# Project Data Summary Sheet[124]

| | |
|---|---|
| Project Number | **AIR 9000 Phase 2, 4 and 6** |
| Project Name | **MULTI-ROLE HELICOPTER** |
| First Year Reported in the MPR | 2008-09 |
| Capability Type | Replacement |
| Acquisition Type | Australianised MOTS |
| Capability Manager | Chief of Navy and Chief of Army |
| Government 1st Pass Approval | Apr 06 (Phases 4 and 6) |
| Government 2nd Pass Approval | Aug 04 (Phase 2), Apr 06 (Phases 4 and 6) |
| Budget at 2nd Pass Approval | **$3,522.8** |
| Total Approved Budget (Current) | **$3,771.1m** |
| 2017-18 Budget | **$108.4m** |
| Project Stage | Initial Materiel Release |
| Complexity | ACAT I |

## Section 1 – Project Summary

1.1 Project Description

The Multi-Role Helicopter (MRH) Program is a key component of the Australian Defence Force (ADF) Helicopter Strategic Master Plan that seeks to rationalise the number of helicopter types in ADF service. The MRH Program consists of three phases of AIR 9000. Phase 2 (12 helicopters) is the acquisition of an additional Squadron of troop lift aircraft for the Australian Army, Phase 4 (28 helicopters) will replace Army's Black Hawk helicopters in the Air Mobile and Special Operations roles, and Phase 6 (6 helicopters) will replace Royal Australian Navy (RAN) Sea King helicopters in the Maritime Support Helicopter role. All three phases are grouped under the AIR 9000 MRH Program.

1.2 Current Status

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

**Cost Performance**

In-year

The project has spent **$101.7m** against a budget of **$108.4m** to June 2018. The **$6.7m** underspend to June 2018 is primarily due to net adjustments to payment phasings across the Prime Acquisition and delays in finalising Contract Change Proposals. This is offset against a foreign currency **gain**.

Project Financial Assurance Statement

As at 30 June 2018, project AIR 9000 Phase 2, 4 & 6 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 applied contingency in the financial year primarily for the treatment of various supportability and performance risks such as a replacement Mission Management System **(including radios and ancillary requirements), Cargo Hook,** Fast Roping, Rappelling and Extraction System**, Skilled Workforce, Gun Mount System, Aero-Medical Evacuation and Electronic Warfare Self Protection System characterisation. The application of Contingency is directly in support to the transition of the MRH90 into 6 Aviation Regiment.**

**Schedule Performance**

As a result of the Deed 2 negotiations with the contractor, the final delivery of aircraft was rescheduled to July 2017; this, and ongoing technical deficiencies, have resulted in delays to the Final Materiel Release (FMR) and Final Operational Capability (FOC) milestones. However, a number of capability milestones have been declared, including Army Initial Operational Capability (IOC) in December 2014, Navy IOC in February 2015, first Operational Capability Land (OCL1) in September 2015, second and third Operational Capability Amphibious (OCA2/3) in December 2015, the second Operational Capability Land (OCL2) in March 2016 **and the third Operational Capability Land (OCL3) in February 2018**. The FMR and FOC dates are currently under review and are expected to be clarified in Quarter **4 2018 to support** approval of a revised Materiel Acquisition Agreement.

124 Notice to reader

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

Forty-seven aircraft have been accepted into service with the final aircraft accepted in July 2017. The first thirteen aircraft required an in-service retrofit to bring them up to the full Phase 2, 4 & 6 capability baseline with the final retrofit completed in March 2016.

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

The Chief of Army delayed the introduction of MRH90 into 6th Aviation Regiment by 3 years, because of reliability and design shortfalls and subsequently extended the Black Hawk fleet to 2022 to mitigate the risk to capability. The delayed introduction to 6th Aviation Regiment (6Avn Regt) resulted in the growth in total MRH90 flying hours temporarily stabilised below the planned mature rate.

**In September 2017, Chief of Army's Senior Advisory Committee (CASAC) endorsed and CA agreed to continue the transition of MRH90 into 6Avn Regt from January 2019.**

Both Full Flight Mission Simulators have been accepted (the first in August 2013 and the second in October 2014).

**Materiel Capability Delivery Performance**

Following achievement of In-Service Date (ISD) with agreed partial achievement of the contracted MRH capabilities, there has been significant work by both Industry and the Commonwealth to define and implement a series of capability block enhancements to bring the MRH90 to contracted standards. This included a retrofit program to progressively bring all aircraft up to the contracted standard. **Although FMR is being reviewed, it is now forecast to be achieved in 2020 as the technical and supportability issues are resolved to meet the final operational capability.**

**MRH achieved 96% of its planned 2017/2018 Financial Year ROE.**

Note

Forecast dates and capability assessments are excluded from the scope of the review.

