

## Project Data Summary Sheet<sup>156</sup>

Project Number	<b>AIR 9000 Phase 2, 4 and 6</b>
Project Name	<b>MULTI-ROLE HELICOPTER</b>
First Year Reported in the MPR	2008-09
Capability Type	Replacement
Acquisition Type	Australianised MOTS
Capability Manager	Chief of Navy and Chief of Army
Government 1st Pass Approval	Apr 06 (Phases 4 and 6)
Government 2nd Pass Approval (or key Government pre-Second Pass Approval)	Aug 04 (Phase 2), Apr 06 (Phases 4 and 6)
Budget at 2nd Pass Approval (or key Government pre-Second Pass Approval)	\$3,522.8m
Total Approved Budget (Current)	<b>\$3,773.9m</b>
2019-20 Budget	<b>\$119.9m</b>
Project Stage	Initial Materiel Release
Complexity	ACAT I



### Section 1 – Project Summary

#### 1.1 Project Description

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

#### 1.2 Current Status

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

##### Cost Performance

###### In-year

The project has spent **\$106.0m** against a budget of **\$119.9m to the end of June 2020**. The **\$13.9m cash underspend to the end of June 2020** is primarily due to **the timing of invoice payments at year end**.

###### Project Financial Assurance Statement

As at **30 June 2020**, project AIR 9000 Phase 2, 4 & 6 has reviewed the approved scope and budget for those elements required to be delivered by **Defence**. Having reviewed the current financial and contractual obligations of **Defence**, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget, including contingency remaining for the project to complete against the agreed scope.

###### Contingency Statement

The project has **committed** contingency in the financial year primarily for the treatment of various supportability and performance risks such as a replacement Mission Management System (**including Development Services and Software Development Support**), Mini Gun system **Support and Test Equipment**, Helicopter Aircrew Respiratory System (HARS) **sparing**, ISU Containers, C17 **Phase 2 Tactical Loading and additional equipment for Optimised Loading**, **Helmet Mounted Sight Display (HMSD) Improved Image Intensifier Tubes**, **feasibility study into required changes to the Aero Medical Evacuation – Mature (AME-M) and Taipan Gun Mount batteries and Captive Carriage requirements**. The **commitment** of Contingency is directly in support of the transition of the MRH90 into 6 Avn Regt.

#### 156 Notice to reader

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

### Schedule Performance

As a result of the Deed 2 negotiations with the contractor, the final delivery of aircraft was rescheduled to July 2017; this, and ongoing technical deficiencies, have resulted in delays to the Final Materiel Release (FMR) and Final Operational Capability (FOC) milestones. However, a number of capability milestones have been declared, including Army Initial Operational Capability (IOC) in December 2014, Navy IOC in February 2015, first Operational Capability Land (OCL1) in September 2015, second and third Operational Capability Amphibious (OCA2/3) in December 2015, the second Operational Capability Land (OCL2) in March 2016 and the third Operational Capability Land (OCL3) in February 2018. The FMR and FOC dates have been updated to June 2021 and December 2021 to support a revised Materiel Acquisition Agreement.

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

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

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

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

In September 2017, Chief of Army's Senior Advisory Committee (CASAC) endorsed and CA agreed to continue the transition of MRH90 into 6 Avn Regt which commenced in January 2019 and will conclude with the withdrawal of the Black Hawk helicopters and 6 Avn Regt taking on full Special Operations capability by the end of 2021.

