<p>LAND200-2 has experienced schedule delays under both the Elbit contract for the BMS and the L3Harris contract for the TCN. Some of 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.</p> <p>A Contract Change Proposal (CCP) was finalised with L3Harris in financial year 19/20 that recognised a 10 month delay to the L3Harris contract, with costs shared between the Commonwealth and L3Harris.</p> <p>L3Harris has yet to satisfy the entry requirements to commence Acceptance Test and Evaluation (AT&E), as a result of System immaturity and the inability of the Commonwealth to provide some of the GFM. The resulting delay has been the catalyst for the negotiation of a CCP (CCP037), received from L3 Harris in November 2021. An internal review on the TCN Project was conducted in December 2021. The conduct of an Integrated Baseline Review (IBR) was initially considered as part of the contract negotiations for CCP037, however, this was not pursued following the recommendations from a Schedule Compliance Risk Assessment Methodology (SCRAM) Review conducted in March 2022 and disagreements over scope. The Commonwealth rejected CCP037 in April 2022. The Commonwealth issued A Stop Payment Notice and direction to L3 Harris to submit a Remediation Plan in April 2022. L3 Harris submitted a Remediation Plan in May 2022, which was rejected by the Commonwealth in June 2022. Both parties continue to work together to resolve remediation issues. In May 2022, L3Harris submitted a Notification of Postponement. L3Harris submitted CCP039, embodying a Claim for Postponement in June 2022. On 28 June 2022, the Commonwealth rejected CCP039 and did not grant the Claim for Postponement.</p> <p>In the previous reporting period, the Commonwealth and Elbit workshopped, but did not agree, a CCP to remove the integration and installation scope from the PMV-M, M1A1 and M88.</p> <p>A CCP for the integration of the Mission Partner Environment (MPE) in lieu of the Defence Secret Network was finalised in the previous reporting period with the introduction of a new milestone, covering the Elbit BMS Release 1.1.</p> <p>The progress of BMS Release 1.1 has been delayed because of an inability to exit the Software Release Review milestone. The Commonwealth and Elbit are continuing to work through known issues.</p> <p>In June 2021, Elbit advised that completion of the BMS Contract's Final Acceptance milestone would occur no earlier than February 2024, due to a number of issues including availability of GFM and the inability to meet milestone exit criteria. The Commonwealth is assessing the impact of this delay and continues to work with Elbit to come to a resolution to the open issues. Elbit has worked to rectify the issues that have led to the inability of BMS Release 1.1 to exit the Software Release Review milestone. The Commonwealth and Elbit agreed to a Demonstration of BMS Release 1.1. The Demonstration was conducted in March and April 2022. The Commonwealth and Elbit were unable to agree whether the issues were resolved by the demonstration. The Commonwealth has continued to engage with Elbit to determine a way forward.</p>
	<p>Material Capability/Scope Delivery Performance</p> <p>LAND200-2 has delivered: 150 Medium Heavy Cargo trucks fitted with the Tranche 1 BCS node; Foundation Training Classroom requirements, and new and retrofitted BMS Training Assemblages, BMS C2 Software Release 0 and BMS C2 Software Release 1. LAND200-2 is contracted to deliver a further 390 vehicle BCS node integrations and installations with the M1A1, M88, PMV-M and PMV-L platforms. Additionally, LAND200-2 is scoped to deliver the BMS-HQ software hosted on the MPE, Syndicate Room/Tactical Exercise Without Troops (TEWT) training requirements, BMS simulator systems and L3Harris AN/PRC-158 multi-channel multi-band radios.</p> <p>The remaining node design descriptions are being updated to accommodate network 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 has resulted in a request from Army to remove this scope item from the Elbit contract. Based on direction from the Army program sponsor, the project does not expect to deliver the Hawkei GSV node: this is offset by the direction from the Army Program Sponsor to increase the delivered quantities of Hawkei C2V and MNV nodes. Based on direction from the Army program sponsor, the Project will now only deliver 19 PMV-M Gate-Way vehicles. The remaining 38 PMV-M Gate Way vehicles originally within the Project's scope will now be delivered by the Land 4111 Project. Defence and Elbit are in commercial negotiations in connection with the remaining scope to be delivered under the BMS contract. Regarding the Demonstration conducted in March and April 2022, the Commonwealth and Elbit were unable to agree whether the issues were resolved by the Demonstration, which Elbit and the Commonwealth are working together to resolve.</p>
	<p>Note</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>
Battlefield Command System	<p>Background</p> <p>The LAND200 program is a core program that fundamentally influences the way Land Forces plan, command and control operations from frontline soldiers and combat vehicles up to and including deployed Joint Force Headquarters. LAND200 systems provide war-fighters with common battlefield awareness and information superiority through a highly capable, mobile and secure networked environment.</p> <p>In August 2013, LAND200-2 was presented to Government as a federation of two projects; JP2072 Phase 3 and LAND75 Phase 4. At this time, LAND200-2 received Government Combined Pass Approval for the continuation of LAND75 Phase 3.4, LAND125 Phase 3A and JP2072 Phase 1 (approved as LAND200-1) and First Pass Project Approval for new work to be delivered under LAND200-2.</p> <p>LAND200-1 and LAND75 Phase 4 Work Package A delivered the Battle Group and Below Command, Control and Communications System (BGC3) for approximately one-third of the Land force. The BGC3 was primed by Elbit which integrated Raytheon and L3Harris radios acquired by JP2072 Phases 1 and 2. LAND200-1 and LAND75 Phase 4 Work Package A:</p> <p>Installed the BGC3 into dismounted commanders, Bushmaster PMV, Unimog, G-Wagon and Armoured Personnel Carrier M113AS4. Delivered a Track Management System (TMS) as the primary interface between the BMS and Joint and US Coalition systems providing an exchange of situational awareness data and the Land Forces common operational picture.</p> <p>LAND75 Phase 3.4 and LAND125 Phase 3A achieved Initial Operating Capability (IOC) in April 2012 and Final Operating Capability (FOC) in March 2015.</p> <p>Final Materiel Release (FMR) for LAND75 Phase 4 Work Package A (the final deliverable for the project) was achieved in December 2017.</p> <p>LAND200-2 put forward a procurement decision for the further development of the BMS, which commenced under LAND75. No Military Off-The-Shelf BMS product was available that provided all of the Army requirements.</p>

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In September 2017, Second Pass Government Approval was provided for LAND200-2. This Government Approval draws together both projects to formulate under the name LAND200 Tranche 2 (Phase 2) Battlefield Command Systems. Under this approval, LAND200-2 will deliver:

An integrated Battle Management System – Command and Control (BMS-C2) with a supporting TCN into new vehicle platforms as part of the digitised land force. In addition to this, a modernised TCN with a new vehicle mounted communications system solution will be acquired by current and future LAND200 platforms programs.

Institutionalised BMS-C2 and TCN training and simulation across land forces.

Expanded functionality of the BMS-C2 to incorporate additional decision and planning tools for use at the Joint Task Force and Brigade Headquarters level.

The project was not approved under the revised Capability Life Cycle model and therefore did not undergo a Smart Buyer review.

The project was subsequently the subject of a Smart Buyer workshop in September 2019, in order to consider the architecture changes requested by Army. The Project has not been considered by a Smart Buyer assessment this financial year.

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

Uniqueness

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

Major Risks and Issues

The project is currently managing the following major risks:

- Funding for the combined implementation of LAND200-2 modifications with PMICA.
- Inability to realise the BCS Capability at IMR because of delays to the TCN Project and the BMS Project.

The project is also managing the following project issues constructively with the contractors:

- Delayed delivery of the Elbit BMS Release 2.
- Elbit and the Commonwealth have been unable to agree whether the release criteria associated with the Software Release Review 1.1 have been met.
- Contract impacts resulting from delayed Land Data Model development.
- Delay to the security accreditation of TCN software.
- A delay to the BMS SIM TTP Capability resulting from issues with external interdependencies
- Resource shortages of technical and engineering staff within the TCN Project.
- Incomplete technical definition of the Mission Partner Environment.

Other Current Related Projects/Phases

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

Note

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

Section 2 – Financial Performance

2.1 Project Budget (out-turned) and Expenditure History

Date	Description	\$m	Notes
2.1 Project Budget (out-turned) and Expenditure History			
Project Budget			
Sep 17	Original Approved (Second Pass Approval)	930.0	1
	Total at Second Pass Approval	930.0	
Jun 22	Exchange Variation	36.2	
	Total Budget	966.2	
Project Expenditure			
Prior to Jun 21	Contract Expenditure – L3Harris Communications	310.0	2
	Contract Expenditure – Elbit Systems	277.7	
	Contract Expenditure – Downer EDI Engineering Power Pty Ltd ¹⁵⁷	21.7	
	Contract Expenditure – Thales Australia Limited	2.9	
	Other Contract Payments / Internal Expenses	29.4	
		641.7	
FY to Jun 22	Contract Expenditure – Elbit Systems	2.3	4
	Contract Expenditure – L3Harris Communications	0.9	
	Contract Expenditure – Downer EDI Engineering Power Pty Ltd	11.0	
	Contract Expenditure – Thales Australia Limited	3.6	
	Other Contract Payments / Internal Expenses	2.0	
		19.8	3
Jun 22	Total Expenditure	661.5	
Jun 22	Remaining Budget	304.7	5

Notes	
1	The Second Pass budget excludes First to Second Pass Approval funding for Work Packages B, C and D (these prices were combined with the Combined Pass Approval for Work Package A captured within the JP2072 Phase 3 and LAND75 Phase 4 projects).
2	Other expenses for prior years includes \$14.0m for Technical Services, \$6.5m for Specialist Military Equipment, \$2.8m for Operational Plant & Equipment, \$1.7m for Travel, \$1.6m for Software Licenses and \$2.8m for Miscellaneous.
3	Other expenses for FY 2021/22 include \$0.7m for procurement of long lead time items, \$0.3m for Project Maintenance Contracts, \$0.3m for Repairable Items, \$0.2m for Specialist Military Equipment, \$0.2m for Technical Services, \$0.1m for Hardware, \$0.1m for Legal, Travel, Freight and Equipment Hire.
4	This is the Team Downer Major Service Provider (MSP) arrangement for the provision of a multi-discipline workforce to deliver the LC4S Branch Integrated Works Package (IWP).
5	Funding associated with the transfer of quantity 38 PMV-M Gateway vehicles to LAND4111 has yet to be finalised.

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
155.8	57.3	57.0	PBS to PAES: The variation is primarily due to delays to the BMS and TCN Prime contracts. Defence and the contractors are working through known issues to finalise a number of CCPs to update the payment and delivery schedules. PAES to Final Plan: Minor variation due to foreign exchange movements
Variance \$m	(98.5)	(0.3)	Total Variance (\$m): (98.3)
Variance %	(63.2)	(0.5)	Total Variance (%): (63.7)

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(37.2)	Australian Industry	The Battle Management System acquisition contract is experiencing delay which is contributing to a variation to the budget. Defence and the contractor are continuing to work through known issues. The Tactical Communications Network has experienced acceptance testing delays, which are being worked through with the contractor. A tailored Tactical Communications Network node has been installed in M1A1 and M88 vehicles. The forecast achievement of the operational capability and materiel release milestones are expected to change as a result of delays to design and acceptance milestones. The magnitude of this delay is being considered.
			Foreign Industry	
			Early Processes	
			Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
57.0	19.8	(37.2)	Total Variance	
		(65.3)	% Variance	

2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 22 \$m			
Elbit Systems Limited	Sep 17	365.2	406.8	Fixed	Standard Defence Contract	1,3
L3Harris Communications Australia	Sep 17	330.0	364.5	Fixed	Standard Defence Contract	1,2
Downer EDI Engineering Power Pty Ltd	Aug 19	17.7	51.4	Variable	Integrated Work Package	1,4
Thales Australia Limited	May 21	12.7	14.2	Fixed	Standard Defence Contract	1,5

Notes		
1	Contract value as at 30 June 2022 is based on actual expenditure to 30 June 2022 and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable).	
2	Contract value at 30 June 2022 includes the cost of CCPs to address changes in system requirements.	
3	The value of this contract may be adjusted, via negotiation and agreement of a contract change proposal with Elbit to remove the integration and installation from all platforms.	
4	Provision of multi-discipline workforce to deliver the LC4S Branch Integrated Work Package via the CASG Major Service Provider Arrangement. In addition the directed establishment of a PSI and improved governance measures lead to an increase in the contracted workforce.	
5	This procurement occurred via CCP078 to the LAND121 Phase 4 Acquisition Contract with Thales. LAND200-2 will pay Thales to produce the LAND200-2 BCS integration design solution within Hawkei vehicles.	
Contractor	Contracted Quantities as at Signature 30 Jun 22 Scope	Notes
Elbit Systems Limited	N/A N/A Development of BMS software and integration and installation of systems into the M1A1, M88 and PMV-M	1,3

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L3Harris Communications Australia	N/A	N/A	Development TCN software and provision of AN/PRC-158 radios.	2
Downer EDI Engineering Power Pty Ltd	N/A	N/A	Provision of multi-discipline workforce to deliver the LC4S Branch Integrated Work Package via the CASG Major Service Provider Arrangement.	4
Thales Australia Limited	N/A	N/A	Delivery of the design solution for integration of the LAND200-2 BCS within Hawkei vehicles.	5
Major equipment accepted and quantities to 30 Jun 22				
Elbit delivered 150 x MHC vehicles fitted with BGC3 and modified with BMS				
Elbit delivered 162 x New and 50 x Upgraded BMS Training Assemblages.				
Elbit delivered 36 x BMS Foundation Training Classroom Kits				
Notes				
1	This contract is for the provision of BMS systems for installation in the following: GSV Node PMV-L x 108, MNV Node M1A1 x 59, MNV Node M88 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.			
3	The scope of this contract is expected to change, via negotiation and agreement of a contract change proposal with Elbit to remove the installation and integration from some platforms.			
4	As a Project within LC4S Branch, LAND200-2 pays for its share of the workforce provided via this arrangement for the provision of above the-line professional services.			
5	Installation of the LAND200-2 BCS within Hawkei vehicles will be the subject of a separate procurement.			

Section 3 – Schedule Performance

3.1 Design Review Progress

Review	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/ Forecast	Variance (Months)	Notes
System Requirements	TCN Systems Requirement Review	Jul 18	N/A	Aug 18	1	8
	BMS Systems Requirements Review	N/A	N/A	N/A	N/A	1
Preliminary Design	TCN Preliminary Design Review	May 19	N/A	Sep 19	4	2
	BMS Preliminary Design Review (Various Reviews)	N/A	N/A	N/A	N/A	1
	Preliminary Design Review M1A1/M88	Jan 20	N/A	N/A	N/A	5
	Preliminary Design Review PMV-L	Oct 21	N/A	Jul 22	9	4
	Preliminary Design Review PMV-M	Sep 19	N/A	Sep 21	24	6
	BCS Preliminary Design Review	Feb 21	N/A	Oct 22	20	11
Detailed Design	TCN Detailed Design Review	Sep 19	Aug 20	Oct 20	13	3
	BMS R1 Detailed Design Review	Nov 19	N/A	Mar 20	4	9
	BMS R1.1 Detailed Design Review	Aug 20	N/A	Aug 20	0	10
	BMS R2 Detailed Design Review	Nov 20	N/A	Aug 23	33	7
	Detailed Design Review M1A1/M88	Jul 20	N/A	Dec 20	5	5
	Detailed Design Review PMV-L	Jan 22	N/A	Feb 23	13	4
	Detailed Design Review PMV-M	Feb 21	N/A			6
	BCS Detailed Design Review	Jun 21	N/A	Sep 22	19	11
				Jul 24	37	
Notes						
1	There is no discrete BMS Systems Requirements Review. BMS software does not follow the traditional Systems Engineering Review process. The Commonwealth has implemented a series of Software specific agile reviews.					
2	TCN Preliminary Design Review variance resulted from the late entry into and exit from the Systems Definition Review.					
3	The TCN Detailed Design Review contract date was updated with the approval of TCN CCP021. Stop Payments were invoked in October 2020 due to an inability to achieve the exit criteria associated with the Detailed Design Review milestone. The Commonwealth worked with L3Harris to achieve the exit criteria and the Stop Payment condition was lifted in late October 2020.					
4	Contract Change Proposal Number 078 (CCP078) to the LAND121 Phase 4 Acquisition Contract with Thales was signed in May 2021. LAND200-2 will pay Thales to produce the LAND200-2 BCS integration design solution within Hawkei vehicles. Installation of the BCS nodes within Hawkei vehicles will be the subject of a separate procurement.					
5	This scope item was originally planned to be delivered under the under the Elbit contract, however, this was not able to be progressed because of an inability to obtain original design information from the US OEM to allow for WINBMS development. Instead of a formal PDR/DDR, a tailored TCN Node has been installed in the M1A1/M88 in response to an immediate obsolescence and risk mitigation request from AHQ, to replace the current radios. This work will be performed as an internal CASG Engineering Change Proposal (ECP), supported by HCA. The full BCS node functionality will be realised in the M1A1/M88 by FMR. A tailored design review was conducted to confirm the functional baseline into the platform.					
6	This scope item will not be performed under the Elbit contract. Instead, alignment of the LAND200-2 and the Protected Mobility Integration and Capability Assurance (PMICA) Non-Recurring Engineering (NRE) design requirements and installation will be performed by Thales. HCA will be engaged as a subcontractor to Thales.					
7	The Commonwealth implemented a change to the hosting for the secure environment from the Defence Secret Network to the Mission Partner Environment, requiring revised work requirements Delay of Release 2 Detailed Design Review is linked to the delay in delivery of Release 1.1, as well as issues with external interdependencies. Concurrent work has continued in the development and design of software to minimise further delay.					
8	System Requirements Review was delayed due to the rejection by the Commonwealth of the System Specification when first submitted for approval and the need for revisions by the contractor.					
9	BMS R1 Detailed Design Review milestone event was delayed due to delayed completion of key design artefacts that were required to accurately describe the R1 capability.					

10	A BMS software Release 1.1 was required due to a change in requirements requested by the Commonwealth. This was confirmed at BMS CCP004. The Commonwealth noted a number of Action Items requiring remediation at the conclusion of the Detailed Design Review milestone. The Commonwealth endorsed progress to commence T&E activities in order for the program to progress through the SWRR 1.1 milestone.
11	The Commonwealth is the Prime Systems Integrator (PSI) responsible for the integration of the BMS and the TCN to realise the Battlefield Command System (BCS). This is not supported by a contract because this is an internal to Commonwealth responsibility. The achievement of this milestone is not dependent upon the achievement of platform Design Reviews.

