

## Project Data Summary Sheet<sup>145</sup>

Project Number	<b>AIR9000 Phase 2, 4 and 6</b>
Project Name	<b>MULTI-ROLE HELICOPTER</b>
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 Performance

###### In-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.

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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.

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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<p>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.</p>
<p><b>Uniqueness</b></p> <p>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.</p> <p>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).</p> <p>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.</p>
<p><b>Major Risks and Issues</b></p> <p>The current open issues being managed by the project are:</p> <ul style="list-style-type: none"> <li>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.</li> </ul> <p>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.</p> <ul style="list-style-type: none"> <li>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.</li> <li>Spares will need to be procured to support the new role equipment and capabilities being developed for the MRH90.</li> <li>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.</li> </ul>
<p><b>Other Current Related Projects/Phases</b></p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>
<p><b>Note</b></p> <p>Major risks and issues are excluded from the scope of the Auditor-General's Independent Assurance Report.</p>

## Section 2 – Financial Performance

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

Date	Description	\$m	Notes
	<b>Project Budget</b>		
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
		<b>3,522.8</b>	
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)	
		<b>(295.2)</b>	
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	<b>Total Budget</b>	<b>3,770.7</b>	
	<b>Project Expenditure</b>		
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
		<b>(3,461.3)</b>	
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	<b>Total Expenditure</b>	(36.0)
		<b>(3,497.1)</b>
Jun 22	<b>Remaining Budget</b>	<b>273.6</b>

**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.
	(105.6)	52.2	Total Variance (\$m): (53.4)
	(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	
113.2	36.0	(77.2)	Total Variance	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.
		(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
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.
<b>Major equipment accepted and quantities to 30 Jun 22</b>			
<ul style="list-style-type: none"> <li>Forty-seven MRH aircraft have been accepted to date.</li> <li>Both Full Flight Mission Simulators have been accepted by the Commonwealth.</li> <li>Aircraft Maintenance Trainer has been accepted.</li> </ul>			
<b>Notes</b>			
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	
System Design	Full Flight and Mission Simulators	May 08	Nov 08	Mar 09	9	3
	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	
Critical Design	Full Flight and Mission Simulators	Feb 09	Sep 09	Oct 09	8	3
	MRH aircraft - Phase 2	May 06	May 06	Jun 06	1	
	MRH aircraft - Phase 4/6	Aug 08	N/A	Oct 08	2	
	MRH Software Support Centre	N/A	Oct 07	Sep 07	(1)	
	Electronic Warfare Self Protection Support System	Sep 06	Sep 06	Oct 06	1	
	Ground based Mission planning and Management System	Nov 06	Nov 07	Jul 08	20	2
	MRH Instrumented System	N/A	Jun 08	Jun 08	0	
Full Flight and Mission Simulators	Aug 09	Feb 10	Apr 10	6	3	
<b>Notes</b>						
1	Delays in the Systems Engineering process have resulted from the more developmental nature of the aircraft system, with the MRH90 variant being unique in some ways.					
2	Ground Mission Management System software delays are directly attributable to aircraft schedule delivery slip.					
3	Full Flight Mission Simulators design review delays stem primarily from slow Contractor derivation of requirements into a suitable System and Subsystem Specification. This was compounded by delays in the prime contractor establishing a vital subcontract with the aircraft manufacturer.					

## 3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System/Platform Variant	Original 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
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	
<b>Notes</b>						
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

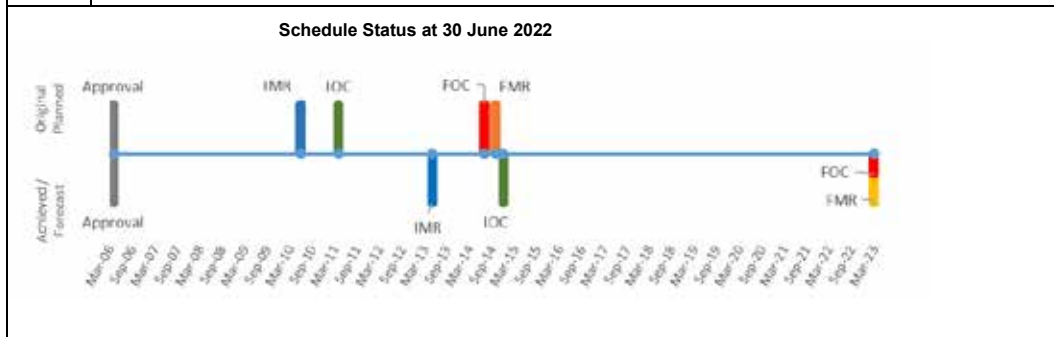
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Final Operational Capability (FOC)	Navy	Dec 12	-	-	5
	Army	Jul 14	Mar 23	104	4,5