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

**The Fast Roping, Rappelling and Extracting System has achieved Service Release and is entering service with the operating units.**

**The Taipan Gun Mount has completed its testing phase utilising all required weapons and is progressing through final design and qualification activities.**

**During the past year a number of capabilities have transitioned from the project office to the Sustainment Organisation including; all MRH Engineering Data, the Electronic Warfare Self-Protection System, the Aircraft Systems Trainer, CH47 Transport, the MRH90 Technical Publications, the heavy Stores Carrier and External Auxiliary Fuel Tank, C17 Transport and the Full Flight and Mission Simulator.**

### Materiel Capability Delivery Performance

Following achievement of In-Service Date (ISD) with agreed partial achievement of the contracted MRH capabilities, there has been significant work by both Industry and the Commonwealth to define and implement a series of capability block enhancements to bring the MRH90 to contracted standards. This included a retrofit program to progressively bring all aircraft up to the contracted standard. FMR has been reviewed and is now forecast to be achieved in June 2021 as the technical and supportability issues are resolved to meet the final operational capability. At this time it is expected that FMR will include the transfer of Project funding and contract management responsibilities concerning the completion of the remaining long lead time acquisition activities for Aero Medical Evacuation Equipment (AMEE), **C-17 Tactical Loading** and an Aircraft Maintenance Trainer (AMT) to the Army Aviation System Program Office (AASPO)

**MRH achieved 55.8% of its planned 2019/20 Financial Year Rate Of Effort. This represents hours actually flown, compared to planned flying hours. ROE is a Sustainment Contract Key System Health Indicator and this achievement indicates that some Key Performance Indicators are below the required performance bands.**

### Note

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

### 1.3 Project Context

#### Background

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

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

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

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

In November 2005 the Defence Capability and Investment Committee agreed that the way forward was to seek a combined first and second pass approval for both Phases 4 and 6 as part of a single approval process.

Cabinet endorsement was gained in April 2006 in a combined first and second pass process for Phase 4 and Phase 6. The agreed method of procurement, a two stage Contract Change Proposal (CCP), resulted in the execution of options contained in the Program Agreement for the procurement of additional aircraft approved under Phases 4 and 6. Initial CCPs for the Acquisition, Sustainment and Program Agreement Contracts were signed in June 2006.