1.3 Project Context

**Background**

The Additional Troop Lift project was first foreshadowed in the Defence White Paper 2000.

The MRH Program consists of Phases 2, 4 & 6. Phase 2 was approved initially, providing 12 additional Troop Lift helicopters for Army. Phases 4 & 6 were approved subsequently with Phase 4 which provided 28 helicopters as the replacement of the Australian Army's fleet of 34 S-70A-9 Black Hawk helicopters, again for troop lift capability, and Phase 6 provided 6 helicopters as the replacement of the RAN's fleet of six Sea King helicopters, providing maritime support capability for Navy. The delivery of a 47th MRH90 was negotiated as part of Deed 2. This enables the use of one airframe as a Ground Training Device without impacting the operational fleet.

In total, the AIR 9000 MRH Program will acquire 47 MRH90 aircraft and support systems. Support capabilities, such as Electronic Warfare Self Protection Support System, MRH Software Support Centre, MRH Instrumentation System and a Ground Mission Management System, will be acquired along with training systems and in-service support.

The Phase 2 Acquisition Contract was signed with Airbus Australia Pacific (Airbus AP) in June 2005 with the subsequent Sustainment and Program Agreement contracts signed in July 2005.

In November 2005 the Defence Capability and Investment 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 AIR 9000 Phase 2, 4 & 6 contracts (Program Agreement Contract, Acquisition Contract and Sustainment Contract) incorporate the above CCPs. On acceptance of two MRH90, appropriate training, maintenance and supply support, an In-Service Date of December 2007 was achieved with aircraft operating under a Special Flight Permit granted by the Chief of Air Force. This triggered the Sustainment Contract to come into effect and all three contracts are now currently active.

The Commonwealth suspended acceptance of aircraft from Airbus AP in November 2010; deliveries recommenced in November 2011 after negotiations of a remediation plan (Deed of Agreement and CCPs) to address a number of engineering and reliability issues. Concurrent with the recommencement of aircraft acceptance in November 2011, the Minister for Defence announced that the project would be listed as a Project of Concern citing schedule, aircraft technical deficiencies and Airbus AP's performance.

The Commonwealth has conducted negotiations with the prime contractor to review and settle commercial, technical and schedule issues resulting in a variation to the original contract signed on 9 May 2013, which has been termed 'Deed 2'. Deed 2, which came into effect on 1 July 2013 re-baselined the delivery schedule and addressed commercial and technical issues.

**Uniqueness**

The MRH90 aircraft is based upon the German Army variant of the NH90 Troop Transport Helicopter. The MRH90 design uses well established aerospace technologies, but will introduce new technologies into Army and Navy, primarily in the areas of composite structure, helmet mounted sight and display and fly-by-wire flight control systems.

The MRH Program is providing an MRH90 capability to two main users - Army and Navy. The capability delivery complexity this introduces has been mitigated through an agreement between Chief of Army and Chief of Navy. This provides the project with a single interface for introduction into service issues.

The MRH Program Office Design Acceptance Strategy is dependent upon the French Military Airworthiness Authority's (Direction Générale de l'Armament (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**

Aircraft system lack of maturity has affected the certification schedule of the MRH90 and subsequently the declaration of capability milestones. .

The project is managing issues affecting Final Materiel Release including the Mission Management System, Cargo Hook, Fast Roping, Rappelling and Extraction System**, Ground Mission Management System, Full Flight Missions System configuration,** Gun Mount System, and Aero-Medical Evacuation.

The remediation of these 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 the Final Materiel Release **and enable the introduction of the MRH90 into 6Avn Regt**.

There is a risk that the project may not be able to retain sufficient levels of experienced and skilled manpower to achieve the required rate of Acquisition deliverables. In addition, there is also a risk that Industry may not be able to retain sufficient workforce, prior to Acquisition Project closure, to sustain the timely delivery of the remaining capability elements.

**Other Current Sub-Projects**

AIR 9000 Phase 7 Helicopter Aircrew Training System (HATS): HATS will be an important link in the training continuum for inductees to the MRH 90 training system.

**AIR 9000 Phase 8 Future Naval Aviation Combat System: The acquisition of 24 helicopters to enable the Navy to deploy at least eight Seahawks embarked at sea across the ANZAC class frigates and the new Hobart class Air Warfare Destroyers.**

Note

Major risks and issues are excluded from the scope of the review.