**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.



**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**

	<p><b>Green:</b> 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.</p>
	<p><b>Amber:</b> Supportability and capability assurance costs to life-of-type present future capability risk.</p>
	<p><b>Red:</b> 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.</p>

**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"> <li>Six Product Baseline 003 aircraft with associated role equipment to support Initial Operational Capability milestones;</li> <li>Issue of Australian Military Type Certificate and Service Release;</li> <li>Completion of all MRH90 facilities at Townsville, Oakey and Nowra;</li> <li>Establishment of mature planned contractor support to maintenance and logistics; and</li> <li>Provision and certification of Mission Management systems necessary for Initial Operational Capability milestones.</li> </ol> <p>Initial Materiel Release was achieved in May 2013.</p>	Achieved
Initial Operational Capability (IOC)	<ol style="list-style-type: none"> <li>Achievement of Operational Capability Maritime Support 1 (OCM1) – a single flight embarked for limited daytime operations.</li> <li>Achievement of Operational Capability Amphibious 1 (OCA1) Milestones – deployment of a single troop (three aircraft) in a permissive environment.</li> </ol> <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"> <li>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);</li> <li>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);</li> <li>A mature sustainment organisation capable of discharging all in-service responsibilities; including logistic and training requirements;</li> <li>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</li> <li>All facilities and support equipment, required to support the capabilities accepted.</li> </ol> <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"> <li>Operational Capability Maritime (OCM3) - Three embarked flights (<i>Note: OCM3 will not be declared as a result of Navy ceasing MRH Operations</i>)</li> <li>Operational Capability Land (OCL3) - Two Airmobile Squadrons</li> <li>Operational Capability Amphibious (OCA4) - One Squadron capable of supporting amphibious operations</li> <li>Operational Capability Special Operations Support (OCS2) - One Special Operations Aviation Task Unit.</li> </ol> <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

## Project Data Summary Sheets

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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"> <li>1. Formation of Cabin Integration Working Group;</li> <li>2. Industry Prototyping;</li> <li>3. Accept incremental improvements;</li> <li>4. Use of Liquidated Damages as offset</li> <li>5. Leverage NATO Helicopters 90 (NH90) community solutions</li> <li>6. MAA v2.5 (approved 9 July 2019) approved a re-baselined FMR</li> <li>7. Ongoing delays require further review of the MAA.</li> </ol> <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"> <li>1. An Aero-Medical Evacuation (AME) capability working group was initially formed and has now evolved into an Integrated Project Team (IPT).</li> <li>2. The functional requirements specification has been agreed with Commonwealth stakeholders and Industry.</li> <li>3. Phase 1 of the AME solution is in contract.</li> <li>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.</li> </ol> <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"> <li>1. The Taipan Gun Mount will replace the current self-protection weapons system.</li> <li>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.</li> <li>3. Maintenance Training for Armourers on M134D was funded by the project and has been conducted.</li> <li>4. TGM has achieved Incorporation Approval and all artefacts supporting Service Release have been submitted.</li> <li>5. This issue will be closed when the TGM is granted Service Release.</li> </ol> <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"> <li>1. As new Role Equipment is developed for MRH90 spares to support the new items are being procured.</li> <li>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.</li> <li>3. This issue will be closed when MRH90 role equipment has been granted Service Release.</li> </ol> <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"> <li>1. Form 6 Avn Regt Integrated Project Team.</li> <li>2. Monitor delivery of key capabilities.</li> <li>3. Mitigate delays including through Industry collaboration.</li> <li>4. Implement solution for each deliverable.</li> </ol> <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