3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
System Integration	TCN Acceptance Test & Evaluation	May 21	N/A	Feb 23	21	1
	BMS R1 Acceptance Test & Evaluation	Jun 19	N/A	Mar 20	9	7
	BMS R1.1 Acceptance Test & Evaluation	Aug 20	N/A	Jun 22	22	9
	BMS R2 Acceptance Test & Evaluation	Dec 20	N/A	Oct 23	46	6
	M1A1/M88 Platform Integration Acceptance Test & Evaluation	Apr 21	N/A	Mar 21	(1)	5
	PMV-L Acceptance Test & Evaluation	Jan 22	N/A	Oct 22	9	3
	PMV-M Acceptance Test & Evaluation	Feb 20	N/A	Feb 23	36	4
	BCS Acceptance Test & Evaluation	Oct 21	N/A	Mar 24	29	10
Acceptance	TCN System Acceptance	Jun 20	Aug 21	Oct 23	40	2
	BMS Acceptance R1	Jan 20	N/A	Mar 20	2	8
	BMS Acceptance R1.1	Sep 20	N/A	Apr 23	31	9
	BMS Acceptance R2	Mar 21	Aug 21	Jan 24	34	6
	M1A1 Tank	Feb 22	N/A	Aug 22	6	5
	M88	May 22	N/A	Aug 22	3	5
	PMV-L	May 22	N/A	Nov 23	18	3
	PMV-M	Apr 21	N/A	Nov 24	43	4
	BCS Acceptance	May 22	N/A	Nov 24	30	10

Notes	
1	TCN System Integration delay is directly driven from delays to progress through the Test Readiness Review (TRR), a condition influenced by L3 Harris's inability to meet the TRR entry criteria, and by the Commonwealth's inability to deliver some of the GFM. A CCP (CCP 037) was rejected by the Commonwealth in April 2022. L3Harris has been directed to re-submit a remediation plan. This is due to be received in July 2022. The Remediation plan will provide further detail of TCN AT&E and SA completion dates.
2	TCN System Acceptance has been affected by delays in the availability of some GFM and further delays in milestones. The TCN System Acceptance milestone was updated with CCP021. TCN System Acceptance has been further delayed because of contractor delays in the completion of test procedures required for entry into Acceptance Test and Evaluation. A CCP (CCP 037) was rejected by the Commonwealth in April 2022. L3Harris has been directed to re-submit a remediation plan. This is due to be received in July 2022. The Remediation plan will provide further detail of TCN AT&E and SA completion dates.
3	Contract Change Proposal Number 078 (CCP078) to the LAND121 Phase 4 Acquisition Contract with Thales was signed in May 2021. LAND200-2 will pay Thales to produce the LAND200-2 BCS integration design solution within Hawkei vehicles. Installation of the BCS nodes within Hawkei vehicles will be the subject of a separate procurement.
4	This scope item will not be performed under the Elbit contract. Instead, alignment of the LAND200-2 and the Protected Mobility Integration and Capability Assurance (PMICA) Non-Recurring Engineering (NRE) design requirements and installation will be performed by Thales. HCA will be engaged as a subcontractor to Thales.
5	This scope item will not be performed under the Elbit contract. Instead, a Tailored TCN Node has been installed in the M1A1/M88 in response to an immediate obsolescence and risk mitigation request from AHQ to replace the current radios. This work will be performed as an internal CASG ECP, supported by HCA. The full BCS node functionality will be realised in the M1A1/M88 by FMR.
6	The Commonwealth implemented a change to the hosting for the secure environment from the Defence Secret Network to the Mission Partner Environment, requiring revised work requirements. Delay of Release 2 Acceptance Test & Evaluation (AT&E) is linked to the delay in delivery of Release 1.1 achievement, as well as issues with external interdependencies. Concurrent work has continued in the development of software to minimise further delay.
7	The BMS AT&E delay flows from the delay to the Detailed Design Review.
8	The delay to the Software Release Review and associated acceptance for BMS Release 1 resulted from delays in achieving the Release 1 Software Design Review/Test Readiness Review (DD/TRR).
9	Issues were identified during Acceptance Test and Evaluation activities. Elbit has provided a Resolution Plan aimed at resolving the technical issues impeding the Commonwealth's ability to accept the Release 1.1 capability. The Commonwealth and Elbit conducted a confidence building demonstration to determine the issue resolution status of R1.1 in March 2022. The Commonwealth and Elbit were unable to agree that the issues of concern have been remediated. R1.1 was not achieved as at June 2022.
10	The Commonwealth is the Prime Systems Integrator (PSI) responsible for the integration of the BMS and the TCN to realise the Battlefield Command System (BCS). This is not supported by a contract because this is an internal to Commonwealth responsibility. The achievement of this milestone is not dependent upon the achievement of platform acceptance.

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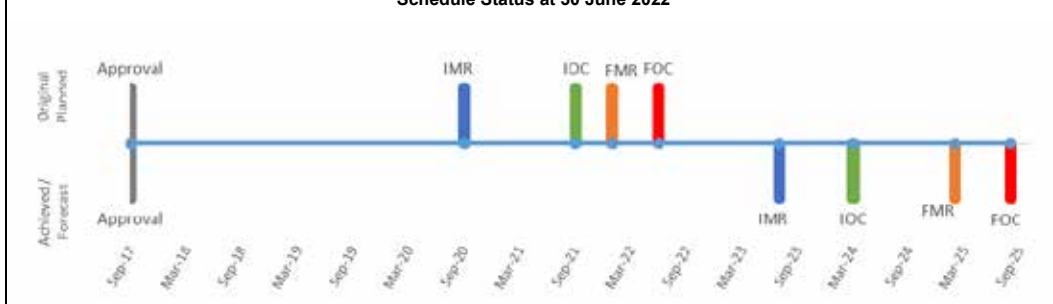
3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Sep 20	July 23	34	1,2
Initial Operational Capability (IOC)	Sep 21	Mar 24	30	1,2
Final Materiel Release (FMR)	Jan 22	Feb 25	37	1,2
Final Operational Capability (FOC)	Jun 22	Aug 25	38	1,2

Notes

1	IOC and FOC delays are being driven by time taken to establish new contracts for platform integration; availability of GFM; materiel and data from interdependent projects that are in separate, but parallel delays and contractor performance. A Standstill Deed between the Commonwealth, Elbit Systems Limited, and Elbit Systems of Australia, was in place during August and September 2021 but had no material effect on the achievement of Materiel Release or Capability Milestones.
2	The forecast achievement of these milestones is expected to change as a result of delays to design and acceptance milestones. The magnitude of this delay is being considered.

Schedule Status at 30 June 2022



Note

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

Section 4 – Materiel Capability/Scope Delivery Performance

4.1 Measures of Materiel Capability/Scope Delivery Performance

Traffic Light Diagram: Percentage Breakdown of Materiel Capability/Scope Delivery Performance

	Green: The project expects to meet Materiel Capability requirements as expressed in the Materiel Acquisition Agreement with the exception of the items referred to in the Red section below.
	Amber: This reflects the non-delivery of aspects of the Elbit contract, specifically acceptance issues associated with the Battle Management System. Following the implementation of the Elbit BMS R1.1 Resolution Plan, the Commonwealth and Elbit agreed a Demonstration of BMS Release 1.1 performance. The Commonwealth and Elbit were unable to agree whether or not the issues were resolved by the Demonstration. The Commonwealth continues to work with Elbit to resolve open contract issues.
	Red: Based on direction from the Army program sponsor, the project does not expect to deliver the WINBMS capability within the M1A1. Further, also based on direction from the Army program sponsor, the project does not expect to deliver the Hawkei GSV node: this is offset by the direction from the Army Program Sponsor to increase the delivered quantities of Hawkei C2V and MNV nodes. Based on direction from the Army program sponsor, the Project will now only deliver 19 PMV-M Gate-Way vehicles. The remaining 38 PMV-M Gate Way vehicles originally within the Project's scope will now be delivered by the LAND4111 Project. This approach is expected to be confirmed following Government consideration.

Note

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

4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	IMR comprises the delivery of: <ul style="list-style-type: none"> Foundation Training Classroom requirements Training Integration Syndicate Rooms BMS HQ hosted on MPE BGC3 Training Assemblage BMS Simulator MNV Nodes fitted to 16 x M1A1 Tanks MNV Nodes fitted to 2 x M88 Hercules 	Not yet achieved

	<ul style="list-style-type: none"> • C2V Nodes fitted to 11 x PMV-L Hawkei • MNV Nodes fitted to 42 PMV-L Hawkei • GSV Nodes fitted to 36 PMV-L Hawkei • GW Nodes fitted to 19 PMV-M Bushmaster • GSV Node fitted to 50 MHC Trucks <p>IMR is forecast to be achieved in July 2023.</p>	
Initial Operational Capability (IOC)	<ul style="list-style-type: none"> • IOC incorporates the components of FIC sufficient to constitute an operational capability. • Commander and staff in a Brigade Headquarters are able to use the BMS to support the planning and conduct of operations. • The data network includes sufficient material to support a BG sized force to plan and conduct operations using the BMS and weapons integrated BMS. • The TCN is established using Tranche 1 and Tranche 2 solutions to support a BG deployment. • The BMS is able to interface with JCATS and VBS systems to establish an initial simulation system. <p>Capability Manager sign-off of IOC.</p> <p>IOC is forecast to be achieved in March 2024.</p>	Not yet achieved
Final Materiel Release (FMR)	<p>FMR comprises the delivery of:</p> <ul style="list-style-type: none"> • Foundation Training Classroom requirements • Training Integration Syndicate Rooms • BMS HQ hosted on MPE • BGC3 Training Assemblage • BMS Simulator MNV Nodes fitted to 59 M1A1 Tanks • MNV Nodes fitted to 7 M88 Hercules • C2V nodes fitted to 33 PMV-L Hawkei • MNV Nodes fitted to 126 PMV-L Hawkei • GSV Nodes fitted to 108 PMV-L Hawkei • GW Nodes fitted to 57 PMV-M Bushmaster • GSV Node fitted to 150 MHC Trucks <p>FMR is forecast to be achieved in February 2025.</p>	Not yet achieved
Final Operational Capability (FOC)	<ul style="list-style-type: none"> • FOC incorporates the components of FIC sufficient to constitute full operational capability. • Each of Army's three Combat Brigades has one digitised BG and a small number of combat support vehicles. • Defence will be able to deploy a digitised BG and Brigade HQ. • Defence could also configure and group all three BG under the digitised BHQ, all at the same readiness notice. • Capability Manager sign-off of FOC. <p>FOC is forecast to be achieved in August 2025.</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 schedule risk that the design solution for integrating BCS nodes within PMV-L will be delayed because of coordination problems between AHQ, LAND200-2, LAND121 Phase 4 and Thales resulting in a delay to the achievement of IMR	Close coordination between all stakeholders will be maintained through the conduct of fortnightly Integrated Project Team (IPT) meetings and adherence to the Contract's schedule of Mandated System Reviews. This risk has been retired as it is no longer rated as high or very high because a contract with Thales for integrating BCS nodes within the PMV-L is now in place and Mandated System Reviews are scheduled for completion.
There is a risk that there will be a funding shortfall for the combined implementation of the LAND200-2 modification and the Protected Mobility Integration Assurance (PMICA) upgrades on the PMV-M vehicles.	The Project Sponsor in Army has been advised of the likely funding shortfall, with further consideration to be held following the availability of costs from PMICA and Thales.

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Emergent Risks (risk not previously identified but has emerged during 2021–22)	
Description	Remedial Action
There is a schedule risk associated with being unable to realise the intended Battlefield Command System Capability at IMR because of schedule delays from both the BMS Project and the TCN Project.	A CCP is required to reset the baseline for the TCN Project. The way forward for the BMS Project will be governed by decisions stemming from the Independent Technical Review and the Finance Review.

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 currently being trialled in the G-Wagon Command Post Mobile vehicles. At a cost of approximately \$3m, this will allow Army to gain experience with the TCN waveform and software as part of an interim Gateway capability, pending the delivery of the full capability on the PMV-M vehicles. The interim fit is being managed as a Survey and Quote task to the L3Harris contract. This issue has been retired as it is no longer rated as high or very high because proto-typing of the PMV-M vehicles under the PMICA program has commenced.
The progression of the M1A1 Tank and M88 platform integration and installation under the Elbit contract has been delayed.	Discussions from the outcomes of reviews undertaken are currently underway and will determine the best way forward. This issue has been retired as it is no longer rated as high or very high because tailored TCN nodes have been installed on the M1A1 and M88 platforms.
The Army Program Sponsor has requested architecture changes to the implementation of the node designs, requiring contract changes for some platform integration activities.	In order to understand the impact of these changes, progression of a Survey and Quote task to the L3 Harris contact is ongoing. AHQ endorsement of the resultant updated System Specification occurred in Q4 2021. This issue has been retired as it is no longer rated high or very high because updated nodal designs have been provided by L3 Harris.
Pending the finalisation of an agreed CCP to the BMS contract to remove from some platform elements, there is currently insufficient uncommitted funds to progress the procurement of PMV-M Gateway Vehicle Installation Kits (VKS) resulting in a delay to the modification of the vehicle.	Discussions from the outcomes of reviews undertaken are currently underway and will determine the best way forward. This issue has been retired as it is no longer rated as a high or very high because, had funding been required, Defence Finance Group provided approval to manage the issue via over-commitment, if necessary.
There is a schedule issue that the delivery of BMS Release 2 has been delayed resulting in a delay to the capability delivery and a delay to the completion of the BMS contract.	Discussions from the outcomes of reviews undertaken are currently underway and will determine the best way forward.
There is a BMS software schedule issue. The Commonwealth and Elbit remain unable to agree that the Release 1.1 delivered BMS Command and Control (BMS-C2) software has satisfied the release criteria associated with the Software Release Review 1.1.	Discussions from the outcomes of reviews undertaken are currently underway and will determine the best way forward.
There is a delay to TCN System Acceptance (SA) stemming from an inability to exit the Test Readiness Review (TRR).	The Commonwealth and L3Harris continue to work collaboratively to determine the best way forward. This issue has been retired as it is no longer rated as high or very high because a plan to achieve System Acceptance will be included within a Remediation Plan developed by L3 Harris.
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.	This risk has been realised and is now being managed as an issue. Coordinated briefings have been established with the LNIC, the LAND200-2 Project Office and the two major contractors. Future updates to the Australian Land Data Model will involve negotiation between the LAND200-2 Project Office and the LNIC regarding the required level of compliance and the schedule for implementation so that commercial considerations can be addressed with the contractors. Defence may need to seek additional contingency and inform Government of the new schedule to incorporate new requirements that have a significant capability realisation benefit to Army.
There is a schedule risk due to the length of time to achieve security accreditation of TCN software it may delay the achievement of TCN Systems Acceptance.	This was previously reported as a risk and is now being managed as an issue. Additional resourcing will be allocated to the security accreditation team within the Commonwealth to minimise the impact.
The BMS Simulation – Tactics, Training and Procedures (SIM TTP) Capability will be delayed resulting in a delay to the capability delivery and a delay to the completion of the BMS contract.	This risk has been realised and is now being managed as an issue. Discussions from the outcomes of the reviews undertaken will determine the best way forward.
There is a resource issue related to the availability of Commonwealth staff to conduct business as usual activities and witness AT&E activities concurrently.	Seek to address through CCP re-baselining activity and where necessary obtain additional Commonwealth contractor resources.

There is technical issue associated with TCN integration with the Mission Partner Environment (MPE) due to incomplete definition of the MPE.	Maintain pressure on AHQ to provide better definition of the MPE.
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Note
Major risks and issues in Section 5 are excluded from the scope of the Auditor-General's Independent Assurance Report.

Section 6 – Lessons Learned

6.1 Key Lessons Learned

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

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2022

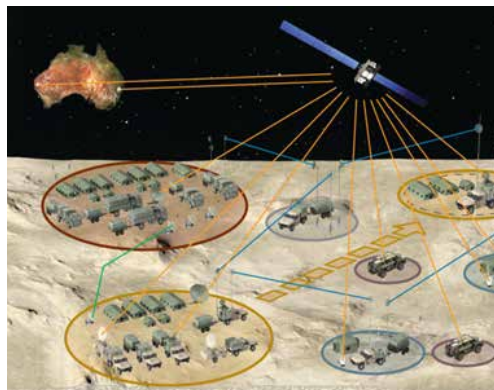
Unit	Name
Division	Joint Systems
Branch	Land Command, Control, Communications and Computer (LC4) Systems

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Project Data Summary Sheet¹⁵⁸

Project Number	JNT2072 Phase 2B ¹⁵⁹
Project Name	BATTLESPACE COMMUNICATIONS SYSTEMS
First Year Reported in the MPR	2017-18
Capability Type	Replacement
Capability Manager	Chief of Army
Government 1st Pass Approval	May 11
Government 2nd Pass Approval	Apr 15
Budget at 2nd Pass Approval	\$915.7m
Total Approved Budget (Current)	\$942.9m
2021-22 Budget	\$92.0m
Complexity	ACAT I



Section 1 – Project Summary

1.1 Project Description

JNT2072 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. JNT2072 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. The I-BTN contractor is Boeing Defence Australia.

JNT2072 Phase 2B is required to provide end to end connectivity from the Mission Partner Environment (MPE), through and within the I-BTN, and to the Defence Terrestrial Communications Network (provided by JNT2047 Phase 3).

JNT2072 Phase 2B has provided supplementary funding to Joint Command, Control, Communications, Computers and Intelligence Systems Program Office (JC4ISPO) for the procurement of 259 Deployable Local Area Network (DLAN) systems for integration with I-BTN.

JNT2072 Phase 2B is scoped to deliver additional Enhanced Deployable Local Area Network (EDLAN) hardware.

JNT2072 Phase 2B will also acquire a Terrestrial Range Extension System (TRES) to extend the range of tactical radios procured under earlier phases of JNT2072.

1.2 Current Status

Cost Performance

In-year

The Project has spent \$70.0m this financial year against a budget of \$92.0m. The variance of \$22.0m is mainly due to costs related to the delay caused by COVID-19 pandemic to the project's schedule and the availability of Army and Air force units to receive and train on the equipment. The flooding in South-East Queensland in early 2022 also caused further delays. The project also experienced some delays caused by safety issues on the vehicle's battery, procurement of spares by sustainment, and Army's re-prioritisation.

Project Financial Assurance Statement

As at 30 June 2022, JNT2072 Phase 2B has reviewed the approved scope and budget for those elements required to be delivered by the Project. Having reviewed the current financial and contractual obligations of the Project, current known risks and estimated future expenditure, Defence considers, as at the reporting date, that there is sufficient budget including contingency remaining for the Project to complete against the agreed scope.

Contingency Statement

The project has applied contingency in the 2021-22 financial year for the treatment of COVID-19 related delays on the completion of project's tasks and milestones, and to add requisite spares to I-BTN Release 3.

Schedule Performance

In March 2020, Boeing started reporting COVID-19 impacts to the project due to social distancing measures, travel restrictions and supply chain issues. On 9 February 2021, Boeing indicated an overall four month delay to schedule as a result of COVID-19.

158 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.

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

A schedule only CCP (039) was submitted on 25 February 2021 proposing a four month extension to COVID-19 impacted Release 3 milestones, a five month extension for Release 2 System Maintenance Review, and movement of Release 2 Medium SATCOM Terminal milestones in line with COVID-19 impacts. On 15 June 2021, the CCP 039 Deed was signed resulting in an overall extension of the contract schedule of four months. This impacted FOC. Army advised Government of a revised FOC date of September 2023. Since February 2022 Boeing Defence Australia continues to be impacted by COVID-19 and also by Queensland flooding events. Boeing Defence Australia's delivery schedule for Release 3 vehicle mounted material is delayed by ten months, however this is not expected to impact FOC. Acceptance of vehicle mounted nodes is now scheduled for completion by December 2022. This excludes I-BTN Release 3 System Material Release (HQOTM) which is subject to Safety Report On Defective or Unsatisfactory Materiel (RODUM). This stoppage is described under Materiel Capability Delivery Performance.

The Commonwealth has entered into contract with Boeing Defence Australia for an activity to risk reduce the aerial component of TRES. This contract (S&Q21) commenced June 2022 for completion September 2022. This activity will inform the duration of a subsequent equipment development and procurement process.

Materiel Capability/ Scope Delivery Performance

IMR, as defined in the contract, was achieved by Boeing in December 2017, allowing the Capability Manager to declare IMR in February 2018. Achievement of Initial Operating Capability was declared in March 2018.

Boeing is on schedule to deliver most elements of future releases of the contracted capability. The exception is the Release 3 Systems Maintenance Release (SMR) known as Headquarters On-the-move (HQ OTM). In May 2022, Defence issued a safety direction (RODUM) to stop work on the host Bushmaster Protected Mobility Vehicle – Medium (PMV-M). In response Boeing advised that delivery would be affected; however it is unable to quantify the delay until the issue is remediated by third party vendors. JNT2072 Phase 2B anticipates that once resolved the delay to material release and user training will result in a delay to FMR but not FOC.

JNT2072 Phase 2B has commenced tethered aerial TRES risk reduction activities through Boeing. The project will develop procurement recommendations for Army endorsement on completion of the risk reduction activity.

Note

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

1.3 Project Context

Background

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

JNT2072 Phase 2B will 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. JNT2072 Phase 2B will also deliver a TRES, with the project currently preparing the procurement 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, tropospheric scatter, External Network Access Point and an additional Currawong Network Edge Strategic to Tactical (CNEST) tactical interface site.