## 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 |
| | **Total at Second Pass Approval** | | 3,522.8 | |
| Oct 06 | Real Variation – Transfer | (219.0) | | 3 |
| Oct 08 | Real Variation – Transfer | (20.0) | | 4 |
| Oct 08 | Real Variation – Scope | 31.5 | | 5 |
| **Sep 17** | **Real Variation – Budgetary Adjustment** | **(87.4)** | | **6** |
| | | | **(294.9)** | |
| Jul 10 | Price Indexation | | 679.8 | 7 |
| Jun 18 | Exchange Variation | | (136.6) | |
| Jun 18 | **Total Budget** | | 3,771.1 | |
| | **Project Expenditure** | | | |
| Prior to Jul 17 | Contract expenditure – Airbus AP | (2,604.8) | | |
| | Contract expenditure – CAE Australia | (172.0) | | |
| | Other Contract Payments / Internal Expenses | (232.7) | | 8 |
| | | | (3,009.5) | |
| FY to Jun 18 | Contract expenditure – Airbus AP | (83.3) | | |
| | **Contract Expenditure – Agusta Westland Australia** | (3.9) | | |
| | Other Contract Payments / Internal Expenses | (14.5) | | 9 |
| | | | (101.7) | |
| Jun 18 | **Total Expenditure** | | (3,111.2) | |
| | | | | |
| Jun 18 | **Remaining Budget** | | 659.9 | |

| Notes | |
|---|---|
| 1 | This project's original budget amount is that prior to achieving Second Pass Government Approval. |
| 2 | Incorporation of AIR 9000 Phase 4 (Black Hawk Upgrade/Replacement) and AIR 9000 Phase 6 (Maritime Support Helicopter). |
| 3 | The funding related to facilities elements of the project was managed by Defence Estate and Infrastructure Group (DE&IG). |
| 4 | Transfer to DE&IG for Facilities Infrastructure. |

| | |
|---|---|
| 5 | Real Cost Increase funding for Full Flight Mission Simulator. |
| 6 | **Real Variation for Budget Adjustment ($87.4m). This was offset and corrected by CFO by a subsequent Exchange Adjustment in the BORIS Bi-Annual update.** |
| 7 | Up until July 2010, indexation was applied to project budgets on a periodic basis. The cumulative impact of this approach was $556.1m. In addition to this amount, the impact on the project budget as a result of out-turning was a further $123.7m having been applied to the remaining life of the project. |
| 8 | **Other expenditure: $232.7m for operating expenditure, contractors, consultants, and other capital expenditure not attributable to the aforementioned contracts.** |
| 9 | Other expenditure: **$14.5m which includes $1.0m** for operating expenditure, **$5.6m** for contractors and consultants, and **$7.9m** for 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 |
|---|---|---|---|
| 119.2 | 102.4 | 108.4 | The variance between PBS and PAES estimates **reflects the latest schedule of contract deliverables and a revised allocation of funding to address key risks associated with the stand-up of 6 Aviation Regiment, the remediation of technical risks, role equipment and supportability issues.** The variance between PAES and Final Plan estimates primarily reflects reprogramming of prime contract milestone and **foreign exchange funding increase.** |
| Variance $m | (16.8) | 6.0 | Total Variance ($m): (10.8) |
| Variance % | (14.1) | 5.9 | Total Variance (%): (9.1) |

2.2B In-year Budget/Expenditure Variance

| Estimate Final Plan $m | Actual $m | Variance $m | Variance Factor | Explanation |
|---|---|---|---|---|
| | | 0.2 | Australian Industry | The **$6.7m** underspend reflects net adjustments to payment phasings across the Prime Acquisition Contract, and against **contracts for** other minor procurement requirements **and foreign exchange funding adjustments.** |
| | | | Foreign Industry | |
| | | | Early Processes | |
| | | (6.0) | Defence Processes | |
| | | | Foreign Government Negotiations/Payments | |
| | | | Cost Saving | |
| | | (0.8) | Effort in Support of Operations | |
| | | | Additional Government Approvals | |
| 108.4 | 101.7 | (6.7) | **Total Variance** | |
| | | (6.2) | **% Variance** | |

2.3 Details of Project Major Contracts

| Contractor | Signature Date | Price at | | Type (Price Basis) | Form of Contract | Notes |
|---|---|---|---|---|---|---|
| | | Signature $m | 30 Jun 18 $m | | | |
| Airbus AP | Jun 05 | 846.3 | **2,916.4** | VARIABLE | ASDEFCON (Strategic) | 1, 2, 3, 4 |
| CAE Australia | Dec 07 | 180.5 | **176.8** | VARIABLE | ASDEFCON (Complex) | 4, 5 |
| **Agusta Westland Australia** | **Apr 18** | **16.3** | **16.7** | **VARIABLE** | **Deed** | **4, 6** |