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<p>The three AIR 9000 Phase 2, 4 &amp; 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.</p> <p>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.</p> <p>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.</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 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.</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 provides the project with a single interface for introduction into service issues.</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 current Cargo Hook Design is incompatible with Australian Defence Equipment which will delay maritime capability milestones OCM2 and OCM3 until the Enhanced Cargo Hook System is delivered.</li> <li>• The achievement of the FMR has been delayed by the late delivery of role equipment including the Taipan Gun Mount, Enhanced Cargo Hook System, AME-Mature, and the Mission Troop Seat leading to an impact on cost, schedule and performance.</li> <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>• Additional deployment spares are required to support transition into 6 Avn Regt.</li> <li>• Spares will need to be procured to support the new role equipment and capabilities being developed for the MRH90</li> <li>• Existing helicopter support facilities will require modification or upgrade to accommodate the MRH90.</li> <li>• The current design of the self-protection weapons system is not meeting capability requirements.</li> <li>• 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.</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> <li>• The MRH Program may not be able to retain sufficient levels of experienced and skilled work force to achieve the required rate of Acquisition deliverables leading to an impact on schedule and capability.</li> </ul>
<p><b>Other Current Related Projects/Phases</b></p> <p>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.</p> <p>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.</p> <p>AIR 90 Identification Friend or Foe (IFF): AIR 90 will upgrade the MRH90 to the Mode 5 IFF waveform to maintain interoperability with US and NATO secure combat identification systems.</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	<b>Government Second Pass Approval (Phase 2)</b>	953.9	
Jun 06	Real Variation - Scope (Second Pass Phase 4 and 6)	2,565.6	2
	<b>Total at Second Pass Approval</b>	<b>3,522.8</b>	
Oct 06	Real Variation - Transfer	(219.0)	3
Oct 08	Real Variation - Transfer	(20.0)	4
	Real Variation - Scope	31.5	5
Sep 17	Real Variation - Budgetary Adjustment	(87.4)	6
Nov 18	Real Variation - Transfer	(0.2)	10
		(295.1)	
Jul 10	Price Indexation	679.8	7
Jun 20	Exchange Variation	(133.6)	
	<b>Total Budget</b>	<b>3,773.9</b>	
	<b>Project Expenditure</b>		
Prior to Jul 19	Contract expenditure - Airbus AP	(2,744.6)	
	Contract expenditure - CAE Australia	(176.6)	
	Contract expenditure - Leonardo Helicopters	(10.3)	
	Other Contract Payments / Internal Expenses	(284.5)	8
		(3,216.0)	
FY to Jun 20	Contract expenditure - Airbus AP	(54.2)	
	Contract Expenditure - Leonardo Helicopters	(1.6)	
	Other Contract Payments / Internal Expenses	(50.2)	9
		(106.0)	
Jun 20	<b>Total Expenditure</b>	<b>(3,322.0)</b>	
Jun 20	<b>Remaining Budget</b>	<b>451.9</b>	
<b>Notes</b>			
1	This project's original budget amount is that prior to achieving Second Pass Government Approval.		
2	Incorporation of AIR 9000 Phase 4 (Black Hawk Upgrade/Replacement) and AIR 9000 Phase 6 (Maritime Support Helicopter).		
3	The funding related to facilities elements of the project was managed by Defence Estate and Infrastructure Group (DE&IG).		
4	Transfer to DE&IG for Facilities Infrastructure.		
5	Real Cost Increase funding for Full Flight Mission Simulator.		
6	Real Variation for Budget Adjustment (\$87.4m). This was offset and corrected by CFO by a subsequent Exchange Adjustment in the BORIS Bi-Annual update.		
7	Up until July 2010, indexation was applied to project budgets on a periodic basis. The cumulative impact of this approach was \$556.1m. In addition to this amount, the impact on the project budget as a result of out-turning was a further \$123.7m having been applied to the remaining life of the project.		
8	Other expenditure: <b>\$284.5m</b> for operating expenditure, contractors, consultants, and other capital expenditure not attributable to the aforementioned contracts.		
9	Other expenditure: <b>\$50.2m</b> which includes <b>\$41.6m</b> for capability re-design expenditure, <b>\$6.1m</b> for contractors and consultants, <b>\$1.8m</b> for other capital expenditure not attributable to the aforementioned contracts, and <b>\$0.7m</b> for operating expenditure.		
10	Budget transfer to DE&IG of \$0.2m for temporary amenities at 6 Aviation Regiment.		

### 2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
56.0	120.1	119.9	PBS to PAES: The variation is primarily due to accrued 2018-19 payments that were delayed to 2019-20, early partial achievement of Final Acceptance milestone criteria, and the allocation of contingency budget to realised risks associated with the stand up of 6 Aviation Regiment. PAES to Final Plan: The variance primarily reflects the reprogramming of capability funding.
Variance \$m	64.1	(0.2)	Total Variance (\$m): <b>63.9</b>
Variance %	114.5	(0.2)	Total Variance (%): <b>114.1</b>

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## 2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		0.5	Australian Industry	The \$13.9m variance is primarily due to the timing of invoice payments at year end.
			Foreign Industry	
			Early Processes	
		(13.9)	Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
		(0.5)	Effort in Support of Operations	
			Additional Government Approvals	
119.9	106.0	(13.9)	Total Variance	
		(11.6)	% Variance	