Release 3 included Vehicle Mounted nodes and 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).

TRES will provide ground based and tethered aerial retransmission of terrestrial tactical communications systems. TRES is not a component of the I-BTN and achievement of I-BTN FOC is not dependant on TRES.

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 rolling one year extensions to a maximum of 12 years. The operative date of the Support Contract was 29 January 2018. As a consequence of 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 \$6.0 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.

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.

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Major Risks and Issues

The Major Risks for the project are:

- There is a chance that COVID-19 may impact project milestones and the project schedule.

The Emergent Risks for the project are:

- There is a chance that FOC and project closure will be impacted due to the lack of APS5 level practitioners.
- There is a chance that the TRES capability may delay project FMR.

The Major Issues for the project are:

- R2 IIS Equipment Delivery Schedule will not be met due to COVID-19 impacts on production and delivery of equipment.
- COVID-19 has impacted on completion of project tasks and milestones within current schedule time frames, the risk to the September 2023 FOC date is being monitored.
- Project Engineering Team may be unable to exercise the expected level of engineering rigour for Verification and Validation (V&V) activities due to a lack of adequate engineering resources.
- Contract milestones for R3 SMR (HQOTM) will not be met due to safety RODUM delaying Boeing Defence Australia's production and subsequent delay to training.

Other Current Related Projects/Phases

JNT2072 Phase 1, BCS(L): The initial phase of the JNT2072 program, this project has delivered communications bearers to the BMS, and enhancing communications for Australian Defence Force Land elements through the development of an holistic battlespace communications architecture for the Land environment.

JNT2072 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.

JNT2072 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 LAND75 Phase 4 as part of a second tranche of LAND200 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.

JNT 2072 Phase 1 and JNT 2072 Phase 2A delivered the initial Tactical Communications Network (TCN). The scope of JNT2072 Phase 2B includes interface of the I-BTN to the TCN.

Protected Mobility SPO: Coordination of the in service management of Bushmaster PMV fleet (procured by LAND116) including configuration updates.

The I-BTN is required to interface with multiple ADF platforms, including combat and non-combat vehicles, deployable satellite communication systems, and strategic communication systems. Any delays or issues within these platforms and systems can affect the testing, design, delivery or 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
Project Budget			
Oct 11	Original Approved	3.9	1
May 15	Government Second Pass Approval	911.8	2
	Total at Second Pass Approval	915.7	
Jun 22	Exchange Variation	27.1	
Jun 22	Total Budget	942.9	
Project Expenditure			
Prior to Jul 21	Contract Expenditure – Boeing Defence Australia	(597.1)	3
	Contract Expenditure – Kellogg Brown and Root	(19.0)	
	Other Contract Payments/Internal Expenses	(145.8)	
		(761.9)	
FY to Jun 22	Contract Expenditure – Boeing Defence Australia	(65.2)	4
	Contract Expenditure – Kellogg Brown and Root	(4.4)	
	Other Contract Payments/Internal Expenses	(0.4)	
		(70.0)	
Jun 22	Total Expenditure	(831.9)	
Jun 22	Remaining Budget	111.0	

Notes	
1	The project's original budget amount prior to Second Pass Approval.
2	The total budget amount includes supplementary funding to JC4ISPO for the procurement of additional EDLAN systems \$126.0m.
3	Other expenditure includes: EDLAN and EDLAN ICT Hardware and Software (\$117.5m), Other ICT Hardware & Other Equipment (\$1.5m), Technical Services (\$3.9m), Travel (\$3.8m), Legal Fees (\$1.1m), Headquarters on the Move (\$18.0m).
4	Other Contract Payments/Internal Expenses includes: Travel, Overheads, Admin, Freight and Office Expenses (\$0.1m), ICT Hardware and Software (\$0.2m) and Technical Services (\$0.2m)

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
103.7	92.3	92.0	PBS – PAES: The variation is primarily due to delays caused by the impacts of COVID-19. PAES – Final Plan: Variation relates to small foreign exchange movements.
Variance \$m	(11.4)	(0.3)	Total Variance (\$m): (11.7)
Variance %	(11.0)	(0.3)	Total Variance (%): (11.3)

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(22.0)	Australian Industry	The Project has spent \$70.0m this financial year against a budget of \$92.0m. The variance of \$22.0m is mainly due to costs related to the delay caused by COVID-19 pandemic to the project's schedule and the availability of Army and Air force units to receive and train on the equipment. The flooding in South-East Queensland in early 2022 also caused further delays. The project also experienced some delays caused by safety issues on the vehicle's battery, procurement of spares by sustainment, and Army's re-prioritisation.
			Foreign Industry	
			Early Processes	
			Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
92.0	70.0	(22.0)	Total Variance	
		(23.9)	% Variance	

2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 22 \$m			
Kellogg Brown and Root (Integrated Support Contract)	Jul 15	9.6	25.2	Fixed	Modified Standard Defence Contract (Services)	1
Boeing Defence Australia (I-BTN)	Sep 15	487.2	724.7	Fixed	Modified Standard Defence Contract (Strategic Materiel)	2

Notes

1	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. Further price increase is due to the extension of this contract by 12 months as part of CCP10.
2	Increase in Contract Price is due to changes required for the Headquarters on the Move vehicle, Support and Test Equipment and Spares, EDLAN delays and the procurement of I-BTN Release 3 spares, support and test equipment.

Contractor	Quantities as at		Scope	Notes
	Signature	30 Jun 22		
Kellogg Brown and Root (Integrated Support Contract)	N/A	N/A	Range of Integrated Support Contractor (ISC) Services in support of the JNT2072 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	1

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			21 Unit Nodes Transit Case 23 Relay Nodes Transit Case 3 Tactical Interface Stations 18 Headquarters on the Move Nodes	
Major equipment accepted and quantities to 30 Jun 22				
18 Formation Nodes Transit Case 21 Unit Nodes Transit Case 23 Relay Nodes Transit Case 2 Tactical Interface Station 26 Broadband Terrestrial Beyond Line Of Sight (BTBLOS) Transit Case 9 Medium Mounted Satellite Terminal (MMST).				
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.			

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 System – Release 3	May 20	N/A	Dec 19	(5)	4
	Tethered aerial TRES	TBD	N/A	TBD	-	6
Notes						
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. Detailed Design Review for R3 was achieved earlier than planned as Boeing Defence Australia's 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.					
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.					
6	Dates to be established at completion of risk reduction activity					

3.2 Contractor Test and Evaluation Progress

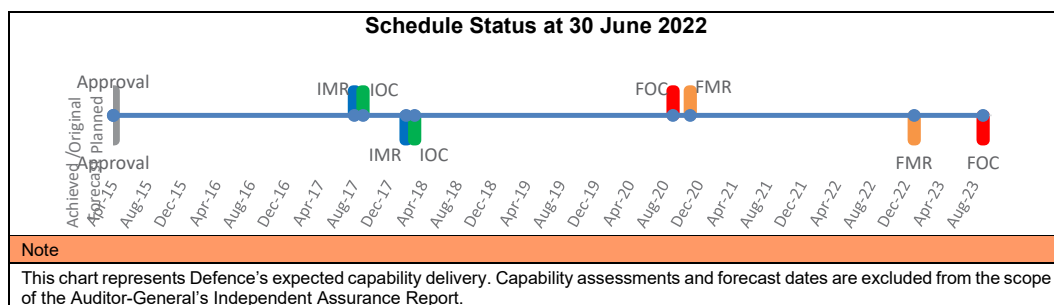
Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
System Integration	Release 1 Mission System Integration & Interoperability Verification	Jul 17	Dec 17	Dec 17	5	1
	Release 2 Mission System Integration & Interoperability Verification	Apr 19	May 20	Mar 20	11	1
	Release 3 Mission System Integration & Interoperability Verification	Mar 21	N/A	Nov 21	8	2,3
	TRES	TBD	N/A	TBD	-	5
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	Jan 22	Dec 21	7	2,3
	System Acceptance – R3 SMR (HQOTM)	Jan 22	May 22	Sep 22	8	4
	Final Acceptance (FA) - Acquisition Contract	Feb 21	Feb 23	Dec 22	22	2,3
	TRES	TBD	N/A	TBD	-	5
Notes						
1	Release 2 expands the capability of Release 1, and has been impacted by delays affecting interfacing projects					
2	Release 3 was introduced as part of CCP015 that replaced the need for EDLAN integration with an alternate LAN. This reduced reliance on delayed interfacing projects.					
3	The movement of schedule due to CCP039 (COVID-19 Delay) has resulted in a change to these dates. They will be updated in the next endorsed Materiel Acquisition Agreement					
4	Delay due to safety Report On Defective or Unsatisfactory Materiel (RODUM).					
5	Dates to be established at completion of the TRES risk reduction activity.					

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
I-BTN				
Initial Materiel Release (IMR) 1A	Aug 17	Feb 18	6	1
I-BTN Initial Operational Capability (IOC)	Sep 17	Mar 18	6	1
(Release 1) Materiel Release 1	Oct 17	May 18	7	2
(Release 1) Materiel Release 2	May 18	Dec 18	7	2
(Release 1) Materiel Release 3	Oct 18	Apr 19	6	2
(Release 2) Materiel Release 5	Dec 19	May 21	18	1,2
(Release 2) Materiel Release 6	Oct 20	Apr 22	18	1,2,3
(Release 3) Materiel Release 7	Nov 21	Dec 22	13	1,2,3
(Release 3) Materiel Release 8	Mar 22	Dec 22	9	1,2,3
I-BTN Final Materiel Release (FMR)	Nov 20	Jan 23	26	2,3
DLAN Hardware Release	Jul 18	Jun 19	12	4
TRES Materiel Release	TBD	TBD	-	6
I-BTN Final Operational Capability (FOC)	Sep 20	Sep 23	36	5
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. Materiel Releases 5 and 6 have been delivered. Materiel Releases 7 and 8 are subject to COVID-19 related delay; delivery is now planned to commence December 2022.			
2	Materiel Release (Release 1, Release 2, Release 3) milestones will be achieved when the units receiving the capability sign the unit acceptance certificate. This variance is dependent on unit availability to conduct the unit test activity.			
3	The movement of schedule due to COVID-19 delay has resulted in a change to these dates. They will be updated in the next endorsed Materiel Acquisition Agreement			
4	Integration between EDLAN and the I-BTN is no longer required. Army has endorsed the declaration of the DLAN Hardware Release milestone, as no further work will be undertaken due to the I-BTN system no longer being required to integrate with the EDLAN system.			
5	The FOC date has changed due to extension of project schedule as a result COVID-19 Delay. The project has conducted workshops with the Capability Manager to assist in identifying a new FOC date. The Capability Manager has advised government of the revised FOC date of September 2023.			
6	Dates will be established on review of risk reduction activity outcomes.			

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Section 4 – Materiel Capability/Scope Delivery Performance

4.1 Measures of Materiel Capability/Scope Delivery Performance

Traffic Light Diagram: Percentage Breakdown of Materiel Capability/Scope Delivery Performance	
	Green: The Project is currently meeting the majority of capability requirements as expressed in the Materiel Acquisition Agreement and supporting suite of Capability Definition Documentation.
	Amber: The Project is managing schedule risks associated with the Terrestrial Range Extension System (TRES) scope of work as expressed in the Materiel Acquisition Agreement and supporting suite of Capability Definition Documentation.
	Red: N/A
Note This Traffic Light Diagram represents Defence's expected capability delivery. Capability assessments and forecast dates are excluded from the scope of the Auditor-General's Independent Assurance Report.	

4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR) 1A	<ul style="list-style-type: none"> Verification & validation, testing and certification completed Initial Learning Management Packages Approved Initial Support Contract is in place Commonwealth acceptance of supplies for those units identified for Materiel Release 1 Completion of AT for initial release IMR 1A was achieved in February 2018	Achieved
Initial Operational Capability (IOC)	<ul style="list-style-type: none"> 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. For Air Force - Delivery of four man portable formation nodes, two man portable unit nodes and one HCLOS with trained crew to enable planning, configuration and operation of a Formation level network. IOC was achieved in March 2018	Achieved
Final Materiel Release (FMR)	<ul style="list-style-type: none"> Verification & validation, testing and Certification completed All elements of the Mission System are delivered to units All introduction into service training is completed and approved Learning Management Plans for sustainment training delivered to Army 	Not yet achieved

	<ul style="list-style-type: none"> • Mature Support Contract in place including delivery of Data Transfer Equipment (DTE); • Delivery of Hand Held Satellite Terminal (HHST) <p>FMR is currently forecast for achievement in January 2023.</p>	
Final Operational Capability (FOC)	<p>The provision, support and training of the I-BTN 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"> • 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. • TRES <p>FOC is currently forecast for September 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 COVID-19 may still impact project milestones within current schedule time frames.	<ul style="list-style-type: none"> • Travel permitted as required to achieve Engineering V&V activities in accordance with State and Federal Government pandemic control guidelines • Assessment of resources required to meet future milestones • Additional engineering support sought through Contractors or other Projects • JNT2072 Phase 2B Project Office (CASG) is working with Boeing Defence Australia to finalise acceptance activities (V&V) to expedite delivery into service.
Emergent Risks (risk not previously identified but has emerged during 2021-22)	
Description	Remedial Action
There is a chance that FOC and project closure will be impacted due to the lack of Integrated Logistic Support APS5 level practitioners since October 2021.	<ul style="list-style-type: none"> • Function performed on interim basis by contractor until suitable staff can be employed
There is a chance that the TRES capability may delay project Final Materiel Release (FMR)	<ul style="list-style-type: none"> • Boeing has proposed a tethered drone solution to meet Army's TRES requirements The Project has entered into a Risk Reduction activity via Survey and Quotation (S&Q) 21 into order to understanding the technical and schedule risks. Upon completion of the risk reduction activity, the Project will request a Contract Change Proposal (CCP) for the procurement of TRES.

5.2 Major Project Issues

Description	Remedial Action
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.	<ul style="list-style-type: none"> • 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. <p>This issue has been retired as there was no longer an impact to the project delivery schedule.</p>
COVID-19 has impacted on completion of project tasks and milestones within current schedule time frames, the risk to the September 2023 FOC date is being monitored. There is a chance restrictions related to COVID-19 will impact on completion of project tasks and milestones within current schedule time frames, this resulting in an inability to meet the current FOC date.	<ul style="list-style-type: none"> • With the signature of CCP039 (COVID-19 Delay) the schedule has been extended by 4 months and Final Materiel Release (FMR) continues to be scheduled for January 2023, however, this date is unlikely to be achieved for all material. • The project has conducted workshops with the Capability Manager to assist in monitoring dynamic scheduling to enable individual training and OT&E activities. • The Capability Manager has advised the project that it has, via the Defence Bi-Annual Update, submitted a revised FOC date of September 2023 to Government.

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	<ul style="list-style-type: none"> Remediation through realignment of project schedule, dependencies and close engagement with interfacing projects. Contingency funding has been applied to address this issue.
Project Engineering Team may be unable to exercise the expected level of engineering rigour for Verification and Validation (V&V) activities due to a lack of adequate engineering resources.	<ul style="list-style-type: none"> Deviations and waivers for low risk V&V activities being granted where appropriate Travel where permitted to achieve Engineering V&V activities in accordance with Defence, State and Federal guidelines. Engagement with Directorate of Officer Career Management to encourage provision of appropriately qualified uniformed engineering personnel to replace those being posted out at the end of 2021. Analysis of engineering resource requirements for the remainder of the project (occurring July 2021) and if required engagement of additional resources via the ISC or other Branch projects.
Contract milestones for R3 SMR (HQOTM) will not be met due to safety RODUM delaying Boeing Defence Australia's production and subsequent delay to training.	<ul style="list-style-type: none"> Protected Mobility System Program Office (CASG) and Thales (HQOTM GFM supplier) to identify interim battery solution to enable Boeing Defence Australia's HQOTM production to resume.
Note	
Major risks and issues in Section 5 are excluded from the scope of the Auditor-General's Independent Assurance Report.	

Section 6 – Lessons Learned

6.1 Key Lessons Learned

Description	Categories of Systemic Lessons
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 7 – Project Structure

7.1 Project Structure as at 30 June 2022

Position	Name
Division	Joint Systems Division
Branch	Land C4 Systems

Project Data Summary Sheet¹⁶⁰

Project Number	SEA1439 Phase 5B2
Project Name	COLLINS CLASS COMMUNICATIONS AND ELECTRONIC WARFARE IMPROVEMENT PROGRAM
First Year Reported in the MPR	2018-19
Capability Type	Upgrade
Capability Manager	Chief of Navy
Government 1st Pass Approval	Oct 06
Government 2nd Pass Approval	Stage 1 - June 15 Stage 2 - March 17
Budget at 2nd Pass Approval	\$599.1m
Total Approved Budget (Current)	\$610.1m
2021-22 Budget	\$33.8m
Complexity	ACAT II



Section 1 – Project Summary

1.1 Project Description

SEA1439 Phase 5B2 is a multiple Second Pass that is delivering a modernised submarine communications system and upgraded 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 is providing the submarines with improved performance, reliability and interoperability with other components of the Australian Defence Force and allied nations. MSMCS Stage 2 is delivering urgent communications systems 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 is being installed independently and in parallel with Stage 1 and 2.

1.2 Current Status

Cost Performance

In-year

As at 30 June 2022, financial year 2021-22 expenditure is \$23.6m against the forecast budget of \$33.8m. The variation is due to Milestone delays due to COVID-19 travel restrictions and lower than forecast FMS case and ASC payments.

Project Financial Assurance Statement

As at 30 June 2022, Project SEA1439 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

SEA1439 Phase 5B2 achieved Stage 1 Initial Materiel Release (IMR) on one platform on 26 Nov 19. Due to external factors including COVID-19 consequences, certain SEA1439 capability release milestones (IMR Stage 2 & MWES) have been delayed. Project SEA1439 Phase 5B2 is aware of risks and these are being actively managed.

SEA1439 Phase 5B2 Microwave Electronic Support (MWES) system – significant schedule delay has occurred from Government 2nd 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 2nd pass approval for MSMCS Stage 2.

Delays due to restricted movements of contractor staff across state borders because of COVID-19 have delayed IMR of MSMCS Stage 2 and MWES. MSMCS Stage 2 IMR achieved 20 Oct 21. MWES IMR was further delayed due to delay in completing installation and set to work because of COVID-19 travel restrictions impacting contractor movement; other priority work conducted on the platform; delay in completing equipment installation for the support facility in the Submarine Training and Systems Centre and follow on delay in obtaining objective quality evidence. MWES IMR is now expected end Oct 22. Initial Operational Capability (IOC) for MSMCS Stage 1 & 2 and MWES delayed because of Initial Materiel Releases delay. IOC is expected Dec 2022.