Notes

| | |
|---|---|
| 1 | This contract also includes 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 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 **2017**, there have been key CCPs processed for a Fast Roping, Rappelling and Extraction System, **and Gun Mount System**. |
| 4 | Contract value as at 30 June 2018 is based on actual expenditure to 30 June 2018 and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable). |
| 5 | The Commonwealth has conducted negotiations with the Contractor, to review and settle commercial and technical issues, in December 2015. |
| **6** | **The Commonwealth entered into contract with Agusta Westland Australia for the establishment of a helicopter transmission repair and overhaul facility.** |

| Contractor | Quantities as at | | Scope | Notes |
|---|---|---|---|---|
| | Signature | 30 Jun 18 | | |
| Airbus AP | 12 | 47 | MRH90 Aircraft | 1 |

| | | | | |
|---|---|---|---|---|
| CAE Australia | 2 | 2 | Full Flight and Mission Simulator | |

| Major equipment received and quantities to 30 Jun 18 |
|---|
| Forty-seven MRH aircraft have been accepted to date. Both Full Flight Mission Simulators have been accepted by the Commonwealth. |

| Notes | |
|---|---|
| 1 | The delivery of a 47th MRH90 was negotiated as part of Deed 2. This enables the use of one airframe 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 Planned | 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 Planned | Achieved /Forecast | Variance (Months) | Notes |
|---|---|---|---|---|---|---|
| System Integration | MRH aircraft - Phase 2 | Jul 06 | Nov 06 | Dec 06 | 5 | |
| | MRH aircraft - Phase 4/6 | N/A | N/A | N/A | N/A | 1 |
| | MRH Software Support Centre | N/A | Oct 08 | Nov 08 | 1 | |
| | Electronic Warfare Self Protection Support System | N/A | N/A | Nov 07 | N/A | |
| | Ground based Mission planning and Management System | N/A | N/A | N/A | N/A | 2 |
| | MRH Instrumented System | Nov 08 | May 09 | Dec 09 | 13 | 3 |
| | Full Flight and Mission Simulators | Jun 11 | Sept 11 | Sep 11 | 4 | 4 |
| Acceptance | Type Acceptance Review Special Flight Permit 1 | Oct 07 | N/A | Dec 07 | 2 | 5 |
| | Australian Military Type Certificate | Dec 08 | Dec 10 | Apr 13 | 52 | 6 |
| | Full Flight and Mission Simulator #1 | Jul 12 | Aug 13 | Aug 13 | 13 | 7 |
| | Full Flight and Mission Simulator #2 | Jan 13 | Oct 14 | Oct 14 | 21 | 7 |
| | Ground based Mission planning and Management System Lot 1 | Feb 09 | Sep 09 | Dec 09 | 10 | 8 |
| | Ground Mission planning and Management System Lot 2 | Feb 09 | Dec 09 | Apr 10 | 14 | 8 |
| | Ground Mission planning and Management System Lot 3 | Sep10 | Sep10 | Mar 13 | 30 | 8 |
| | MRH Software Support Centre | Feb 09 | Feb 09 | Dec 08 | (2) | |
| | Electronic Warfare Self Protection Support System | Dec 07 | Dec 07 | Dec 07 | 0 | |
| | MRH Instrumented System | Mar 10 | Jun 10 | Sep 11 | 18 | 9 |
| Aircraft Acceptance | MRH aircraft #01 (First aircraft) | Dec 07 | N/A | Dec 07 | 0 | |
| | MRH aircraft #05 (First Australian built aircraft) | Dec 08 | N/A | Dec 08 | 0 | |
| | MRH aircraft #46 | Jul 14 | Jun 17 | Jun 17 | 35 | 10 |
| | MRH aircraft #47 (Final Aircraft) | Jul 17 | Jul 17 | Jul 17 | 0 | |