## 2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 20 \$m			
Airbus AP	Jun 05	846.3	2,947.8	VARIABLE	ASDEFCON (Strategic)	1,2,3,4
CAE Australia	Dec 07	180.5	176.5	VARIABLE	ASDEFCON (Complex)	4,5
Leonardo Australia	Apr 18	16.3	16.8	VARIABLE	Deed	4,6
<b>Notes</b>						
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 2018, there have been key CCPs processed for an Aeromedical Evacuation Mature System (Phase 1), replacement Cargo Hooks and Heavy Stores Carriers (HSCs) and External Auxiliary Fuel Tanks (EAFTs) Packaging.					
4	Contract value as at 30 June 2020 is based on actual expenditure to 30 June 2020 and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable).					
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.					
Contractor	Contracted Quantities as at		Scope	Notes		
	Signature	30 Jun 20				
Airbus AP	12	47	MRH90 Aircraft	1		
CAE Australia	2	2	Full Flight and Mission Simulator			
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 20</b>						
Forty-seven MRH aircraft have been accepted to date. Both Full Flight Mission Simulators have been accepted by the Commonwealth.						
<b>Notes</b>						
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 Contracted	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
<b>Notes</b>						
1	Delays in the Systems Engineering process have resulted from the more developmental nature of the aircraft system, with the MRH90 variant being unique in some ways.					
2	Ground Mission Management System software delays are directly attributable to aircraft schedule delivery slip.					
3	Full Flight Mission Simulators design review delays stem primarily from slow Contractor derivation of requirements into a suitable System and Subsystem Specification. This was compounded by delays in the prime contractor establishing a vital subcontract with the aircraft manufacturer.					

### 3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System / Platform Variant	Original Contracted	Currently Contracted	Achieved /Forecast	Variance (Months)	Notes
System Integration	MRH aircraft - Phase 2	Jul 06	Nov 06	Dec 06	5	
	MRH aircraft - Phase 4/6	N/A	N/A	N/A	N/A	1
	MRH Software Support Centre	N/A	Oct 08	Nov 08	1	
	Electronic Warfare Self Protection Support System	N/A	N/A	Nov 07	N/A	
	Ground based Mission planning and Management System	N/A	N/A	N/A	N/A	2
	MRH Instrumented System	Nov 08	May 09	Dec 09	13	3
	Full Flight and Mission Simulators	Jun 11	Sept 11	Sep 11	4	4
Acceptance	Type Acceptance Review Special Flight Permit 1	Oct 07	N/A	Dec 07	2	5
	Australian Military Type Certificate	Dec 08	Dec 10	Apr 13	52	6
	Full Flight and Mission Simulator #1	Jul 12	Aug 13	Aug 13	13	7
	Full Flight and Mission Simulator #2	Jan 13	Oct 14	Oct 14	21	7
	Ground based Mission planning and Management System Lot 1	Feb 09	Sep 09	Dec 09	10	8
	Ground Mission planning and Management System Lot 2	Feb 09	Dec 09	Apr 10	14	8
	Ground Mission planning and Management System Lot 3	Sep 10	Sep 10	Mar 13	30	8
	MRH Software Support Centre	Feb 09	Feb 09	Dec 08	(2)	
	Electronic Warfare Self Protection Support System	Dec 07	Dec 07	Dec 07	0	
	MRH Instrumented System	Mar 10	Jun 10	Sep 11	18	9
Aircraft Acceptance	MRH aircraft #01 (First aircraft)	Dec 07	N/A	Dec 07	0	
	MRH aircraft #05 (First Australian built aircraft)	Dec 08	N/A	Dec 08	0	
	MRH aircraft #46	Jul 14	Jun 17	Jun 17	35	10
	MRH aircraft #47 (Final Aircraft)	Jul 17	Jul 17	Jul 17	0	