¹⁶⁰ Notice to reader

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

Collins Comms and EW	<p>Materiel Capability/Scope Delivery Performance</p> <p>The project has completed implementation of:</p> <ul style="list-style-type: none"> • Stage 1 on five platforms which are now in service. • Stage 1 and 2 training system at the Integrated Test and Training Site (ITTS) and are in use for training. • Stage 2 on two platforms, which are now in service. • MWES on three platforms which are now in service. • MWES training system at the Submarine Training & Systems Centre (STSC) • Stage 1, 2 and MWES are currently being installed on one platform.
	<p>Note</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>Background</p> <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 SEA1439 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"> 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). 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: <ul style="list-style-type: none"> a. wideband Satellite Communications system; b. classified Local Area Networks to distribute information outside the Communication Centre, referred to as the Submarine Local Area Network Environment; c. network infrastructure to allow multiple classified Local Area Networks (LANs) to access the same IP-enabled Radio Frequency bearer system; and 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. <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>
	<p>Uniqueness</p> <p>SEA1439 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. For implementation of Stage 2, the majority of supplies being Government Furnished Materiel. 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>
	<p>Major Risks and Issues</p> <p>The project is currently managing a number of risks and issues including:</p> <p>Chance of delay to capability set to work and testing because of international travel restrictions/limited international flights. This risk has been realised. Set to work and testing were delayed resulting in delay to materiel release.</p> <p>Delay to introduce capability due to emergent work impacting timely delivery of Government Furnished Materiel.</p>
	<p>Other Current Related Projects/Phases</p> <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 SEA1439 Phase 5B2 project and has been implemented on two platforms and a shore system.</p> <p>SEA1442 Phase 6 provides Wideband Satellite Communications Ground and Space segment, as well as planning and land based infrastructure required to operate the system. The submarine fitted segment of this capability is provided by SEA1439 Phase 5B2 Stage 2.</p> <p>SEA1439 Phase 5B2 is also related but not dependent on other projects within the SEA1439 program, a full list of these can be found in the SEA1439 Phase 3 - Collins Reliability & Sustainability project.</p> <p>SEA2273 (Fleet Information Environment Modernisation) is responsible to modernise the extant fleet information environment.</p>
	<p>Note</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
Project Budget			
Oct 06	Original Approved (First Pass Approval)	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
	Total at Second Pass Approval	599.1	
Jan 20	Real Variation – Budgetary Adjustment	2.5	9
Jul 10	Price Indexation	0.4	5
Jun 22	Exchange Variation	8.1	
	Total Budget	610.1	
Project Expenditure			
Prior to Jun 21	Contract Expenditure – Raytheon Australia	(172.1)	6
	Contract Expenditure – Foreign Military Sales (AT-P-LFQ)	(76.6)	
	Contract Expenditure – ASC Pty Ltd	(53.7)	
	Contract Expenditure – Jenkins Engineering Defence (JEDS)	(39.4)	
	Other Contract Payments / Internal Expenses	(17.2)	
		(359.1)	
FY to Jun 22	Contract Expenditure – Raytheon Australia	(5.4)	
	Contract Expenditure – Foreign Military Sales (AT-P-LFQ)	(2.2)	7
	Contract Expenditure – ASC Pty Ltd	(7.8)	
	Contract Expenditure – Jenkins Engineering Defence (JEDS)	(6.2)	
	Other Contract Payments / Internal Expenses	(1.9)	8
		(23.6)	
Jun 22	Total Expenditure	(382.6)	
Jun 22	Remaining Budget	227.5	
Notes			
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.		
9	In January 2020, a budget adjustment was applied (\$2.5m) as a correction to Project financial reporting. The project's total approved budget has remained the same as approved by Government.		

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
37.5	33.9	33.8	PBS-PAES: Due to changes to FMS case (AT-P-LFQ) delivery schedule. PAES – Final Plan variation is primarily due to minor contractual commencement delays.
Variance \$m	(3.6)	(0.1)	Total Variance (\$m): (3.7)
Variance %	(9.5%)	(0.3%)	Total Variance (%): (9.8)

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(7.5)	Australian Industry	The variation is due to Milestone delays due to COVID-19 travel restrictions and lower than forecast FMS case and ASC payments
		(2.8)	Foreign Industry	
			Early Processes	

			Defence Processes
			Foreign Government Negotiations/Payments
			Cost Saving
			Effort in Support of Operations
			Additional Government Approvals
33.8	23.6	(10.2)	Total Variance
		(30.2%)	% Variance

2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes		
		Signature \$m	30 Jun 22 \$m					
ASC Pty Ltd	July 12	N/A	88.5	Variable (Cost Reimbursement)	Standard Defence Contract	1,6		
Raytheon Australia	Feb 15	32.9	191.1	Fixed	Standard Defence Contract	2,3,6		
Jenkin Engineering Defence (JEDS)	Jul 16	10.4	48.5	Fixed	Standard Defence Contract	4,5,6,7		
US Government - Foreign Military Sales (AT-P-LFQ)	Jun 17	98.0	105.5	Reimbursement	FMS	6		
Notes								
1	ASC Pty Ltd engagement related to SEA1439 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 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 2022 is based on actual expenditure to 30 June 2022 and remaining commitment at current exchange rates.							
7	A Contract Change Proposal (CCP003) was approved to re-baseline milestones affected because of COVID-19 consequences. There is no change to the contract price.							
Contractor	Contracted Quantities as at		Scope			Notes		
	Signature	30 Jun 22						
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 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 22								
Stage 1 systems have been implemented on five platforms which are now in operational service. Stage 1 & 2 training system have been implemented at the ITTS and are in use for training. Stage 2 has been implemented on two platforms and are now in service. MWES has been implemented on three platforms and are now in service. MWES training system has been implemented at the STSC.								
Notes								
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	Stage 1	Jul 15	N/A	Jul 15	0	
	MWES	Nov 16	Sep 18	Oct 18	23	1
	Stage 2	Sep 17	Oct 17	Oct 17	1	2
Preliminary Design	Stage 1	Nov 15	N/A	Nov 15	0	
	MWES	Jan 17	Jan 19	Feb 19	25	1
	Stage 2	Jan 18	Feb 18	Jul 18	6	2
Detailed Design	Stage 1	Mar 16	Apr 16	Apr 16	1	2
	MWES	Apr 17	Mar 19	Sep 19	29	1
	Stage 2	May 18	Jun 18	May 18	0	
Notes						
1	MWES Function and Performance Specification had taken longer than expected to finalise. Detailed Design Review completed 8 May 2019. Detailed Design Review acceptance signed 19 Sept 2019.					
2	Variance is due to delays in processing and acceptance of documentation delivered by the contractor.					

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3.2 Contractor Test and Evaluation Progress

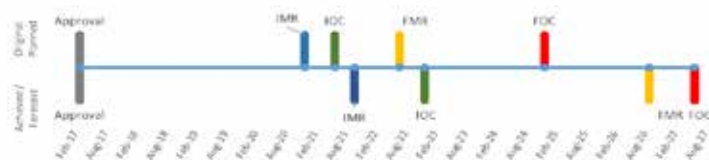
Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
System Integration	MSMCS Stage 1	May 17	Jun 17	Jul 17	2	1,4
	MWES	May 18	Nov 19	Mar 20	22	2
	MSMCS Stage 2	Jun 19	Jul 19	Jul 19	1	1,6,8
Acceptance	MSMCS Stage 1	Jun 24	Apr 18	Jan 18	(77)	7
	MWES	Jul 19	N/A	Aug 21	25	2,5
	MSMCS Stage 2	Jun 20	N/A	Jun 20	0	3,6,8
Notes						
1 MSMCS Stage 1 & Stage 2 System Integration is based on completion of CAT 3 Testing by the Prime System Integrator (PSI) in accordance with completion milestones within the PSI contract and the Test and Evaluation Master Plan (TEMP).						
2 MWES System Integration is based on First of Type (FOT) Set-to-Work (STW). System acceptance is based on completion of successful FOT Harbour Acceptance Trial completion. Original system integration date based on planned FOT installation that was subsequently transferred to a different platform in a later maintenance period.						
3 MSMCS Stage 1 & Stage 2 Acceptance is based on the Commonwealth's acceptance of the completion of CAT 4 testing in accordance with completion milestones within the PSI contract and the Test and Evaluation Master Plan (TEMP).						
4 Variance is due to extended duration for processing and acceptance of documentation delivered by the contractor.						
5 MWES implementation delayed due to immature procurement strategy and Function and Performance Specification (FPS). This has now been resolved with implementation completed in FOT platform. Commonwealth's acceptance is at completion of CAT 4 testing. Completion of CAT4 testing and Harbour Acceptance Trial on First of Type platform delayed due to COVID-19 related travel and working condition restrictions. Additional delay to CAT 4 testing due to COVID-19 travel restrictions between states and unavailability of platform resulting in deferral of CAT 4 testing.						
6 Implementation schedule understanding has matured since the 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 transition the WBS to the Submarine sustainment organisation. SOVT of WBS system is not a precondition to Stage 2 acceptance.						

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR) (Stage 1)	Jul 18	Nov 19	16	1,2
Initial Materiel Release (IMR) - (MWES)	Feb 18	Oct 22	56	1,3,6,8
Initial Materiel Release (IMR) - (Stage 2)	Dec 20	Oct 21	10	1,4,5,8
Initial Operational Capability (IOC) (Stage 1, 2 & MWES)	Jun 21	Dec 22	18	1,4,7
Final Materiel Release (FMR) - (Stage 1)	Jul 22	Oct 22	3	1,4, 8
Final Materiel Release (FMR) - (MWES)	Jun 19	Sep 26	87	1,3,8,9
Final Materiel Release (FMR) (Stage 2)	Jul 22	Sep 26	50	1,4,8
Final Operational Capability (FOC) (Stage 1, 2 & MWES)	Dec 24	Jun 27	30	1,4

Notes				
1 Original Planned dates for Stage 1 and Microwave Electronic Support (MWES) are in accordance with Revision 2 of the MAA. Original planned dates for Stage 2 are in accordance with Revision 4 of the MAA.				
2 Stage 1 IMR claim agreed 26 Nov 19. 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 completed in FOT platform, but has had consequential impact to the MWES implementation plan, IMR and FMR.				
4 Original IOC, FMR and FOC was for MSMCS Stage 1 and MWES. MAA Version 4.0 updated IOC to also include MSMCS Stage 2.				
5 IMR Stage 2 variance is due to delay of sea acceptance trial schedule as a result of COVID-19 related travel restrictions and delay in obtaining objective quality evidence to support trials assessment.				
6 IMR MWES variance due to installation and set to work delay resulting from COVID-19 travel restrictions, installation schedule conflict resulting in contractor resources being allocated to one platform and delay in completing of Support System equipment in the Submarine Training and Systems Centre.				
7 IOC date amended to reflect delay in achieving MSMCS Stage 2 (see Note 5) and MWES IMR (see note 6).				
8 MAA Version 5.0 updated IMR (MWES) and IMR Stage 1 and 2.				
9 FMR (MWES) is now aligned with FMR Stage 2.				

Schedule Status at 30 June 2022



Note

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

Section 4 – Materiel Capability/Scope Delivery Performance

4.1 Measures of Materiel Capability/Scope Delivery Performance

Traffic Light Diagram: Percentage Breakdown of Materiel Capability/Scope Delivery Performance

	Green: The project is currently achieving the Materiel Capability Requirements as expressed in the Materiel Acquisition Agreement.
	Amber:
	Red:
Note This Traffic Light Diagram represents Defence's expected capability delivery. Capability assessments and forecast dates are excluded from the scope of the Auditor-General's Independent Assurance Report.	

4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	Modification of one platform and the Integrated Test and Training Site with Stage 1 including: <ul style="list-style-type: none"> Verification & validation and certification completed in accordance with approved plans; Training system delivered along with initial crew and trainer training; and Spares and support arrangements in place. IMR report endorsed and released for approval by the regulatory authority. 	IMR achieved 26 Nov 19
Initial Operational Capability (IOC)	Operationally employ MSMCS Stage 1 and Stage 2 and MWES on one platform and associated Fundamental Inputs to Capability such as crew training and Integrated Logistics Support. IOC for Stage 1 and Stage 2 expected December 22.	Not yet achieved
Final Materiel Release (FMR)	MSMCS Stage 1, 2 and the MWES 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 Stage 1 is expected to be achieved in Oct 22 and FMR Stage 2 is expected to be achieved in Sep 26.	Not yet achieved
Final Operational Capability (FOC)	Operationally employ MSMCS Stage 1, 2 and MWES in six platforms, the ITTS and associated Fundamental Inputs to Capability such as crew training and Integrated Logistics Support. FOC is expected to be achieved in Jun 27.	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 affecting SEA1439 Phase 5B2 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. The Project has downgraded this risk after acceptance of the system on the first of class platform.
Emergent Risks (risk not previously identified but has emerged during 2021–22)	
Description	Remedial Action
There is a chance of delay to introduce capability because of emergent work impacting delivery of Government Furnished Material (GFM) to prime systems integrator leading to delay to contracted milestones.	Use contract instrument to vary contract milestones to align with revised schedule.

5.2 Major Project Issues

Description	Remedial Action
Implementation of Information Screening and Delivery System at Submarine Communication Centre – East is	Project in liaison with stakeholders to bring forward other activities that do not require use of delayed material. Stakeholders aware of

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delayed because of disruptions to international supply chain and travel restrictions.	delay. Required material has been delivered and accepted as part of the mission system hardware. This issue has been downgraded to 'Low'
Delay /disruptions to capability set to work and testing because of COVID-19 travel restrictions (international and national).	Project seeking exemption from Border Force for US Government personnel to travel to Aust and availability of project staff. This issue has been downgraded. Travel restrictions impacting travel arrangements for project staff, and US personnel delayed Set to work, testing and on the job training resulting in delay to materiel release.

Note

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

Section 6 – Lessons Learned

6.1 Key Lessons Learned

Description	Categories of Systemic Lessons
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 and Foreign Military Sales knowledge with Future Submarine Program.	Requirements Management / First of Type Equipment / Contract Management
Regular and close stakeholder engagement where SEA1439PH5B2 is not the Commonwealth representative of a contract; however, manages budget and reporting requirement reduces risks to deliver scope under the Materiel Acquisition Agreement.	Governance

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2022

Unit	Name
Division	Submarines
Branch	Collins Submarine Program

Project Data Summary Sheet¹⁶¹

Project Number	SEA3036 Phase 1
Project Name	Pacific Patrol Boat Replacement (PPB-R)
First Year Reported in the MPR	2017-18
Capability Type	Replacement
Capability Manager	Chief of Navy
Government 1st Pass Approval	Apr 16
Government 2nd Pass Approval	Apr 16
Budget at 2nd Pass Approval	\$504.5m
Total Approved Budget (Current)	\$502.3m
2021-22 Budget	\$68.2m
Complexity	ACAT II



Section 1 – Project Summary

1.1 Project Description

SEA3036 Phase 1 – Pacific Patrol Boat Replacement is acquiring 22 vessels to replace the existing 22 Pacific Patrol Boats (PPBs) gifted to 12 Pacific Island Countries between 1987 and 1997 and to provide two boats for Timor-Leste; as part of Australia's Pacific Maritime Security Program (PMSP). The project also includes disposal of the current PPB fleet and 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 2022, the project had spent \$61.45m against an in-year budget of \$68.17m. The variance \$6.7m is mainly due to the Prime Contract (Austal) delay in issuing the escalation invoices whilst commercial negotiations are underway and delays in execution of the infrastructure program. This is expected to be recovered in the next Financial Year.

Project Financial Assurance Statement

As at 30 June 2022 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, fifteen 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
- Vessel 7 to Palau in September 2020
- Vessel 8 to Kiribati in June 2021
- Vessel 9 to Tonga in October 2020
- Vessel 10 to Papua New Guinea in March 2021
- Vessel 11 to Solomon Islands in May 2021
- Vessel 12 to Vanuatu in July 2021
- Vessel 13 to Papua New Guinea in October 2021
- Vessel 14 to Federated States of Micronesia in March 2022
- Vessel 15 to Cook Islands in May 2022

In addition, from 01 July 2021 the project has achieved the following Key Milestones on time:

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

<ul style="list-style-type: none"> • Vessel 13 (PNG) Launch milestone achieved in July 2021 • Vessel 16 (FSM) Keel Laying achieved in September 2021 • Vessel 14 (FSM) Launch milestone achieved in October 2021 • Vessel 17 (PNG) Keel Laying achieved in December 2021 • Vessel 15 (Cook Islands) Launch milestone achieved in January 2022 • Vessel 18 (Samoa) Keel Laying achieved in March 2022 • Vessel 16 (FSM) Launch milestone achieved in April 2022 • Vessel 19 (Fiji) Keel laying milestone achieved in June 2022 • Vessel 17 (PNG) Launch milestone achieved in June 2022 <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"> • Delivery of the first vessel 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. • Delivery of Vessel 7 was approximately 4 months later than contracted as a result of international travel restrictions due COVID-19. • Delivery of Vessel 8 was approximately 10 months later than contracted as a result of international travel restrictions due to COVID-19. • Delivery of Vessels 10 and 14 were delayed by two weeks due to the crew undertaking quarantine to enter Australia. In both cases the crew was unable to alter their departure date so the arrival in Australia was on schedule and other activities were adjusted by two weeks. • Delivery of Vessel 15 was delayed by four weeks due to a number of the crew testing positive for COVID-19 during training in Australia. • Delivery of Vessel 16 is expected to be significantly delayed due to the imperative to rectify an identified latent defect in the engine exhaust silencers that presents a safety hazard to crew. An additional requirement to fit a fixed gas detection system to each boat has been requested by stakeholders to provide added safety assurances of awareness of potentially harmful gases. The time required to make these changes has not yet been determined however and will depend on the root cause and remediation of the engine exhaust silencer defect. <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 have been unable to mobilise to site to conduct the work. Travel restrictions within the Pacific Island Countries are beginning to ease and work is recommencing.</p> <p>Disposal of the existing Pacific Patrol Boats is progressing in alignment with project needs.</p>
<p>Material Capability/Scope Delivery Performance</p> <p>The first fifteen vessels have been delivered to their recipient nations. COVID-19 caused delay to delivery of the vessels to Cook Islands, Federated States of Micronesia, Kiribati, Palau, and Papua New Guinea. However, these delays have been absorbed within the overall project delivery schedule with the project managing the continued risks to the schedule posed by COVID-19 and global freight delays.</p> <p>The emergence of a latent defect and imperative to increase the performance of safety systems are expected to delay the delivery of boat 16 and are not expected to have significant flow-on effects.</p> <p>The addition of Boat 22 into the project is expected to delay Final Material Release however the delivery date is still being negotiated.</p>
<p>Note</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>Background</p> <p>SEA3036 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 (PMSP). 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 12 PPB nations are Cook Islands, Federated States of Micronesia (FSM), Fiji, Kiribati, Palau, Papua New Guinea (PNG), Republic of Marshall Islands (RMI), Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu. The 13th nation is Timor-Leste which has accepted an offer of two (2) PPB-R vessels by the Australian Government.</p> <p>The PMSP 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 PMSP 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</p>
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<p>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>The vessel that was gifted to Samoa in August 2019 ran aground on a reef in August 2021 and its replacement has been approved but the project office is currently in the progress of exercising the costed option through a contract change.</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 (DCP).</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> <p>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.</p>
<p>Uniqueness</p> <p>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 Chief of 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.</p>
<p>Major Risks and Issues</p> <p>The Project has downgraded an issue related to Pacific nation crews unable to travel to Australia for conversion training and to receive the PPB-R vessel</p> <p>The Project has retained one High risk relating to the COVID-19 pandemic impact with public health and supplier capabilities on project deliverables.</p> <p>A further two High risks have been identified. One relates to the delay of Project Milestones due to the lack of Project and stakeholder personnel. The other relates to Austal failing to meet production targets due to labour shortages, workforce inefficiency, and inability to source contractor labour, or supply chain issues delaying the delivery of critical equipment.</p> <p>The Project has downgraded one High risk to Medium. The risk relates to current PPB movement to Australia for disposal and to provide crews for training. There are now only three PPBs left to bring to Australia for disposal and mechanisms in place to bring the crews to Australia by air so any delays due to the PPB movement to Australia would have a less significant impact.</p>
<p>Other Current Related Projects/Phases</p> <p>N/A</p>
<p>Note</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
	Project Budget		
Aug 14	Original Approved	5.7	1
Jan 15	Real Variation – Transfer	1.2	2
May 16	Government Combined Pass Approval	497.6	
	Total at Second Pass Approval	504.5	
Jun 22	Exchange Variation	(2.2)	
Jun 22	Total Budget	502.3	
	Project Expenditure		
Prior to Jul 21	Contract Expenditure - Austal	(223.2)	
	Other Contract Payments/Internal Expenses	(27.5)	3
		(250.7)	
FY to Jun 22	Contract Expenditure - Austal	(58.4)	
	Other Contract Payments/Internal Expenses	(3.1)	4
		(61.5)	
Jun 22	Total Expenditure	(312.2)	

Jun 22	Remaining Budget	190.1	5
Notes			
1	This amount was for Initial Pass Project Approval.		
2	Transfer of funding to Defence Materiel Organisation, now known as Capability Acquisition and Sustainment Group, to support Offer Definition Improvement Activity and Anthropometric Study.		
3	Other contract payments and expenditure comprises of Pre Combined Pass expenditure (\$3.6m) and other project support contracted staff costs (\$15.0m), infrastructure costs (\$8.1m) and other direct project costs (\$0.9m).		
4	Other contract payments and expenditure includes, project support contracted staff costs of (\$3.0m) and other direct project costs of (\$0.0m).		
5	The addition of the 22 nd boat will require the allocation of additional funding which has not yet been confirmed.		