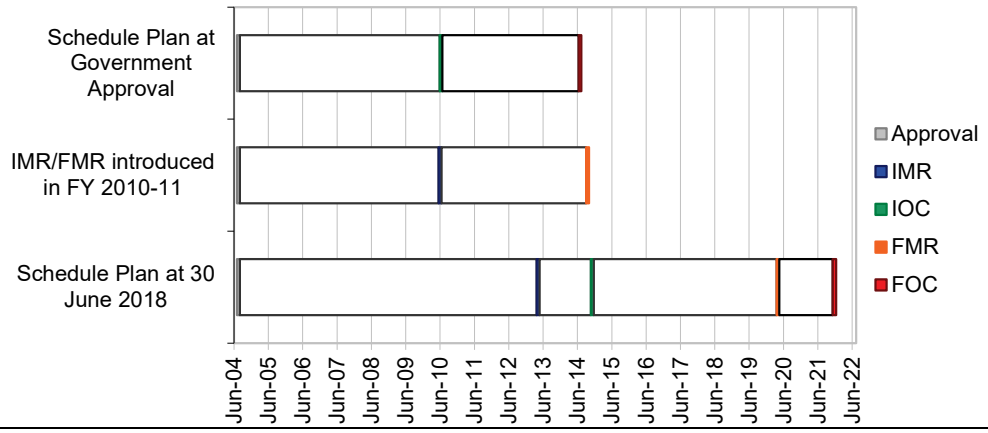
| Notes | |
|---|---|
| 1 | Phases 4/6 were rolled into the MRH Program from aircraft 13 onwards, which increased the number of aircraft from 12 to 46. |
| 2 | The acceptance and test-readiness of the Ground Mission Management System (GMMS) was broken into six lots post contract signature. The lots compose of GMMS deliverables that have been aligned to aircraft delivery – location and baseline. The acceptance of GMMS lots are listed in the acceptance area of this table. |
| 3 | The 13 month delay to closure of Test Readiness Review was due to electronic compatibility test design issues not resolved until November 2009. This delay was mitigated by the development of an interim MRH Instrumentation System capability used for a test activity in October 2009. |
| 4 | Achieved through completion of Test Readiness Review for Contractor In-Plant Test and Evaluation in September 2011. |
| 5 | The first Airworthiness Board (for a Special Flight Permit (SFP)) was conducted in November 2007 and a SFP was granted in December 2007. There have been a number of SFP extensions to allow flight trials of the aircraft as it further develops. The most recent SFP was granted in December 2012 and expired in April 2013. |
| 6 | Achievement of the Australian Military Type Certificate proved problematic due to technical and reliability issues, leading to insufficient levels of the Rate of Effort. Rate of Effort was required to validate that in-service support arrangements for the fleet are sufficient to cope with current numbers of aircraft and are growing in maturity to meet fleet requirements. Australian Military Type Certificate and Service Release was achieved 17 April 2013. |
| 7 | Refers to acceptance of Full Flight Mission Simulators in Oakey and Townsville. Delays have been incurred due to the late delivery of facilities and an underestimation of the time required to implement the design. |
| 8 | Lot 1, 2 and 3 have been altered to accommodate the variation in aircraft delivery date and configuration. |
| 9 | The MRH instrumented system incurred delays due to technical and supportability issues that resulted in contractual non-conformances. These non-conformances were rectified by September 2011. |
| 10 | The MRH90 program stopped accepting aircraft in November 2010 due to a number of technical and reliability issues. The Commonwealth recommenced accepting aircraft in November 2011 after negotiating a remediation plan to address a number of engineering and contractual issues; however acceptance of aircraft was again suspended in February 2012 pending resolution of another technical concern related to the aircraft's cargo hook. In May 2012 the Commonwealth agreed to accept a further four aircraft based on Airbus AP's agreement to the commercial terms associated with the rectification of the cargo hook issue. Scheduled aircraft acceptance recommenced in June 2012 with aircraft #46 accepted in June 2017 **and the final aircraft (#47) accepted in July 2017**. |

3.3 Progress Toward Materiel Release and Operational Capability Milestones

| Item | | Original Planned | Achieved /Forecast | Variance (Months) | Notes |
|---|---|---|---|---|---|
| Initial Materiel Release (IMR) | Army/Navy | Jun 10 | May 13 | 35 | 1 |
| Initial Operational Capability (IOC) | Navy | Jul 10 | Feb 15 | 55 | 2 |
| | Army | Apr 11 | Dec 14 | 44 | 3 |
| Final Materiel Release (FMR) | Army/Navy | Oct 14 | **Jun 20** | **68** | 4,5 |
| Final Operational Capability (FOC) | Navy | Dec 12 | - | - | 5, |
| | Army | Jul 14 | **Dec 21** | **89** | 4,5 |