2.2A In-year Budget Estimate Variance

PBS \$m	PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
81.5	68.4	68.2	PBS – PAES: \$13.1m movement is primarily due to the reprogramming of the prime contract escalation (lower than anticipated escalation values applied under the Prime Contract with Austal); delays in execution of the Infrastructure program and anticipated delays to the delivery program as a result of the remediating latent defects. PAES – Final Plan: \$0.2m due to foreign exchange fluctuations.
Variance \$m	(13.1)	(0.2)	Total Variance (\$m): (13.3)
Variance %	(16.1)	(0.3)	Total Variance (%): (16.3)

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(6.7)	Australian Industry	The underachievement is primarily due to the Prime Contract (Austal) delay in issuing the escalation invoices whilst commercial negotiations are underway and delays in execution of the infrastructure program. This is expected to be recovered next FY.
			Foreign Industry	
			Early Processes	
			Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
68.2	61.5	(6.7)	Total Variance	
		(9.9)	% Variance	

2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes		
		Signature \$m	30 Jun 22 \$m					
Austal Ships Pty Ltd	May 16	321.1	352.5	Fixed	Standard Defence Contract	1		
Notes								
1	Contract Value as at 30 June 2022 is based on actual expenditure to 30 June 2022 and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable).							
Contractor	Quantities as at		Scope			Notes		
	Signature	30 Jun 22						
Austal Ships Pty Ltd	19	21	PPB-R vessels, conversion training and associated support system products.			1		
Major equipment accepted and quantities to 30 Jun 22								
<ul style="list-style-type: none">• Three Guardian class Patrol Boats gifted to Papua New Guinea.• One Guardian class Patrol Boat gifted to Tuvalu.• Two Guardian class Patrol Boats gifted to Tonga.• One Guardian class Patrol Boat gifted to Samoa.• Two Guardian class Patrol Boats gifted to Solomon Islands.• One Guardian class patrol Boat gifted to Fiji.• One Guardian class Patrol Boat gifted to Palau• One Guardian class Patrol Boat gifted to Kiribati.• One Guardian Class Patrol Boat gifted to Vanuatu• One Guardian Class Patrol Boat gifted to Federated States of Micronesia• One Guardian Class Patrol Boat gifted to Cook Islands								
Notes								
1	Two additional PPB-R vessels were included into the scope of supply in April 2018 following acceptance in December 2017 by the Timor-Leste Government of the offer from the Australian Government to receive two boats. The vessel that was gifted to Samoa in August 2019 ran aground on a reef in August 2021 and its replacement has been approved by the Minister for Defence. The 22 nd boat has not yet been implemented into the project contract.							

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Section 3 – Schedule Performance

3.1 Design Review Progress

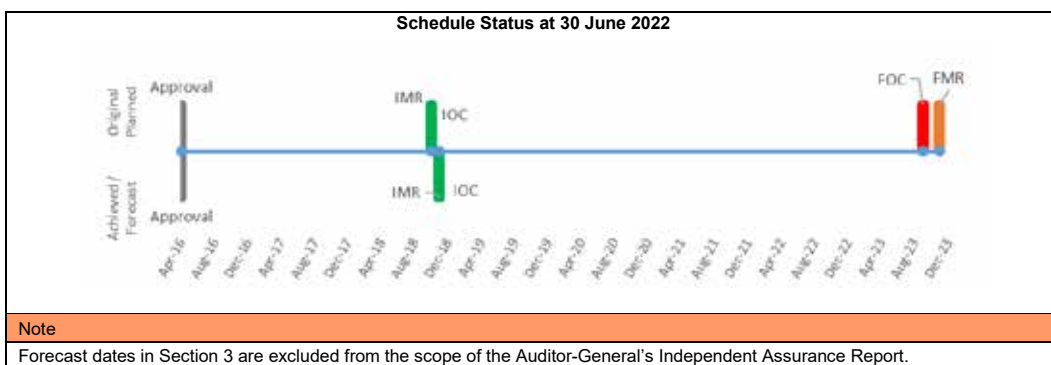
Review	Major System / Platform Variant	Original Planned	Current Contracted	Achieved / Forecast	Variance (Months)	Notes
System Requirement Conduct	Mission System	Aug 16	N/A	Aug 16	0	
	Support System	N/A	Nov 16	Nov 16	0	1
Preliminary Designs Conduct	Mission System	Oct 16	N/A	Oct 16	0	
	Support System	N/A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

3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System / Platform Variant	Original Planned	Current Contracted	Achieved / Forecast	Variance (Months)	Notes
Harbour Acceptance Trials (HATs) Complete	PPBR Boat 1	Jul 18	N/A	Oct 18	3	1
	PPBR Boat 2-5	Aug 19	N/A	Sep 19	1	
	PPBR Boat 6-9	Aug 20	N/A	Aug 20	0	
	PPBR Boat 10-13	Aug 21	N/A	Aug 21	0	
	PPBR Boat 14-18	Oct 22	N/A	Oct 22	0	
	PPBR Boat 19-21	Jul 23	N/A	Jul 23	0	
Acceptance	PPBR Boat 22	TBA	N/A	TBA	N/A	7
	PPBR Boat 1	Oct 18	N/A	Nov 18	1	1,2,3
	PPBR Boat 2-5	Nov 19	N/A	Nov 19	0	3
	PPBR Boat 6-9	Nov 20	N/A	Jun 21	7	4
	PPBR Boat 10-13	Oct 21	N/A	Oct 21	0	3
	PPBR Boat 14-18	Dec 22	N/A	Jun 23	6	5, 6
	PPBR Boat 19-21	Oct 23	N/A	Mar 24	5	5
	PPBR Boat 22	TBA	N/A	TBA	N/A	7
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.					
4	The variance of seven months is due to COVID-19 pandemic travel restrictions restricting the crew for vessel 8 travelling to Australia to undertake conversion training and receive their vessel.					
5	The variance of Boat 16 onwards is presently unknown due to issues relating to a latent defect on the engine exhaust silencer, which is currently being investigated, and a remediation plan being developed however delays are expected to be minor and to be absorbed into the project. The forecast dates for acceptance are working estimates for scheduling purpose only: they are not fully scoped or agreed baselines.					
6	Boat 18 may be the subject of a very short delay up to one month due to: <ul style="list-style-type: none"> a. The welfare of crews is best served by avoiding having them sailing home during Christmas. b. Boat 18 has been reassigned to Samoa as the replacement for Nafanua II but the stakeholders have not yet confirmed the delivery dates. c. A conflict exists in the availability of the training resources d. Austal indicate that there are likely delays to the delivery of critical equipment potentially impacting launch date. 					
7	Boat 22 is still in negotiations and the contract change has not been fully implemented, preliminary indication of delivery however is expected during Q3 2024					

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	TBA	TBA	1,2,5
Final Operational Capability (FOC)	Sep 23	TBA	TBA	3,4,5
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.			
5.	The current delays to delivery are not expected to impact downstream however the addition of a 2 nd boat will move FMR and FOC beyond the previously planned dates. The new forecast date will be confirmed when the contract and project have been updated accordingly.			



Section 4 – Materiel Capability/Scope Delivery Performance

4.1 Measures of Materiel Capability/Scope Delivery Performance

Traffic Light Diagram: Percentage Breakdown of Materiel Capability Delivery Performance	
	Green: 0% 15 of 22 ships have been delivered however they are currently limited in their operations due to latent defects.
	Amber: 95% 15 ships have been delivered and are currently operating in a very limited capacity. 6 additional ships are potentially facing delays due to the imperative to rectify defects and enhance safety. None of this is considered to be a serious threat to the realisation of full capability.
	Red: 0% None of the issues experienced by the project are considered serious threats to the full capability being realised once the project concludes.
	Blue: 5% The additional ship will need to be entered into the project's scope along with some design and build modifications to enhance safety.
Note This Traffic Light Diagram represents Defence's expected capability delivery. Capability assessments and forecast dates are excluded from the scope of the Auditor-General's Independent Assurance Report	

4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	First vessel and associated support system technical documentation, initial spares and logistics documentation delivered and accepted by the 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 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 will shortly be reforecast as Boat 22 is incorporated into the project.	Not yet achieved
Final Operational Capability (FOC)	All vessels accepted into their Pacific Island Country operational service. FOC will shortly be reforecast as Boat 22 is incorporated into the project.	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 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.	Downgraded to Medium risk. The Project has continued monitoring this risk and downgraded the probability to occasional. The impact of an occurrence is also manageable due to the small number of boats remaining. A plan is now in place for movement of vessels unable to transit to the disposal site under own power to avoid the risk of Disposals Contract costs being incurred. PPBSPO will conduct material condition assessments and advise on seaworthiness to sail.
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.	Remain aware of Government Departments' advice and actions that may impact on project deliverables. Management of the risks is through close communication with shareholders to ensure early identification of any anticipated delays and making arrangements to minimise them.
Emergent Risks (risk not previously identified but has emerged during 2021-22)	
Description	Remedial Action
There is a chance that key Project Milestones delivery will be affected by a lack of availability of suitably qualified, experienced and authorised Project and stakeholder personnel, leading to an impact on cost, schedule and technical performance	Use of APS and contracted workforce mix within Project Office. Engagement of stakeholders (inc FICs) through Integrated Project Team, System Safety Working Group, Vessel Ownership Transfer IPT, Project Steering Group and Transition Working Group.
There is a chance that Ship acceptance will be effected by Austal unable to meet production schedule milestones leading to an impact on cost, schedule, and reputation	Contract controls and statement of work consistent with the Australian Standard for Defence Contracting (ASDEFCON).

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.	Downgraded to medium The project is not currently managing an issue of this type and as travel restrictions have continued to relax this has been revised to an assessment of a medium risk of future reoccurrence. Management of the risks is through close communication with stakeholders and monitoring of Government Departments' advice and actions that may impact on travel. Impacts may be minimised by advance understanding of any impacts.
Note	
Major risks and issues in Section 5 are excluded from the scope of the Auditor-General's Independent Assurance Report.	

Section 6 – Lessons Learned

6.1 Key Lessons Learned

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 and quality issues are understood and encourage early advice on delay.	Schedule Management

Section 7 – Project Line Management

7.1 Project Line Management as at 30 June 2022

Unit	Name
Division	Ships Division
Branch	Ships Acquisition - Specialist Ships Branch

Project Data Summary Sheet¹⁶²

Project Number	SEA1442 Phase 4
Project Name	MARITIME COMMUNICATIONS MODERNISATION
First Year Reported in the MPR	2014-15
Capability Type	Upgrade
Capability Manager	Chief of Navy
Government 1st Pass Approval	Dec 10
Government 2nd Pass Approval	Jul 13
Budget at 2nd Pass Approval	\$385.6m
Total Approved Budget (Current)	\$434.8m
2021-22 Budget	\$31.8m
Complexity	ACAT II



Section 1 – Project Summary

1.1 Project Description

SEA1442 Phase 4 will upgrade the communications capability in the eight Anzac Class Frigates and address communications system obsolescence in the Class, by modernising it with improved communications management, secure voice and tactical intercom, red/black switching, tactical radios and a high data rate line-of-sight capability. The project will also deliver support systems, a secondary Maritime Tactical Wide Area Network (MTWAN) Shore Gateway and upgrade the Anzac Combat System Trainer Communications Terminals.

1.2 Current Status

Cost Performance

In-year

This year the project has spent \$24.4m to 30 June 2022 of a budget of \$31.8m. The budget variance of \$7.4m underspend due to Prime Contractor contractual payments slipping to next FY; including Milestone payments, lower than anticipated spend for spares, Communications Control Management System upgrades, training services, additional cable and Power Distribution Panels purchases and resulting contract price escalation payments.

Project Financial Assurance Statement

As at 30 June 2022, Project SEA1442 Phase 4 has reviewed the project's approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial contractual obligations of Defence for this project, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget remaining for the project to complete against the agreed scope.

Contingency Statement

The project has not applied contingency in the financial year.

Schedule Performance

Detailed Design Review (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 three ship mission systems accepted to date; in April, July and September 2021.

The SEA1442 Phase 4 delivery and installation schedule has been aligned to the Anzac Midlife Capability Assurance Program (AMCAP) scheduling and the availability dates for the remaining ships are subject to change. This alignment of programs has resulted in the SEA1442 Phase 4 Initial Materiel Release (IMR) moving from June 2018 to being declared in September 2021. It was achieved with exceptions, which are detailed in s4.2 and s5.2 of the PDSS. Final Operating Capability (FOC) remains at April 25.

Materiel Capability/Scope Delivery Performance

The MTWAN Secondary Shore Gateway has been delivered and is operational, including the Training System and the Shore Integration Test Facility which were both accepted in November 2019. The first three Anzac ship systems (HMAS Anzac, Arunta & Warramunga) with associated support systems were delivered by the contractor to CASG in 2021. The IMR milestone was declared in September 2021 with minor exceptions, which are to be completed prior to Initial Operational Release (IOR).

Note

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

1.3 Project Context

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

<p>Background</p> <p>SEA1442 (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.</p> <p>SEA1442 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.</p> <p>The majority of individual equipment and sub-systems are either existing Military or Commercial grade items. Some development is required and involves functionality enhancements and Australianisation of the Military or Commercial grade items. 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.</p> <p>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 and to Leonardo UK Ltd in March 2021.</p> <p>Under the acquisition contract, Leonardo UK 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 became operative in November 2020.</p> <p>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.</p> <p>Uniqueness</p> <p>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.</p> <p>Major Risks and Issues</p> <p>The risk that Navy may take an upgraded vessel prior to the completion of testing and acceptance of the communications system was identified during 2022. The project continues to manage issues relating to the COVID-19 outbreak disruption and deficiencies in the Prime Contractor's engineering management and resource management. The project is managing the issue of its installation activities within the AMCAP Program being delayed due to problems with concurrent work being carried out by other Projects/maintenance activities. Navy's support for the declaration of IMR was provided with an understanding that several issues identified had not been completed and this work is being managed by the Project.</p> <p>Other Current Related Projects/Phases</p> <p>N/A</p> <p>Note</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
Dec 10	Project Budget		
	Original Approved (First Pass Approval)	11.4	
Jul 13	Government Second Pass Approval	374.3	
	Total at Second Pass Approval	385.6	
Jun 22	Exchange Variation	49.1	
Jun 22	Total Budget	434.8	
	Project Expenditure		
Prior to Jun 21	Leonardo	(211.9)	
	US Government	(15.3)	
	WAMA	(9.2)	
	Nova Systems	(3.9)	
	Other Contract Payments / Internal Expenses	(11.2)	2
		(251.5)	
FY to Jun 22	Leonardo	(18.3)	
	WAMA	(1.4)	
	Nova Systems	(3.7)	
	Other Contract Payments / Internal Expenses	(1.0)	
		(24.4)	
Jun 22	Total Expenditure	(275.9)	3
Jun 22	Remaining Budget	158.9	

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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 of note include \$2.9m for travel and purchasing card payments, \$0.3m for Legal Services, \$3.1m for Technical Services, \$1.0m for Scheduler Support, \$1.9m for the purchase of Specialised Military Equipment, \$0.5m for System Engineering Services and \$0.3m for the development of Capability Definition Documents and other extant expenditure of \$1.2m.
3	Other expenditure of note include \$7m for System Engineering Services and \$0.1m for Technical Services

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
40.0	31.7	31.8	The variation from PBS to PAES is largely due to less than anticipated spare parts deliveries and a delay to two Milestones; Support System Endurance Demonstration and the Installation Complete Ship#5 Milestone; both moved to the next financial year. Variation between PAES and Final Plan is due to an adjustment in exchange rates.
Variance \$m	(8.3)	0.1	Total Variance (\$m): (8.2)
Variance %	(20.8%)	0.3%	Total Variance (%): (20.5%)

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(7.4)	Australian Industry	Underspend due to Prime Contractor contractual payments slipping to next FY; including Milestone payments, lower than anticipated spend for spares, Communications Control Management System upgrades, training services, additional cable and Power Distribution Panels purchases and resulting contract price escalation payments.
			Foreign Industry	
			Early Processes	
			Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
31.8	24.4	(7.4)	Total Variance	
		(23.3%)	% Variance	

2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 22 \$m			
Leonardo UK	Nov 2013	187.7	288.2	Variable	Standard Defence Contract	1, 2, 3
US Government (AT-P-BSH)	Dec 2014	17.0	15.4	Firm	FMS	1, 3, 4
WAMA	Dec 2017	7.5	15.5	Variable with Pain/Gain Share	Alliance	5
Nova Systems	Mar 2019	0.2	12.3	Variable	Integrated Work Package	6

Notes	
1	Contract value at 30 June 2022 is based on actual expenditure to 30 June 2022 and remaining commitment at current budget exchange rates, and includes adjustments for indexation (where applicable).
2	The contract price has increased to include the recommended spare parts list and to extend the contracted period in line with Navy's ship upgrade program.
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.
5	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 Partner for SEA1442 Phase 4 tasking is BAE.
6	Provision of multi-discipline workforce to deliver the JC4S Branch Integrated Work Package via the CASG Major Service Provider Arrangement. Operational changes have led to an increase in the contracted workforce.

Contractor	Contracted Quantities as at		Scope	Notes
	Signature	30 Jun 22		
Leonardo UK	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
WAMA	N/A	N/A	Provision of all site project management and support services for SEA1442 Phase 4 for the entirety of the Anzac Mid Life Capability Assurance Program (AMCAP) as well as other tasks to incorporate the NewGen MCS into the ANZAC environment.	
Nova Systems	N/A	N/A	Provision of multi-discipline workforce to deliver the JC4S Branch Integrated Work Package.	

Major equipment accepted and quantities to 30 Jun 22						
MTWAN Secondary Gateway, Training Systems, Shore Integration and Test Facility (SITF) and three ship mission systems have 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
Notes						
1	Delayed from originally planned due to slow ramp up/contractor performance.					
2	Contract schedule re-baselined to reflect previous System Definition Review (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 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

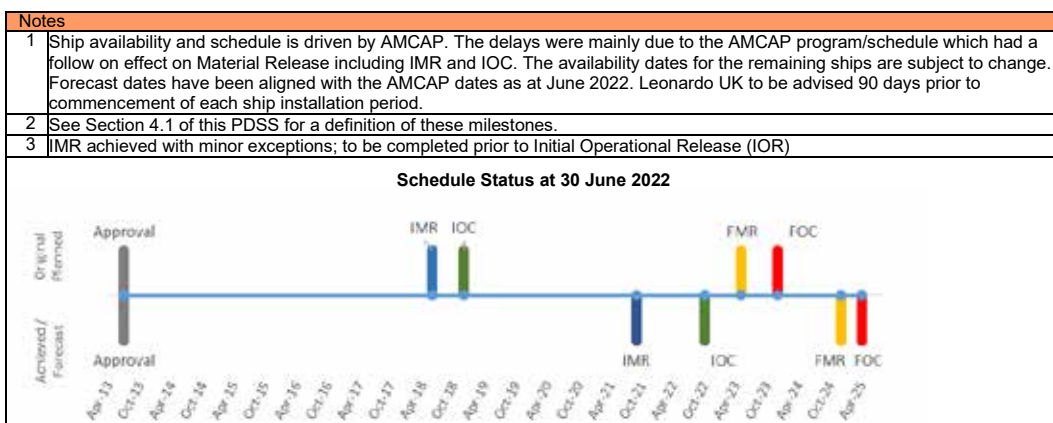
Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
System Integration	NewGen MCS	Jun 18	Jul 20	Apr 21	34	1
Acceptance	MTWAN Secondary Gateway	Apr 15	N/A	Mar 15	(1)	
	Training System	Jun 17	Nov 18	Nov 19	29	2
	Shore Integration and Test Facility (SITF)	Dec 16	Mar 19	Nov 19	35	3
	Ship #1	Jun 18	Jul 21	Jul 21	37	1,4
	Ship #2	Apr 19	Apr 21	Apr 21	24	1,4
	Ship #3	Nov 19	Sep 21	Sep 21	23	4
	Ship #4	Jun 20	Jul 22	Jul 22	25	4
	Ship #5	Feb 21	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
Notes						
1	Delays attributed to alignment with planned ship availability per the AMCAP, and the effects of the COVID-19 pandemic, specifically travel restrictions which resulted in the contractor's UK based personnel being unable to travel to undertake set-to-work and acceptance testing in WA, and the project being unable to travel to carry out onsite test and trials activities with the contractor.					
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. Forecast and current contract dates have been aligned with the AMCAP dates updated in 30 Jun 2022. Leonardo UK to be advised 90 days prior to commencement of each ship installation period.					

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Jun 18	Sep 21	39	1,2,3
Initial Operational Capability (IOC)	Dec 18	Oct 22	46	1,2
Materiel Release 2 – Ship # 2	Apr 19	Apr 21	24	1,2
Materiel Release 3 – Ship # 3	Dec 19	Sep 21	21	1,2
Materiel Release 4 – Ship # 4	Aug 20	Sep 22	25	1,2
Materiel Release 5 – Ship # 5	Apr 21	Mar 23	23	1,2
Materiel Release 6 – Ship # 6	Dec 21	Dec 23	24	1,2
Materiel Release 7 – Ship # 7	Aug 22	May 24	21	1,2
Final Materiel Release (FMR)	May 23	Dec 24	19	1,2
Final Operational Capability (FOC)	Dec 23	Apr 25	16	1,2

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

Section 4 – Materiel Capability/Scope Delivery Performance

4.1 Measures of Materiel Capability/Scope Delivery Performance

Traffic Light Diagram: Percentage Breakdown of Materiel Capability/Scope Delivery Performance	
	Green: The Project expects to meet capability materiel requirements as per the Joint Project Directive, Materiel Acquisition Agreement and relevant Technical Regulatory Authority.
	Amber: N/A
	Red: N/A

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

4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	Ship 1 acceptance, training system, shore integration and test facility, ship 1 crew training, and support arrangements in place.	Achieved September 2021; with minor exceptions; to be completed prior to Initial Operational Release (IOR)
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 by October 2022.	Not yet achieved
Final Materiel Release (FMR)	All 8 ships accepted and all support arrangements in place. FMR is expected to be achieved in September 2024.	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 April 2025.	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	

Emergent Risks (risk not previously identified but has emerged during 2021–22)	
Description	Remedial Action
There is a chance that if the Navy takes an upgraded ship prior to testing & acceptance, a loss of warranty coverage could result, leading to an increase in costs.	Continue to liaise closely with Leonardo, Navy, ANZAC SPO and the WAMA through established working groups and regular meetings to ensure stakeholders are aware of the status of Ships' communications readiness and to assist with expediting readiness if required to support Navy.

5.2 Major Project Issues

Description	Remedial Action
COVID-19 Outbreak Disruption – The outbreak has had a number of effects on the Project.	<p>The effects of COVID-19 created a number of issues for the Project including:</p> <ul style="list-style-type: none"> Reduced ability of the ACT-based Project team and Defence SME's to travel to WA to support the installation and carry out testing and witnessing activities; Limitations on the UK contractor's team to travel to Australia to support installation. The end to travel restrictions in early 2022 has reduced the impact of this issue.
Deficiencies in Prime Contractors Engineering Management and Resource Management effecting the likelihood of Milestone achievement.	<ul style="list-style-type: none"> Work with the Contractor to assist estimation of the time required to produce Milestone Deliverables and other artefacts and to assist it employing and retaining sufficient technical and installation staff. Being actively managed by Team with Contractor. Improvements noted in recent times due to lifting of COVID-related travel & platform access issues.
Ship Installation in the AMCAP Program is delayed due to problems with concurrent work being carried out by other Projects/maintenance activities such as unrelated but neighbouring installation activities.	<ul style="list-style-type: none"> Our ability to reduce the occurrence of this issue is limited as communications testing is one of the last activities of an AMCAP installation so is always subject to delay caused by other activities running late. The Project & Contractor continue to actively participate directly in AMCAP Scheduling activities to develop and maintain the Integrated Master Schedule (IMS) and participate in regular production meetings. The addition of a team member with senior AMCAP experience has mitigated this issue; ensuring Project priorities are well represented to AMCAP management.
Several Milestones have been deemed complete with the undertaking that uncompleted items are to be completed as entry criteria to later Milestones.	<ul style="list-style-type: none"> IMR - IMR was achieved with minor exceptions with the support of Navy; which are to be completed prior to declaration of the IOR Navy milestone. The Project Team is working with its Navy sponsor to ensure the timely completion of the outstanding items. Leonardo Contractual Milestones - Outstanding Minor actions are tracked in meeting minutes with agreed completion dates as entry to future milestones.

Note

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

Section 6 – Lessons Learned

6.1 Key Lessons Learned

Description	Categories of Systemic Lessons
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 Standard Defence Contract 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 SEA1442 Phase 4 and AMCAP, can be a source of additional and unnecessary effort if not closely monitored and aligned.	Schedule Management

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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
Ship availability may be subject to change with minimal notice and may impact on the contractor's ability to deliver against key milestones. Ensuring effective communication between the project office, the Capability Manager and other relevant Defence stakeholders is essential. This will ensure all stakeholders are aware of what capability is being received if schedules change unexpectedly.	Platform Availability
Importance of a localised workforce. In response to COVID-19 related travel issues affecting the ability to travel and issues relating to the CASG team being based away from installation activities in West Australia, the Project has prioritised locating key workforce in WA and encouraged the Contractor to empower its local WA based subsidiary to take on more responsibilities.	Resourcing
The effort involved in managing spare parts may be underestimated initially by a Project. Whilst there is estimated spares usage data available for planning initial spares purchases; actual usage once the Capability has been released must be closely monitored and reacted to promptly. Spares usage has varied significantly in some cases and some spare parts lead times are quite long.	Spare Parts Management

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2022

Unit	Name
Division	Joint Systems
Branch	Joint C4 Systems

Project Data Summary Sheet¹⁶³

Project Number	SEA1448 Phase 4B
Project Name	ANZAC AIR SEARCH RADAR REPLACEMENT
First Year Reported in the MPR	2018-19
Capability Type	Replacement
Capability Manager	Chief of Navy
Government 1st Pass Approval	Mar 15
Government 2nd Pass Approval	Jun 17
Budget at 2nd Pass Approval	\$427.8m
Total Approved Budget (Current)	\$429.2m
2021-22 Budget	\$22.0m
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 2022, the project had underspent by \$2.8m. The underachievement is primarily due to the late submission of invoices from CEA as a result of a delay in milestone completion, in addition to FMS payment recommendation requirements being less than what was forecast. The project achieved the milestones aligned with ANZAC Midlife Capability Assurance Program.

Project Financial Assurance Statement

As at 30 June 2022, project SEA1448 Phase 4B has reviewed the approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial and contractual obligations of Defence for this project, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget remaining for the project to complete against the agreed scope.

Contingency Statement

The Project has not applied contingency in the financial year.

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 SEA1448 Phase 4B Final Operating Capability (FOC) date.

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

Material Release 2 (MR2) was achieved in November 2021.

The third ship, HMAS *Warramunga*, commenced Sea Acceptance Trials in Apr 2021 and concluded in Jun 2021.

The fourth ship, HMAS *Perth*, commenced Sea Acceptance Trials in Feb 2022 and concluded in Apr 22.

Materiel Capability/Scope Delivery Performance

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 was scheduled for acceptance in Quarter 1 2021, dependent on IFF certification.

163 Notice to reader

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

Initial Materiel Release (IMR) was split into two Initial Materiel Releases. The first release enabled the project to support acceptance of the radar to enable the RAN to utilise the capability on HMAS Arunta, realign the CEA Technologies payment schedule and commence the warranty period. The second release was aligned with IFF certification being sufficiently completed. IMR 1 was declared December 2020 and IMR2 was declared in April 21.

Initial Operational Capability (IOC) was declared in July 2021. Materiel Release (MR) 2 was the first release after declaration of IOC, and was declared in Nov 2021. MR 3 is scheduled for August 2022.

Note

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

1.3 Project Context

Background

SEA1448 Phase 4B was entered into the 2009 Defence Capability Plan (DCP) to replace the existing and ageing 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).

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.

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 SEA1448 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)).

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:

Advanced material purchases for CEA; and
BAE to commence Mast production.

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:

A new Long Range Air Search Radar (LRASR) with integrated IFF, to be delivered by CEA;
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
Acquisition of supporting equipment (and services) under Foreign Military Sales (FMS).
Production timings and integration of the mission system(s) into the Anzac Class is driven by the AMCAP schedule, managed by the ANZAC System Program Office.

Uniqueness

The CEA 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.

Major Risks and Issues

The Major risks the project faces are:

The project delivery schedule will be affected by a delay in the acceptance of capability by Navy.

The AIMS Box and Platform level certified software will be impacted by the rectification of deficiencies identified by AIMS.

CEA data being passed from Commonwealth to Commonwealth interrelated projects may lead this information being disclosed to a non-authorised recipient.

There is a chance that the project schedule will be affected by an insufficient Commonwealth workforce leading to an impact on program performance.

The Major issues the project faces are:

Contractual deliverables impacting the forecast spend spread of the project.

Materiel Releases IMR1, IMR2 and MR2 were achieved with exceptions relating to outstanding electromagnetic testing and delivery of the Integrated Logistics Support matrix.

Certification for the IFF interrogator was not achieved in time to meet the original IOC date, however, this issue has closed with the achievement of IOC.

Other Current Related Projects/Phases

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.

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 SEA1448 Phase 4B 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

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

Section 2 – Financial Performance

2.1 Project Budget (out-turned) and Expenditure History

Date	Description	\$m	Notes
Project Budget			
Oct 13	Original Approved	3.0	1
Jun 14	Real Variation – Scope	5.9	2
Mar 15	Government First Pass Approval	45.2	3
Jan 17	Real Variation –Scope	20.4	4
Aug 17	Government Second Pass Approval	353.3	
	Total at Second Pass Approval	427.8	
Jun 22	Exchange Variation	1.5	
Jun 22	Total Budget	429.2	
Project Expenditure			
Prior to Jul 21	Contract Expenditure - CEA	(158.1)	5
	Contract Expenditure - WAMA	(125.7)	
	Other Contract Payments/Internal Expenses	(28.3)	
		(312.1)	
FY to Jun 22	Contract Expenditure - CEA	(3.6)	5
	Contract Expenditure - WAMA	(14.8)	
	Other Contract Payments/Internal Expenses	(0.8)	
		(19.2)	
Jun 22	Total Expenditure	(331.3)	
Jun 22	Remaining Budget	97.9	

Notes

1	The project's original approved budget was the amount received for project initiation prior to Government Second Pass Approval.
2	To advance the L-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
33.0	22.0	22.0	PBS - PAES: The variation is due to the late delivery of milestones from CEA, driven by COVID-19 lockdowns which have impeded milestone completion. This is in addition to amendments to forecasted escalation payments. PAES – Final Plan: There is no variation.
Variance \$m	(11.0)	0.0	Total Variance (\$m): (11.0)
Variance %	(33.3)	0.0	Total Variance (%): (33.3)

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(2.0)	Australian Industry	The underachievement is primarily due to the late submission of invoices from CEA as a result of a delay in milestone completion, in addition to FMS payment recommendation requirements being less than what was forecast
		(0.8)	Foreign Industry	
			Early Processes	
			Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
22.0	19.2	(2.8)	Total Variance	
		(12.7)	% Variance	

2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 22 \$m			
CEA	Sep 17	166.6	165.0	Fixed with indices escalation	Standard Defence Contract	1,2
WAMA	Aug 17	136.1	144.9	Variable with Pain/Gain Share	Alliance	2,3

Notes

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 October 2013. CCP01 reduced the contract price by removing the performance security as the technology had been demonstrated.
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2	Contract value as at 30 June 2022 is based on actual expenditure to 30 June 2022 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 SEA1448 Phase 4B tasking is BAE and Saab.		
Contractor	Contracted Quantities as at		Notes
	Signature	30 Jun 22	
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
Major equipment accepted and quantities to 30 Jun 22			
As at 30 June 2022, three ships have been fully accepted (which includes aft mast installation, integration, harbour acceptance trials and sea acceptance trials). They are: HMAS Arunta, HMAS ANZAC, and HMAS Warramunga.			
Notes			
1	CEA contract change proposal was accepted to modify the number of training simulators from (4) to (8) to support the training requirements solution put forward by the WAMA.		

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

3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System/Platform Variant	Original Planned	Current Contracted	Achieved/Forecast	Variance (Months)	Notes
System Integration	HMAS Arunta – CAT1 (Factory Acceptance Testing)	Nov 18	N/A	Apr 19	5	1
	HMAS Arunta – CAT2 (Environmental Qualifications) and CAT3 (Integration)	Jan 19	May 20	Jul 20	18	2,3
	HMAS Arunta – CAT4 (Harbour Acceptance Trials)	Feb 19	N/A	Oct 19	8	4
	HMAS Anzac – CAT4 (Harbour Acceptance Trials)	Aug 19	N/A	May 20	9	4,5
	HMAS Warramunga – CAT4 (Harbour Acceptance Trials)	Jul 20	Mar 21	Jun 21	11	6
	HMAS Perth – CAT4 (Harbour Acceptance Trials)	Dec 20	Dec 21	Feb 22	14	6
	HMAS Toowoomba – CAT4 (Harbour Acceptance Trials)	Nov 21	Jul 22	Oct 22	11	6
	HMAS Stuart – CAT4 (Harbour Acceptance Trials)	May 22	Feb 23	Mar 23	10	6
	HMAS Ballarat – CAT4 (Harbour Acceptance Trials)	Feb 23	Aug 23	Jun 23	4	6
	HMAS Parramatta – CAT4 (Harbour Acceptance Trials)	Aug 23	Mar 24	Apr 24	8	6
Acceptance	HMAS Arunta – CAT5 (Sea Acceptance Trials)	Sep 19	N/A	Mar 20	6	4
	HMAS Anzac – CAT5 (Sea Acceptance Trials)	May 20	N/A	Oct 20	5	6
	HMAS Warramunga – CAT5 (Sea Acceptance Trials)	Feb 21	May 21	Jul 21	5	6
	HMAS Perth – CAT5 (Sea Acceptance Trials)	Sep 21	Mar 22	Apr 22	7	6
	HMAS Toowoomba – CAT5 (Sea Acceptance Trials)	Jun 22	Sep 22	Nov 22	5	6
	HMAS Stuart – CAT5 (Sea Acceptance Trials)	Dec 22	May 23	May 23	5	6
	HMAS Ballarat – CAT5 (Sea Acceptance Trials)	Oct 23	Sep 23	Aug 23	(2)	6

Project Data Summary Sheets

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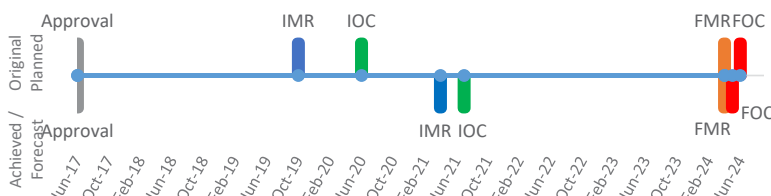
	HMAS Parramatta – CAT5 (Sea Acceptance Trials)	Apr 24	Apr 24	Apr 24	0	6
Notes						
1	A manufacturing delay with CEA resulted in the Factory Acceptance Testing from November to December 2018. Test Reports were accepted in April 2019.					
2	CEA Contract Change Proposal approved the delay in which CEA 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 CAT 2 test results were received in July 2020. This delay was caused by the limited number of appropriately certified third party test facilities and longer than anticipated test durations.					
4	Delays in the AMCAP Schedule for HMAS Arunta and HMAS Anzac has resulted in delays to CAT 4 and CAT 5.					
5	HMAS Anzac 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 1 (IMR1)	Oct 19	Dec 20	14	1, 2, 3, 4, 5
Initial Materiel Release 2 (IMR2)	Mar 21	Apr 21	1	2, 3, 4, 6
Initial Operational Capability (IOC)	Jun 20	Jul 21	13	1, 4
Final Materiel Release (FMR)	Apr 24	Apr 24	0	4, 7
Final Operational Capability (FOC)	Jun 24	May 24	(1)	

Notes	
1	Initial Materiel Release (IMR) and Initial Operating Capability (IOC) dates are dependent on Identification Friend or Foe (IFF) certification, which was impacted by COVID-19 travel restrictions.
2	IMR1 with radar acceptance occurred December 2020 and IMR2 IFF certification was completed by April 2021.
3	Delays in the AMCAP Schedule for HMAS Arunta and HMAS Anzac has resulted in delays to CAT 4 and CAT 5.
4	These milestone definitions are aligned with Section 4.2
5	IMR1 was achieved with three exceptions. One of these exceptions had not been resolved at 30 June 2022. This is disclosed as an issue in Section 5.2 of this PDSS.
6	IMR2 was achieved with four exceptions. Two of these exceptions had not been resolved at 30 June 2022. This is disclosed as an issue in Section 5.2 of this PDSS.
7	Delay is due to alignment with Ship availability and the testing milestones in Section 3.2.

Schedule Status at 30 June 2022



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

Section 4 – Materiel Capability/Scope Delivery Performance

4.1 Measures of Materiel Capability/Scope Delivery Performance

Traffic Light Diagram: Percentage Breakdown of Materiel Capability/Scope Delivery Performance	
	Green: The project is currently meeting capability requirements as expressed in the Joint Project Directive and Materiel Acquisition Agreement.
	Amber: N/A
	Red: N/A

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

4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR1)	Integration of one (1) Air Search Radar and partial IFF System into the first ship, including installation of a new aft-mast and reinstallation of all extant systems. Delivery of on-board spares and training packages. Establishment of Initial Support Contracts for both Radar and Integration.	Achieved with exceptions
Initial Materiel Release (IMR2)	Integration of one (1) Air Search Radar and full IFF System into the second Anzac Class Frigate, including installation of a new aft-mast and reinstallation of all extant systems. Delivery of on-board spares.	Achieved with exceptions
Initial Operational Capability (IOC)	Installation of equipment onto ships completed to date, development of operator and maintainer training package and initial package completed, tactical doctrine updated, completion of acceptance trials on the first ship completed, and the logistics support arrangements in place.	Achieved
Final Materiel Release (FMR)	Integration of one (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 scheduled for Apr 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 scheduled for May 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 project delivery schedule will be affected by a delay in the acceptance of capability by Navy leading to an impact on both schedule and reputation	To advise all key stakeholders of delays and request assistance as required.
There is a chance that the recipients of CEA data being passed from Commonwealth to Commonwealth interrelated projects may lead this information being disclosed to a non-authorised recipient, who may inadvertently expose the data therefore impacting sovereign capability leading to an impact on cost, schedule and reputation.	Limit access to data through the application of the Defence records management policy.
There is a chance that the AIMS Box and Platform level certified software will be impacted by the rectification of deficiencies identified by AIMS leading to an impact on engineering approvals, cost and schedule of Follow-On ships using the updated certified software	The United States Air Traffic Control Radar Beacon System Identification Friend or Foe Mark XIIA electronic identification System (AIMS) Program Office (PO) is the IFF certification authority. Maintain software at baseline approved by AIMS until software rectification has been made, tested and evidence provided to AIMS, and is certified by AIMS for installation.
Emergent Risks (risk not previously identified but has emerged during 2021–22)	
Description	Remedial Action
There is a chance that the project schedule will be affected by an insufficient Commonwealth workforce leading to an impact on program performance.	The most likely cause of this risk is slow recruitment and/or poor retention, to which the team is governed by standard processes and no additional mitigation strategies can be applied (other than the creation of a positive working environment).