| Notes | |
|---|---|
| 1 | The MRH90 program stopped accepting aircraft in November 2010 due to a number of technical and reliability issues. This has impacted the achievement of capability milestones. The Commonwealth recommenced accepting aircraft in November 2011 after negotiating a remediation plan to address a number of engineering and reliability issues; however acceptance of aircraft was again suspended in February 2012 pending resolution of another technical concern related to the aircraft's cargo hook. In May 2012 the Commonwealth agreed to accept a further four aircraft based on Airbus AP's agreement to the commercial terms associated with the rectification of the cargo hook issue. Scheduled aircraft acceptance recommenced in June 2012 with the **final** aircraft (**#47**) accepted in **July** 17.<br>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 are currently under review and are expected to be clarified **in Quarter 4 2018** with the approval of a revised Materiel Acquisition Agreement **as the technical and supportability issues are resolved to meet the FOC**. |
| 5 | FOC is now only forecast as a single date. The last capability subset is to be realised by Army **as Operational Capability Special Operations 2 (OCS2) in November 2021, which is expected to trigger FOC**. |

**Schedule Status at 30 June 2018**

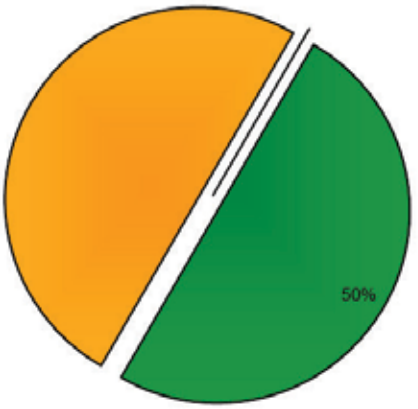



| Note |
|---|
| Forecast dates in Section 3 are excluded from the scope of the review. |

## Section 4 – Materiel Capability Delivery Performance

4.1 Measures of Materiel Capability Delivery Performance

Pie Chart: Percentage Breakdown of Materiel Capability Delivery Performance




**Green:**

A number of key capabilities have been delivered and service released and the aircraft retrofit program is now complete.

**Amber:**

MRHPO remains focused on the timely delivery of capabilities to support operational capabilities. There continues to be a number of capabilities that will need to be progressed and released including the redesign of Cargo Hook, the Common Mission Management System, **the Gun Mount System, the Mission (wider) Troop Seats** and the improved Fast Roping, Rappelling and Extraction System.

**Red:**

N/A

Note

This Pie Chart does not necessarily represent capability achieved. The capability assessments and forecasts by the project are not subject to the ANAO's assurance review.

4.2 Constitution of Initial Materiel Release and Final Materiel Release

| Item | Explanation | Achievement |
|---|---|---|
| Initial Materiel Release (IMR) | 1. Six Product Baseline 003 aircraft with associated role equipment to support Initial Operational Capability milestones;<br>2. Issue of Australian Military Type Certificate and Service Release;<br>3. Completion of all MRH90 facilities at Townsville, Oakey and Nowra;<br>4. Establishment of mature planned contractor support to maintenance and logistics; and<br>5. Provision and certification of Mission Management systems necessary for Initial Operational Capability milestones.<br><br>Initial Material Release was achieved in May 2013. | Achieved |
| Final Materiel Release (FMR) | 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);<br>2. Role equipment delivered to support aircraft;<br>3. A mature sustainment organisation capable of discharging all in-service responsibilities; including logistic and training requirements;<br>4. Mature training system with all training devices accepted, supported by an effective, functioning training organisation; and<br>5. All facilities and support equipment, required to support the capabilities accepted.<br>The project is focused on the timely delivery of capability to meet future operational milestones. This includes the delivery of crucial products such as the replacement Cargo Hook, the Fast Roping and Rappelling Device and a Common Ground Mission Management System.<br><br>FMR is forecast to be achieved in **June 2020.** | Not yet achieved |

## Section 5 – Major Risks and Issues

5.1 Major Project Risks

| Identified Risks (risk identified by standard project risk management processes) | |
|---|---|
| Description | Remedial Action |
| There is a risk that the MRH Program may not be able to retain sufficient levels of experienced and skilled manpower to achieve the required rate of Acquisition deliverables leading to an impact on schedule and capability. | 1. Early identification of staff transition and turnover.<br>2. Detailed succession planning.<br>3. Early engagement with Army and Royal Australian Air Force posting Directorates and CASG, to identify solutions.<br>4. Identify areas where contracted workforce can supplement where applicable. |
| There is a risk that Industry may not be able to retain sufficient workforce, prior to Acquisition Project closure, to sustain the timely delivery of the remaining capability elements. | 1. Apply provisions of the contract to incentivise delivery to the schedule.<br>2. Actively engage Industry and scrutinise performance against product delivery through the following forums:<br>a. Critical Item Review<br>b. Project Executive Meetings<br>c. Project Management Review<br>d. Weapons Systems Working Group<br>e. Project Management Stakeholder Group |
| **Emergent Risks (risk not previously identified but has emerged during 2017-18)** | |
| Description | Remedial Action |
| **There is a chance that the MRH90 capability transition into 6Avn Regt will be affected by delays in delivery of key capability and role equipment leading to a delay of MRH90 transition and extension of Black Hawk for 6Avn Regt operations.** | **1. Form 6Avn Integrated Project Team.**<br>**2. Monitor delivery of key capabilities.**<br>**3. Mitigate delays including through Industry collaboration.**<br>**4. Implement solution for each deliverable.** |