5.2 Major Project Issues

Description	Remedial Action
Contractual deliverables are impacting the forecast spend spread of the project.	This issue has closed as IMR has been achieved and schedule delays are managed by the project office.
Certification for the Identification Friend or Foe (IFF) interrogator was not achieved in time to meet the original IOC date due. This is due to the complexities in meeting requirements for United States IFF certification, with Australia unable to certify the equipment internally.	This issue has closed as IOC has been achieved and schedule delays managed by the project office.

Project Data Summary Sheets

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IMR1 was achieved with three exceptions. One of these exceptions was pertaining to the delivery of the final Integrated Logistics Support (ILS) matrix.	This issue is now closed with the delivery and acceptance of the ILS matrices.
IMR2 was achieved with four exceptions. Two of the three exceptions address Electromagnetic Interference testing (EMI) and delivery of the final ILS matrix.	ILS matrices have been delivered and accepted. However, EMI testing is still outstanding until the end of December 2022.
MR2 was achieved with two exceptions. These exceptions, relating to EMI testing and the final ILS matrix.	ILS matrices have been delivered and accepted. However, EMI testing is still outstanding until the end of December 2022.

Note

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

Section 6 – Lessons Learned**6.1 Key Lessons Learned**

Description	Categories of Systemic Lessons
The 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 7 – Project Structure**7.1 Project Structure as at 30 June 2022**

Unit	Name
Division	Ships Division
Branch	Maritime Integrated Warfare Systems Branch

Part 4. JCPAA 2021–22 Major Projects Report Guidelines



Australian Government
Department of Defence



Endorsed by the Joint Committee of Public Accounts and Audit

2 November 2021

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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.’¹⁶⁴ 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*. Under section 24 of the *Auditor-General Act 1997*, the Auditor-General sets the relevant auditing standards that are to be complied with in this review.

1.2 The purpose of the Guidelines is to set the criteria for Defence’s preparation of the Project Data Summary Sheets. Draft Guidelines are prepared annually by the ANAO, following consultation with Defence, before they are submitted for endorsement by the JCPAA.

1.3 The terms of the review engagement are communicated to Defence through ANAO correspondence prepared in accordance with audit standards set by the Auditor-General.

Introduction

1.4 The MPR is tabled in Parliament and is organised into a number of parts:

- Part 2 comprises Defence’s commentary, analysis and appendices, also referred to as the Defence MPR (not included within the scope of the *Independent Assurance Report* by the Auditor-General);
- 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; and
- Part 4 reproduces the *Major Projects Report Guidelines* endorsed by the JCPAA, which provide the criteria for the compilation of the PDSSs by Defence.

1.5 The Committee notes that the Auditor-General may also choose to include ANAO review and analysis in the report. This has, in the past, been included in Part 1 of the MPR.

1.6 The MPR will report on the performance of selected major Defence equipment acquisition projects (Major Projects) since Second Pass Approval¹⁶⁵, and associated sustainment activities (where applicable), managed by Defence.¹⁶⁶ The summary project data is prepared by Defence and reviewed by the ANAO.

1.7 The Major Projects included within the MPR are based on criteria endorsed by the Joint Committee of Public Accounts and Audit (JCPAA), and provided to the JCPAA by the ANAO.

¹⁶⁴ 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.

¹⁶⁵ Projects which are pre-Second Pass Approval but have spent more than \$500m will also be considered.

¹⁶⁶ 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.

1.8 The 2021–22 MPR will report on 21 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	29	2018–19	26
2012–13	29	2019–20	25 ¹⁶⁷
2013–14	30	2020–21	21

1.9 Project data is presented by way of Project Data Summary Sheets (PDSSs), as at 30 June of the reporting year. The ANAO's review is designed to enable the ANAO to obtain sufficient appropriate evidence for the Auditor-General to form a conclusion reported in the Auditor-General's Independent Assurance Report.

1.10 These Guidelines:

- provide the criteria for project selection and the list of projects for inclusion in the 2021–22 MPR;
- outline the roles and responsibilities of Defence in the production and quality assurance of Defence's contribution to the 2021–22 MPR¹⁶⁸;
- provide requirements for the preparation of the PDSSs;
- provide the PDSS template; and
- provide an indicative program schedule in support of a November 2022 tabling.

1.11 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. These processes occur following consultation with Defence.

Criteria for Project Selection

1.12 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:

- Projects only admitted one year after Second Pass Approval, or projects pre Second Pass Approval that have spent > \$500m¹⁶⁹;
- a total approved project budget of > \$300m;

¹⁶⁷ The 2019–20 MPR Guidelines, endorsed in September 2019, stated that 30 projects would be included. Five projects exited after the 2019–20 MPR Guidelines were endorsed.

¹⁶⁸ The ANAO's roles and responsibilities are defined by the *Auditor-General Act 1997* (Cth) and relevant legislation, and are outlined for each engagement with the responsible parties.

¹⁶⁹ The Capability Life Cycle (CLC) has been redesigned following the First Principles Review, to deliver a risk-based decision-making and capability management process. Not all projects in the 2021–22 MPR will have been approved under the updated process, but will have had at least one Second Pass approval or key Government decision.

- (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.

1.13 Projects selected for inclusion in the MPR may be proposed by Defence or the ANAO, based on the above criteria. The ANAO provides comments and advice to the JCPAA on the proposals by 31 August, for endorsement.

1.14 The removal of projects from the MPR is generally based on declaration of Final Operational Capability (FOC), or on a pre-FOC risk assessment¹⁷⁰ of the timely declaration of FOC where a significant portion of the project's deliverables are complete, and subject to consideration of each of the following matters:

- (a) the outstanding deliverables pre-FOC, against the relevant Materiel Acquisition Agreement (MAA)¹⁷¹ and/or the government approvals;
- (b) the remaining schedule to FOC¹⁷², against the relevant MAA and/or government approvals;
- (c) the remaining budget to FOC, against the relevant MAA and/or government approval;
- (d) the remaining project risks and issues;
- (e) Project of Interest or Project of Concern status¹⁷³; and
- (f) 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.¹⁷⁴

1.15 Projects selected for removal from the MPR may be proposed by Defence or the ANAO, based on the above criteria. The ANAO provides comments and advice to the JCPAA on the proposals by 31 August, for endorsement.

1.16 Projects that have met the exit criteria and been endorsed for removal by the JCPAA should be removed from the list of projects included in the MPR in the subsequent year. Expenditure and milestone information for these projects will be included within Part 2 of the MPR in the subsequent year.

1.17 Projects that have been removed from the MPR that still have outstanding exceptions to the achievement of significant milestones declared by Defence (IMR,

¹⁷⁰ The pre-FOC risk assessment could be informed by Defence's Independent Assurance Review process.

¹⁷¹ MAAs are intended to be phased out and gradually replaced by Product Delivery Agreements (PDAs). Projects in the 2021–22 MPR will have an approved MAA. A PDA is an agreement between the Program 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*, June 2020, Annex A, Capability Life Cycle Definitions, p. A-7.

¹⁷² In general, if a project is within 12 months of declaring FOC, it should be considered for exit, subject to the Capability Manager's risk assessment.

¹⁷³ Acquisition projects with issues and risks raised against schedule, cost, and/or capability performance that warrant heightened internal senior management attention become Projects of Interest. Entry to and exit from the Projects/Products of Concern list is decided by the Minister for Defence and the Minister for Defence Industry, either at the recommendation of the Deputy Secretary CASG and the relevant Capability Manager, or at the Ministers' own instigation. Department of Defence, *Capability Acquisition and Sustainment Quarterly Performance Report*, May 2020.

¹⁷⁴ 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 <<https://www1.defence.gov.au/about/capability-acquisition-sustainment-group>> [accessed 14 July 2021].

IOC, FMR and FOC) and/or significant remaining materiel capability 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.

2021–22 Project Selection

1.18 The following table reflects projects included in the 2021–22 MPR program.¹⁷⁵ For each project that 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 2021–22 MPR

Project Number	Project Name	Defence Abbreviation
AIR 6000 Phase 2A/2B	New Air Combat Capability	Joint Strike Fighter
SEA 5000 Phase 1	Hunter Class Frigate Design and Construction	Hunter Class Frigate
SEA 1000 Phase 1B	Future Submarines Design Acquisition	Future Subs
LAND 400 Phase 2	Combat Reconnaissance Vehicles	Combat Reconnaissance Vehicles
AIR 9000 Phase 2/4/6	Multi-Role Helicopter	MRH90 Helicopters
SEA 1180 Phase 1	Offshore Patrol Vessel	Offshore Patrol Vessel
LAND 121 Phase 3B	Medium Heavy Capability, Field Vehicles, Modules and Trailers	Overlander Medium/Heavy
AIR 555 Phase 1	Airborne Intelligence, Surveillance, Reconnaissance and Electronic Warfare (ISREW) Capability	Peregrine ¹
AIR 7000 Phase 1B	MQ-4C Triton Remotely Piloted Aircraft System	MQ-4C Triton
LAND 121 Phase 4	Protected Mobility Vehicle – Light (PMV-L)	Hawkei
AIR 8000 Phase 2	Battlefield Airlift – Caribou Replacement	Battlefield Airlifter
LAND 19 Phase 7B	Short Range Ground Based Air Defence	SRGB Air Defence
AIR 2025 Phase 6	Jindalee Operational Radar Network	JORN Mid-Life Upgrade
SEA 1654 Phase 3	Maritime Operational Support Capability	Repl Replenishment Ships
AIR 5431 Phase 3	Civil Military Air Management System	CMATS
LAND 200 Tranche 2	Battlefield Command System	Battlefield Command System
JNT 2072 Phase 2B	Battlespace Communications System Phase 2B	Battle Comm. Sys. (Land) 2B
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
SEA 1442 Phase 4	Maritime Communications Modernisation	Maritime Comms
SEA 1448 Phase 4B	ANZAC Air Search Radar Replacement	ANZAC Air Search Radar Repl

Note 1: AIR 555 Phase 1 Airborne Intelligence, Surveillance, Reconnaissance and Electronic Warfare (ISREW) Capability is included in the MPR Program for the first time in 2021–22.

¹⁷⁵ The JNT 2008 Phase 5A Indian Ocean Region UHF SATCOM project was removed from the MPR program based on the low risk nature of the remaining activities to FOC.

Defence's Roles and Responsibilities

1.19 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 materially accurate and complete. The Secretary is also responsible for formally presenting the Defence chapters, *Statement by the Secretary of Defence* and the Project Data Summary Sheets in the MPR to the ANAO on completion of the PDSSs and associated commentary.

1.20 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 must 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.

1.21 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"> Primary accountability for the completeness and accuracy of Defence's contributions to the MPR. Sign off on the <i>Statement by the Secretary of Defence</i>, including Significant Events Occurring Post 30 June 2022.
Vice Chief of the Defence Force	Joint Force Authority	<ul style="list-style-type: none"> Provision of advice with regards to the overall security classification of the aggregated information contained within the PDSS suite, and suitability for unclassified publication.
Defence Deputy Secretary Capability Acquisition and Sustainment Group (CASG)	Business Process Owner	<ul style="list-style-type: none"> Obtain cascading sign offs from Branch and Division Heads, on the data and content in the unclassified PDSS suite. Clearance of the PDSSs and Defence analysis, or delegation as appropriate.
Chief Finance Officer Defence	Financial advice and assurance	<ul style="list-style-type: none"> Responsibility for financial advice and information in the Defence contribution to the MPR. Coordination and provision of corporate budget information. Quality assurance of all financial data.
First Assistant Secretary Audit and Fraud Control	Overall Relationship Management	<ul style="list-style-type: none"> Provision of assistance/support when called upon by ANAO or CASG. This may include the provision of advice to, and facilitation of clearance by, the Secretary of Defence. Provision of advice on matters of an audit/assurance nature.
First Assistant Secretary Integration	MPR management and accountability	<ul style="list-style-type: none"> Advise to Deputy Secretary CASG and Secretary. Clearance of the unclassified PDSS suit and Defence MPR. Liaison with ANAO senior management.
Director Program Approvals and Agreements	MPR coordination and liaison	<ul style="list-style-type: none"> Liaison with the ANAO MPR Team and facilitate access to information required by the ANAO. Guidance and direction to project offices. Manage the MPR Program and schedule with the ANAO MPR team. Development, configuration management and quality assurance of the Defence MPR, PDSS suite and evidence packs to ensure completeness and accuracy.

Project Directors/Managers	PDSS development and generation of evidence packs	<ul style="list-style-type: none"> Develop the project's PDSS and associated evidence packs, including the mapping of evidence to disclosures within the PDSS, in compliance with the Guidelines. Actively engage the ANAO MPR team in its review of the project's PDSS.
Capability Managers	PDSS confirmation	<ul style="list-style-type: none"> Responsibility for confirming the project's status, particularly progress toward the Initial Materiel Release (IMR), Initial Operational Capability (IOC), FMR and FOC milestones. Confirmation that the information contained within the PDSSs is unclassified. <p>Note: This confirmation is at the request of the ANAO, to obtain a confirmation of the information in the PDSSs.</p>

MPR Process

1.22 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.

1.23 An indicative schedule for the MPR program has been established (refer to page 26). The schedule provides for a pre 30 June site visit period for the ANAO to conduct PDSS reviews of projects. 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.

1.24 Circumstances permitting, the ANAO will seek to arrange site visits. 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. Project teams are to ensure that each statement within the PDSS has an identified evidence source.

1.25 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.

1.26 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

1.27 As the PDSS is part of a public document, the following style conventions must be followed:

- 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 21).
- Where possible, acronyms and jargon are not to be used. When acronyms are used, the first use must be spelt out in full.

- (c) 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.
- (d) 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.
- (e) 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.
- (f) Any cells in a table not containing data should be shown as 'N/A'.
- (g) Alignment of data within tables is to be positioned as per the template in this document (refer to page 21).

Requirements for the Preparation of the Project Data Summary Sheets (PDSS)

Heading	Data	Information Required
Project Header	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, in 20xx–xx date format.
	Capability Type	Either one or a combination of: <ul style="list-style-type: none"> • New; • Replacement; • Upgrade. An alternative descriptor where the above types are not applicable.
	Capability Manager	Either one or a combination of: <ul style="list-style-type: none"> • Chief of Navy; • Chief of Army; • Chief of Air Force; • Chief of Joint Capability; • Vice Chief of the Defence Force; • Deputy Secretary Strategic Policy and Intelligence; and • Chief of Defence Intelligence.
	Government 1st Pass Approval	The date Government First Pass Approval was given.
	Government 2nd Pass Approval/ key Government pre Second Pass Approval (<i>specify one</i>)	The date Government Second Pass Approval was given (with multiple dates for multiple Government Second Pass Approvals). Where a project has entered the MPR but has not yet achieved Second Pass Approval, the date is a pre-Second Pass Approval date based on a key Government decision.

Heading	Data	Information Required
	Budget at 2nd Pass Approval	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, the amount is a pre-Second Pass Approval budget based on a key Government decision.
	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.
	2021–22 Budget	The estimated project expenditure for 2021–22 as per the Estimate Final Plan at 30 June 2022. This amount should be equal to the Estimate Final Plan in Section 2.2A and Section 2.2B.
	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.
SECTION 1 – PROJECT SUMMARY		
Section 1.1 Project Description	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.
Section 1.2 Current Status	Cost Performance	<u>In-year</u> The project's current progress, at a strategic level, against its in-year budget (specifying whether more or less was spent than budgeted), and a succinct explanation of causes for variations. This statement should agree to the In-year Budget/Expenditure Variance explanation in Section 2.2B. <u>Project Financial Assurance Statement</u> A statement of whether the budget remaining, together with the estimated future expenditure and current known risks, is sufficient for completing the project. If the budget is sufficient, the statement should be based on the following standard text: As at 30 June 2022, 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

Heading	Data	Information Required
		<p>sufficient budget remaining for the project to complete against the agreed scope.</p> <p>If the budget is insufficient, the statement is to be modified accordingly and/or is 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, a description of the actions the project is undertaking to address the insufficiency of the budget is to be included.</p> <p><u>Contingency Statement</u></p> <p>A statement of whether the project has/has not applied contingency funds this financial year. The amount of contingency expenditure 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 category¹⁷⁶] risk or issue [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>A brief description, at a strategic level, of key schedule milestones achieved so far and issues facing the project in achieving future milestones. Milestone achievements or non-achievements in the current year and the variance in months are to be included.</p> <p>This section must be consistent with what is stated in Section 3 – Schedule Performance.</p>
	Materiel Capability/Scope Delivery Performance	<p>A brief update, at a strategic level, on the materiel capability delivered to date, and expected future delivery.</p> <p>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/Scope Delivery Performance.</p>
Section 1.3 Project Context	Background	<p>A succinct summary level statement that covers Government approvals history and any strategic changes that have occurred since approval. For projects approved prior to the Smart Buyer Framework, if the projects' classification is not MOTS, an explanation must be included to ensure that these options were explicitly</p>

¹⁷⁶ 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	Information Required
		<p>considered and eliminated for particular reasons before final procurement decisions have been made.¹⁷⁷</p> <p>For projects approved under the Capability Life Cycle model a short description of Defence's "Smart Buyer" outcomes considered at Government approval is to be included. If a "Smart Buyer" risk assessment considered at Second Pass was not conducted, a brief description of the reasons why not is to be included.</p> <p>Any decisions resulting in transfers of scope into or out of the project are to be described. This information should be consistent with any transfers of budget presented in Section 2, capability presented in Section 4 and risks and issues presented in Section 5.</p> <p>For projects that have been announced as a Project of Concern by the Minister for Defence, the following information is to be included:</p> <ul style="list-style-type: none"> • The date the project was announced as a PoC; • The reason for the project being placed on the POC list; • The remediation activities being undertaken; and • The date of removal from the list (if applicable). <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	A succinct summary of the major risks and issues disclosed in Section 5 – Major Risks and Issues. Where the project has achieved a milestone with an exception, a brief description of the exception is to be included. Exceptions could include: caveats, deficiencies, limitations, restrictions or anything of a similar nature. This should be consistent with the description in Section 5.2.
	Other Current Related Projects/Phases	A list of 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 a brief description of the capability (i.e. one or two short sentences).

¹⁷⁷ JCPAA, Report 429, *Review of the 2010–11 Defence Materiel Organisation Major Projects Report*, May 2012, p. 25.