5.2 Major Project Issues

| Description | Remedial Action |
|---|---|
| The Full Flight Mission Simulator configuration alignment with the MRH90 aircraft has been affected by the length of time required to upgrade to Sustainment Software Build 1.1. | 1. Evaluate options for consolidating Full Flight Mission Simulator technologies to a single manufacturer.<br>2. Establish an efficient process of obtaining aircraft documentation and associated software packages.<br>3. Integrate engineering change proposals between MRH90 aircraft and the Full Flight Mission Simulator. |
| The Electronic Warfare Self Protection system is not performing to specification during specific aircraft manoeuvres. | 1. Conduct a technical assessment of the issues identified and provide recommendations for remediation.<br>2. Commonwealth to assess the validity of the recommendations with system specialists.<br>3. Verification and validation of the remediation activities by Industry.<br>4. Implement solution to meet capability requirements. |
| The Fast Roping and Rappelling is not suitable which has affected the achievement of operational capability leading to an impact on schedule and performance. | 1. Interim Fast Roping and Rappelling Device solution has been design accepted and service release has been achieved.<br>2. Identify design options for enduring solution.<br>3. **Contract for enduring solution.**<br>4. **Implement enduring solution – Fast Roping, Rappelling and Extraction System.**<br><br>**This issue has been downgraded as a result of contracting for the enduring solution.** |
| The Enhanced MRH Armament Sub-System (EMAS) is incompatible with an introduced weapon leading to an impact on operational performance and delivery schedule. | 1. Implement interim capability.<br>2. Identify design options for enduring solution for both Navy and Army.<br>3. **Contract for enduring solution.**<br>4. Implement **enduring** solution **- Taipan Gun Mount System.**<br><br>**This issue has been downgraded as a result of contracting for the enduring solution.** |
| The existing Ground Mission Management System (GMMS) is not suitable for integration with the ADF mandated Joint Mission Planning System (JMPS) leading to an impact on MRH90 operational performance. | 1. Formation of user working group.<br>2. Develop and agree on options to meet capability requirements.<br>3. Implement agreed solution. |
| The initial AME solution is not suitable for high care or multiple extractions which will delay the final solution delivery schedule. | 1. Formation of Aero-Medical Evacuation capability working group. |

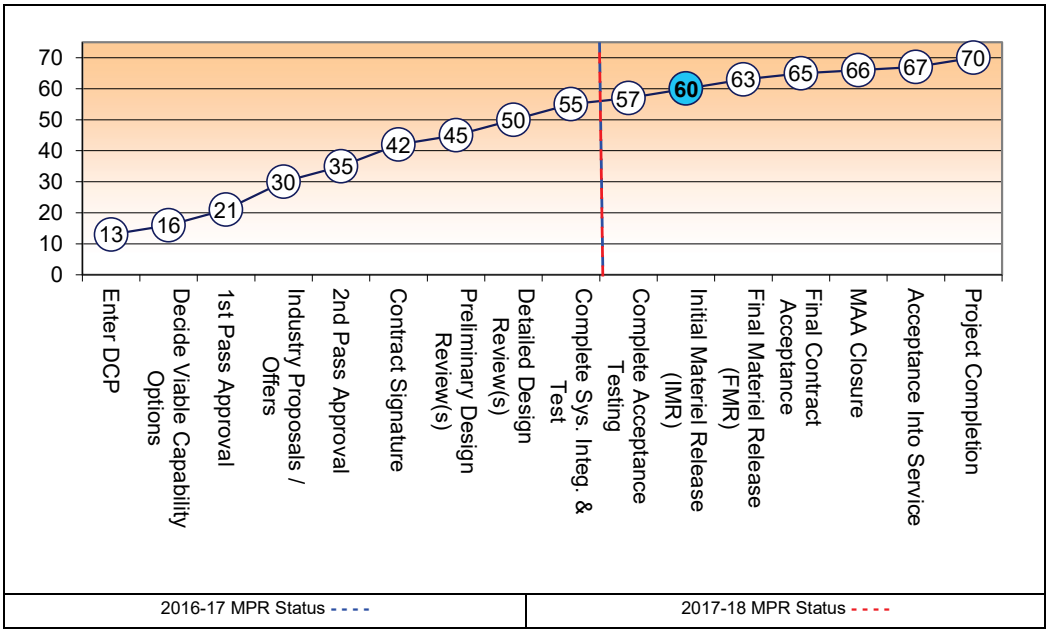
| | |
|---|---|
| | 2. Develop and agree on the functional requirements specification with Commonwealth stakeholders and Industry.<br>3. Implement agreed solution. |
| The current Cargo Hook design is incompatible with Australian Defence Equipment which will delay the final solution delivery. | 1. Develop Statement of Requirement for new Cargo Hook.<br>2. Industry to provide proposal for new Cargo Hook.<br>3. Develop and agree on options enduring solution to meet capability requirements.<br>4. Implement agreed solution. |
| **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** | **1. Accept incremental improvements where appropriate**<br>**2. Identify design options for enduring solution for both Navy and Army as required**<br>**3. Leverage NATO Helicopters 90 community solutions where appropriate**<br>**4. Re-baseline FMR are date via Out of Session PMSG brief to allow update of MAA.**<br>**5. Contract for enduring solution.**<br>**6. Implement enduring solutions to achieve FMR** |