Heading	Data	Information Required
SECTION 2 – FINANCIAL PERFORMANCE		
Section 2.1 Project Budget (out-turned) and Expenditure History	Project Budget	
	Original Approved	The first budget approved by Government. This could be through an Original, Interim, First or Second pass approval. In brackets, the Approval source is to be disclosed (e.g. Government First or Second Pass Approval).
	Real Variation	<p>All 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>“Subsequent Government Approvals” are the addition of funds via any specific Government Approval after the Original Approved. If the approval is a Government First or Second Pass Approval, it is to be disclosed in bold text. The date of the variation is to be the date the funds were received in the FMIS, and not the date of the Government decision, if different.</p> <p>“Scope” 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>“Transfers” 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>“Budgetary Adjustments” account for corrections resulting from foreign exchange or indexation accounting estimation errors. 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>“Real Cost Increases” These funds have been approved by government to increase the Project's budget (generally without a change in scope).</p> <p>“Real Cost Decreases” These funds have been handed back to the Defence Portfolio.</p> <p>The elements above are added to form a subtotal for a single amount for all real variations (including Government Second Pass Approvals).</p>

Heading	Data	Information Required
	Total at Second Pass Approval/key Government pre-Second Pass Approval (<i>specify one</i>)	A subtotal 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 material 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	The sum of the above. This should reconcile with the FMIS as at 30 June. The Total Approved Budget in the Project Header should equal this figure.
	Notes	For additional information as required, e.g. explanation for the reason for each Real Variation.
	Project Expenditure	
	Prior to Jul 20	<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 2021). 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><u>“Contract Expenditure”</u> 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. For large projects, it may be appropriate to include greater than the top 5 contracts. Contract expenditure should be listed from highest to lowest value. Contracts with nil value should not be disclosed.</p> <p><u>“Other Contract Payments / Internal Expenses”</u> which comprises operating expenditure, contractors, consultants, other capital expenditure not attributable to the aforementioned contracts and minor contract expenditure.</p> <p>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, an additional explanation within the Notes section outlines the key aspects of the expenditure</p>

Heading	Data	Information Required
		<p>including amounts to bring the amount of unexplained 'other' below 10%.</p> <p>The two expenditure elements above are added to give a subtotal that is a single amount for all prior period expenditure.</p>
	FY to Jun 21	<p>This item comprises all amounts incurred in the <u>current reporting period</u> (i.e. contract level expenditure from 1 July 2021 to 30 June 2022). 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><u>"Contract Expenditure"</u> 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. For large projects it may be appropriate to include greater than the top 5 contracts. Contract expenditure should be listed from highest to lowest value. Contracts with nil value should not be disclosed.</p> <p><u>"Other Contract Payments / Internal Expenses"</u> which comprises operating expenditure, contractors, consultants, other capital expenditure not attributable to the aforementioned contracts and minor contract expenditure.</p> <p>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, an additional explanation within the Notes section outlines 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 added to give a subtotal that is a single amount for Financial Year (FY) expenditure.</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	<p>This item discloses total project expenditure as at the reporting date (i.e. 30 June 2022) 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.</p>
	Remaining Budget	<p>The subtraction of total expenditure from total budget, thus showing the unspent portion of the approved budget, as at 30 June.</p>
	Notes	<p>For additional information as required, e.g. the breakdown of 'Other Contract Payments/Internal Expenses'.</p>

Heading	Data	Information Required
Section 2.2A In-year Budget Estimate Variance	Estimate PBS \$m	The initial budget estimate for 2021–22, as published in the PBS.
	Estimate PAES \$m	The mid-year revised budget estimate for 2021–22, 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 2021–22. 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 2021–22 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.
Section 2.2B In-year Budget/Expenditure Variance	Estimate Final Plan \$m	The estimated project expenditure for 2021–22. The data presents the project's 'Year to Date' performance in financial terms. It must explain the difference between the 'Latest Plan' in the MRM Majors Budget Performance Total report and/or the FMIS and the End of Financial Year Actual Expenditure. This amount should be equal to the 2021–22 Budget figure in the Project Header and the Estimate Final Plan in Section 2.2A In-year Budget Estimate Variance.
	Actual \$m	The actual project expenditure incurred in the current reporting period (i.e. 2021–22). This amount should be equal to the FY to Jun 22 Total Expenditure in Section 2.1 Project Budget (out-turned) and Expenditure History.
	Variance \$m	Budget expenditure variances are to be disaggregated and disclosed separately as per the variance factors described below. The sum of these should give a total variance equal to the difference between the Estimate and Actual expenditure. The variance percentage should also be calculated between the Estimate and Actual expenditure.
	Variance Factor	This section provides a range of factors attributable to the cause of the variances between the Budget Estimate and Actual

Heading	Data	Information Required
		<p>expenditure. These are expressed as the standard variance factors of:</p> <ul style="list-style-type: none"> • Australian Industry; • Foreign Industry; • Early Processes; • Defence Processes; • Foreign Government Negotiations/Payments; • Cost Saving; • Effort in Support of Operations; and <p>Additional Government Approvals.</p>
	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>
Section 2.3 Details of Project Major Contracts	Contractor ¹⁷⁸	<p>List the contractors for the top 5 contracts valued at greater than or equal to \$10m. For large projects it may be appropriate to include more than the top 5 contracts. Contractors should be listed in order of signature date (earliest to most recent).</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 22 \$m	<p><u>Signature \$m</u> The value of the contract at signature.</p> <p><u>30 Jun 2022 \$m</u> The value of the contract at 30 June 2022 (i.e. value spent as per Section 2.1 Project Budget (outturned) and Expenditure History plus remaining commitment as at the spot exchange rates as recorded in the FMIS at 30 June 2022). All values are exclusive of GST.</p>
	Type (Price Basis)	<p>Choices for this include:</p> <ul style="list-style-type: none"> • Firm (or Fixed); • Variable; • Cost Ceiling (capped); or • Reimbursement (for FMS). <p>Further information including templates is in the ASDEFCON Suite of Tendering and Contracting Templates on the Defence intranet.</p>
	Form of contract	<p>Choices for this include:</p> <ul style="list-style-type: none"> • Standard Defence Contract (for ASDEFCON); • FMS (for Foreign Military Sales); and • MoU (for Memorandum of Understanding).

178 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.

Heading	Data	Information Required
		Note: For unique arrangements such as Alliance or Public Private Partnership that would need to be specially treated (noting the key signatories to the arrangement), projects should seek the advice of the Defence MPR team.
	Notes	For additional information as required, e.g. description of new contract or explanation of significant changes in contract value from the prior year.
	Contractor	The contractors for the top 5 contracts. For large projects it may be appropriate to include more than the top 5 contracts. Contractors should be listed in order of signature date (earliest to most recent), i.e. same order as above.
	Contracted Quantities as at Signature and 30 Jun 22	The quantity of major equipment under contract as at the date the contract was signed and also as at 30 June 2022. The quantity of contracted equipment should only be provided at a summary level.
	Scope	A brief description of the scope of the contract deliverables. Generally only hardware is included in this section at 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 22	Detail the major equipment and quantities the project has accepted to 30 June 2022.
	Notes	For additional information as required.
SECTION 3 – SCHEDULE PERFORMANCE		
Section 3.1 Design Review Progress	Review	Events in the categories shown below as they are applicable to the project: <ul style="list-style-type: none"> • System Requirements; • Preliminary Design; and • Critical Design. 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	The major system that the design review refers to, including significant variants for the major systems
	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.

Heading	Data	Information Required
	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.
Section 3.2 Contractor Test and Evaluation Progress	Test and Evaluation	Events in the categories shown below as they are applicable to the project: • System Integration; and • Acceptance. 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	The major system that the Test and Evaluation event refers to. If there are significant variants for the major systems, then they are to be stated.
	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.
Section 3.3 Progress Toward Materiel Release and Operational Capability Milestones	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'.

Heading	Data	Information Required
	Notes	<p>A top level description of the reasons for and implications of the variance to 'Achieved/Forecast' dates.</p> <p>Where the project has achieved a milestone with exceptions, a brief description of the exceptions is to be included. Exceptions could include: caveats, deficiencies, limitations, restrictions or anything of a similar nature. This should be consistent with the description in section 5.2.</p>
Schedule Status at 30 June 2022	Graph	<p>A visual representation of: Second Pass Approval, Initial Materiel Release (IMR), Initial Operational Capability, Final Materiel Release (FMR) and Final Operational Capability dates, both Original Planned and Achieved/Forecast. Note: graphs are prepared by the Defence MPR team.</p>
SECTION 4 – MATERIEL CAPABILITY / SCOPE DELIVERY PERFORMANCE		
Section 4.1 Measures of Materiel Capability/Scope Delivery Performance	Traffic Light Diagram: Percentage Breakdown of Materiel Capability Delivery Performance	<p>This section presents a forecast of the materiel capability to be delivered by the acquisition project by FOC. Materiel capability is assessed as:</p> <ul style="list-style-type: none"> • 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; or • Red – at this stage, the capability outcome is unlikely to be fully met. <p>The Traffic Light Diagram and associated narratives will provide a percentage breakdown of the Materiel Release Milestones and Completion Criteria for the project, as identified in the MAA and/or government approval, at 30 June 2022.</p> <p>Where materiel deliverable/s is assessed as Amber or Red, the analysis/narrative should describe what deliverable/s is under threat or unlikely to be met and what action is being taken to address this. Where there is no data insert 'N/A'.</p> <p>"Where a project's materiel capability/scope is amended, the change should be disclosed as Red if the change represents a reduction (including transfers to other Defence projects or capabilities) in materiel capability/scope, or as a Blue traffic light if the change represents an increase (including transfers from other Defence projects or capabilities) of materiel capability/scope. PDSSs in subsequent years will then record the current state as it relates to the revised materiel capability/scope. A narrative should also be included to explain the reason for the amendment."</p>

Heading	Data	Information Required
		<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 MRM. Defence may need to provide alternative evidence to support disclosures which are not able to be supported by MRM.</p>
Section 4.2 Constitution of Materiel Release and Operational Capability Milestones	Item	Represented at a whole of capability level, i.e. IMR, IOC, FMR and FOC.
	Explanation	<p>A description of the materiel release and operational capability elements as stipulated in the MAA, at 30 June 2022, 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"> • Initial Materiel Release; • Initial Operational Capability; • Final Materiel Release; and • Final Operational Capability. <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. This should be consistent with the description in Section 5.2.</p>
	Achievement	Standard text, i.e. Achieved; Not yet achieved; or Achieved with caveats.
SECTION 5 – MAJOR RISKS AND ISSUES		
Section 5.1 Major Project Risks	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 in accordance with Defence's risk management framework.</p> <p><u>Remedial Action:</u> The risk mitigation/treatment proposed for the risk identified (these must be actionable measures).</p> <p><u>Note 1:</u> If the risk has been retired or the pre-mitigation rating has been downgraded to medium, this should be documented along with</p>

Heading	Data	Information Required
		<p>the reason; the risk can then be removed in the subsequent MPR.</p> <p><u>Note 2:</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> <p><u>Note 3:</u> 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>
	Emergent Risks (risks not previously identified but have emerged during 2021–22)	<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><u>Note 1:</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> <p><u>Note 2:</u> 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>
Section 5.2 Major Project Issues	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 1:</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><u>Note 2:</u> Where the project has achieved a milestone with exceptions, these should be disclosed as separate issues. On the removal of the exception, it should also be clear to the reader whether the underlying shortfall/issue has been resolved.</p> <p>(See also Section 1.3 Major Risks and Issues, Section 3.3, and Section 4.2).</p> <p><u>Note 3:</u> Where contingency has been applied to treat an issue the wording should be consistent with Section 1.2 Current Status - Cost Performance - Contingency Statement.</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>

Heading	Data	Information Required
SECTION 6 – LESSONS LEARNED		
Section 6.1 Key Lessons Learned	Description	Describe the project lesson (at the strategic level) that has been learned.
	Categories of Systemic Lessons	Select from the following 'Systemic Lessons' ¹⁷⁹ categories where they are applicable to the project: <ul style="list-style-type: none"> • Requirements Management; • First of Type Equipment; • Off-The-Shelf Equipment; • Contract Management; • Schedule Management; • Resourcing; and/or • Governance.
SECTION 7 – PROJECT STRUCTURE		
Section 7.1 Project Structure as at 30 June 2022	Unit and name of the relevant organisational structure within CASG	The name of the CASG Division and Branch that the project sat in at 30 June 2022.

¹⁷⁹ ANAO Report No.13 2009–10, *2008–09 Major Projects Report*, November 2009, Part 3, paragraph 3.25, p. 122.

Project Data Summary Sheet Template¹⁸⁰

Project Number	XXX XXX	Project Image.
Project Name	XXX XXX	
First Year Reported in the MPR	20XX–XX	
Capability Type	XXX	
Capability Manager	XXX	
Government 1st Pass Approval	XXX	
Government 2nd Pass Approval/ or key Government pre-Second Pass Approval (<i>specify one</i>)	XXX	
Budget at 2nd Pass Approval/or key Government pre-Second Pass Approval (<i>specify one</i>)	\$XXX.Xm	
Total Approved Budget (Current)	\$XXX.Xm	
2021–22 Budget	\$XXX.Xm	
Complexity	ACAT XXX	

Section 1 – Project Summary

1.1 Project Description

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1.2 Current Status

Cost Performance
<u>In-year</u>
<u>Project Financial Assurance Statement</u>
<u>Contingency Statement</u>
Schedule Performance
Materiel Capability/Scope Delivery Performance
Note
Forecast dates and capability assessments are excluded from the scope of the Auditor-General's Independent Assurance Report.

1.3 Project Context

Background

180 Notice to reader

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

Uniqueness
Major Risks and Issues
Other Current Related Projects/Phases
Note
Major risks and issues are excluded from the scope of the Auditor-General's Independent Assurance Report.

Section 2 – Financial Performance

2.1 Project Budget (out-turned) and Expenditure History

Date	Description	\$m	Notes
	Project Budget		
	Original Approved (Government First/Interim/Second Pass Approval)	XXX.X	X
	Real Variation – Scope	XXX.X	
	Real Variation – Transfer	XXX.X	
	Total at Second Pass Approval /or key Government pre-Second Pass Approval (<i>specify one</i>)	XXX.X	
	Real Variation – Budgetary Adjustment	XXX.X	
	Real Variation – Real Cost Increase / Decrease	XXX.X	
		XXX.X	
Jul 10	Price Indexation*	XXX.X	
Jun 22	Exchange Variation	XXX.X	
Jun 22	Total Budget	XXX.X	
	Project Expenditure		
Prior to Jul 21	Contract Expenditure – Contractor 1	XXX.X	X
	Contract Expenditure – Contractor 2	XXX.X	
	Contract Expenditure – Contractor 3	XXX.X	
	Contract Expenditure – Contractor 4	XXX.X	
	Contract Expenditure – Contractor 5	XXX.X	
	Other Contract Payments / Internal Expenses	XXX.X	
		XXX.X	
FY to Jun 22	Contract Expenditure – Contractor 1	XXX.X	
	Contract Expenditure – Contractor 2	XXX.X	
	Contract Expenditure – Contractor 3	XXX.X	
	Contract Expenditure – Contractor 4	XXX.X	
	Contract Expenditure – Contractor 5	XXX.X	
	Other Contract Payments / Internal Expenses	XXX.X	
		XXX.X	
Jun 22	Total Expenditure	XXX.X	

Jun 22	Remaining Budget	XXX.X	X
Notes			
1	XXX		
2	XXX		
3	XXX		
4	XXX		

*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
	XXX.X	XXX.X	
Variance \$m	XXX.X	XXX.X	Total Variance (\$m): XXX
Variance %	XXX.X	XXX.X	Total Variance (%): XXX

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		XXX.X	Australian Industry	
		XXX.X	Foreign Industry	
		XXX.X	Early Processes	
		XXX.X	Defence Processes	
		XXX.X	Foreign Government Negotiations/Payments	
		XXX.X	Cost Saving	
		XXX.X	Effort in Support of Operations	
		XXX.X	Additional Government Approvals	
XXX.X	XXX.X	XXX.X	Total Variance	
		XXX.X	% Variance	

2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 22 \$m			
Contractor 1	XXX	XXX.X	XXX.X	XXX	XXX	X
Contractor 2	XXX	XXX.X	XXX.X	XXX	XXX	X
Contractor 3	XXX	XXX.X	XXX.X	XXX	XXX	X
Contractor 4	XXX	XXX.X	XXX.X	XXX	XXX	X
Contractor 5	XXX	XXX.X	XXX.X	XXX	XXX	X
Notes						
1	XXX					
Contractor	Contracted Quantities as at		Scope			Notes
	Signature	30 Jun 22				
Contractor 1	XXX	XXX	XXX			X
Contractor 2	XXX	XXX	XXX			X
Contractor 3	XXX	XXX	XXX			X
Contractor 4	XXX	XXX	XXX			X

Contractor 5	XXX	XXX	XXX	X
Major equipment accepted and quantities to 30 Jun 22				
XXX				
Notes				
1	XXX			

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	XXX	XXX	XXX	XXX	XXX	X
	XXX	XXX	XXX	XXX	XXX	X
	XXX	XXX	XXX	XXX	XXX	X
Preliminary Design	XXX	XXX	XXX	XXX	XXX	X
	XXX	XXX	XXX	XXX	XXX	X
	XXX	XXX	XXX	XXX	XXX	X
Critical Design	XXX	XXX	XXX	XXX	XXX	X
	XXX	XXX	XXX	XXX	XXX	X
	XXX	XXX	XXX	XXX	XXX	X
Notes						
1	XXX					
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	XXX	XXX	XXX	XXX	XXX	X
	XXX	XXX	XXX	XXX	XXX	X
	XXX	XXX	XXX	XXX	XXX	X
Acceptance	XXX	XXX	XXX	XXX	XXX	X
	XXX	XXX	XXX	XXX	XXX	X
	XXX	XXX	XXX	XXX	XXX	X
Notes						
1	XXX					
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)	XXX	XXX	XXX	X
Initial Operational Capability (IOC)	XXX	XXX	XXX	X
Final Materiel Release (FMR)	XXX	XXX	XXX	X
Final Operational Capability (FOC)	XXX	XXX	XXX	X
Notes				
1	XXX			

2	
3	
4	
Schedule Status at 30 June 2022	
Defence MPR Team to insert graph	

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

Section 4 – Materiel Capability/Scope Delivery Performance

4.1 Measures of Materiel Capability/Scope Delivery Performance

Traffic Light Diagram: Percentage Breakdown of Materiel Capability/Scope Delivery Performance	
Defence MPR Team to insert Traffic Light Diagram	Green: XXX
	Amber: XXX
	Red: XXX
Note	
This Traffic Light Diagram represents Defence's expected capability delivery. Capability assessments and forecast dates are excluded from the scope of the Auditor-General's Independent Assurance Report.	

4.2 Constitution of Materiel Release and Operational Capability Milestones

Item	Explanation	Achievement
Initial Materiel Release (IMR)	XXX	XXX
Initial Operational Capability (IOC)	XXX	XXX
Final Materiel Release (FMR)	XXX	XXX
Final Operational Capability (FOC)	XXX	XXX

Section 5 – Major Risks and Issues

5.1 Major Project Risks

Identified Risks (risk identified by standard project risk management processes)	
Description	Remedial Action
XXX	XXX
XXX	XXX
XXX	XXX
XXX	XXX
Emergent Risks (risk not previously identified but has emerged during 2021–22)	
Description	Remedial Action
XXX	XXX
XXX	XXX
XXX	XXX
XXX	XXX

5.2 Major Project Issues

Description	Remedial Action
XXX	XXX
XXX	XXX
XXX	XXX
XXX	XXX

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

Section 6 – Lessons Learned

6.1 Key Lessons Learned

Description	Categories of Systemic Lessons
XXX	XXX
XXX	XXX
XXX	XXX
XXX	XXX

Section 7 – Project Structure

7.1 Project Structure as at 30 June 2022

Unit	Name
Division	XXX
Branch	XXX

Indicative 2021–22 MPR Program Schedule

Event	Start Date	End Date
Planning for the 2021–22 MPR (including review of outcomes of the 2019–20 program)	Dec 21	Jan 22
Defence and ANAO finalise preparations for the 2021–22 MPR program in time for the JCPAA Hearing	Jan 22	Mar 22
ANAO provide the Engagement Letter and Review Strategy to the Secretary of Defence ¹⁸¹	Feb 22	Jun 22
Defence MPR provide program advice to the project offices	Feb 22	Feb 22
Defence MPR management finalise preparation with the project offices	Feb 22	Feb 22
Project site visits conducted by the ANAO	Mar 22	Jun 22
End Of Financial Year advice to project offices	Jul 22	Jul 22
Post 30 June PDSS reviews	Jul 22	Sep 22
ANAO submits 2022–23 MPR Guidelines and Project Selection to the JCPAA	Aug 22	Aug 22
Development of the Defence 2021–22 MPR	Aug 22	Oct 22
ANAO develops its Assurance, Review and Analysis for provision to the Secretary	Aug 22	Oct 22
Defence provides advice to the ANAO regarding the security classification of the aggregated PDSS suite	Oct 22	Oct 22
Secretary submits formal draft Defence section of the 2021–22 MPR to the Auditor-General	Oct 22	Oct 22
Defence response to the ANAO Assurance, Review and Analysis for provision to the Auditor-General	Oct 22	Oct 22
ANAO response to the Defence 2021–22 MPR to Defence	Oct 22	Oct 22
ANAO internal clearance of the 2021–22 MPR (Publication and Tabling)	Nov 2022	

¹⁸¹ Timing may depend on the JCPAA hearing to ensure key priorities of the JCPAA are considered.