| Note |
|---|
| Major risks and issues in Section 5 are excluded from the scope of the review. |

## Section 6 – Project Maturity

6.1 Project Maturity Score and Benchmark

| Maturity Score | | Attributes | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|
| | | Schedule | Cost | Requirement | Technical Understanding | Technical Difficulty | Commercial | Operations and Support | |
| Project Stage | Benchmark | 10 | 8 | 8 | 8 | 9 | 8 | 9 | 60 |
| Initial Materiel Release | Project Status | 7 | 7 | 9 | 9 | 8 | 7 | 9 | 56 |
| | Explanation | • **Schedule:** The Final Materiel Release and Final Operational Capability dates are currently under review and are expected to be clarified in **quarter 4 2018** with the approval of a revised Materiel Acquisition Agreement.<br>• **Cost:** Not all risks have been retired; however the estimate at completion to mitigate remains within contingency guidance.<br>• **Requirement:** The MRH System design and acceptance testing phases are essentially complete, with activities on-going for outstanding elements such as cargo hook and mission troop seat. Additionally, the project office, with Navy and Army, is conducting validation trials to demonstrate that the system meets in-service requirements.<br>• **Technical Understanding:** The knowledge necessary to operate and support the platform is being transferred to the in-service providers.<br>• **Technical Difficulty:** Capability is still being tested fully due to the immaturity of elements of the capability.<br>• **Commercial:** Deed 2 settled a number of long outstanding commercial issues and has implemented sound management arrangements to provide confidence that industry effort will be focused on capability realisation. | | | | | | | |




## Section 7 – Lessons Learned

7.1 Key Lessons Learned

| Project Lesson | Categories of Systemic Lessons |
|---|---|
| Early establishment of the Sustainment organisations. Both Commonwealth and Industry teams need to be set up well in advance of the first of the deliveries. The provision of accepted aircraft to an Operational Squadron has led to a range of lessons in regard to command and control of assets and people, stakeholder management and the relationship with Industry. | Resourcing |
| The impact of attaining limited Intellectual Property rights has been critical to the ongoing development of the capability and achievement of value for money in further contract negotiations. It has also limited the provision of data for integration with other platforms (such as the Landing Helicopter Dock ships). | Contract Management |
| The MRH Program was incorrectly viewed as a Military off-the-Shelf (MOTS) acquisition. Lessons associated with intended MOTS procurements include: that it is essential that the maturity of any offered product be clearly assessed and understood; and that elements of a chosen off-the-shelf solution may not meet the user requirement. | Off-the-shelf Equipment |
| Better arrangements should be put in place to ensure appropriate considerations of contractor performance occur before the Commonwealth enters into similar contracts with the same contractor. | Contract Management |

## Section 8 – Project Line Management

8.1 Project Line Management in 2017-18

| Position | Name |
|---|---|
| Division Head | MAJGEN Andrew Mathewson **(to Nov 17)**<br>**Mr Shane Fairweather (Nov 17 - current)** |
| Branch Head | BRIG Jeremy King |
| Project Director | COL Brad Warren |
| Project Manager | Mr Hilton Hunter |