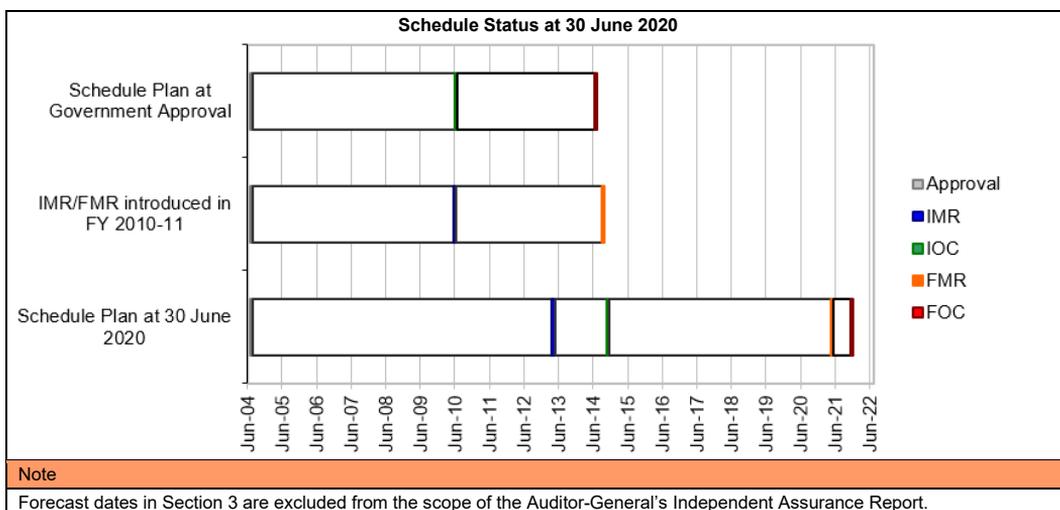
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Notes	
1	Phases 4/6 were rolled into the MRH Program from aircraft 13 onwards, which increased the number of aircraft from 12 to 46.
2	The acceptance and test-readiness of the Ground Mission Management System (GMMS) was broken into six lots post contract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

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

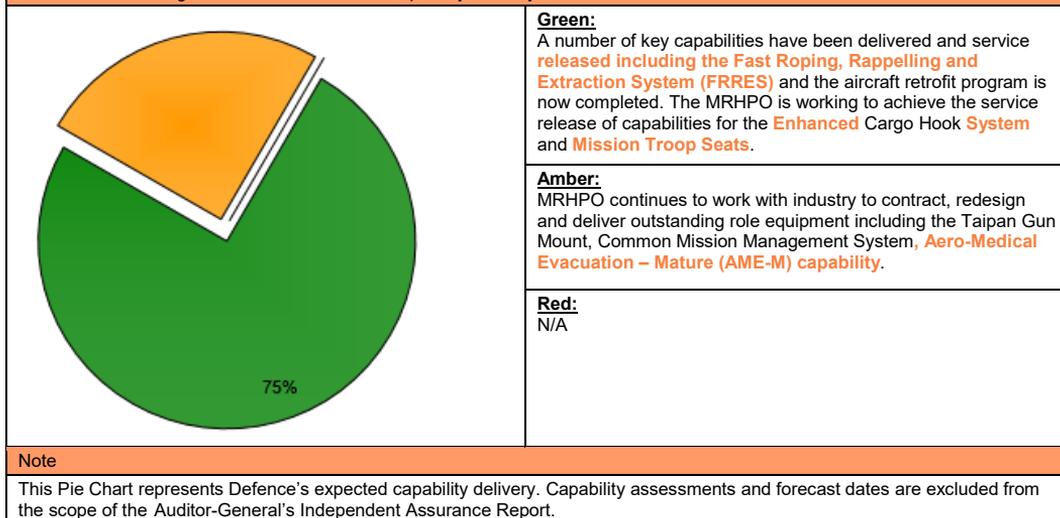
Item		Original Planned	Achieved /Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Army/Navy	Jun 10	May 13	35	1
Initial Operational Capability (IOC)	Navy	Jul 10	Feb 15	55	2
	Army	Apr 11	Dec 14	44	3
Final Materiel Release (FMR)	Army/Navy	Oct 14	Jun 21	80	4
Final Operational Capability (FOC)	Navy	Dec 12	-	-	5
	Army	Jul 14	Dec 21	89	4,5
Notes					
1	The MRH90 program stopped accepting aircraft in November 2010 due to a number of technical and reliability issues. This has impacted the achievement of capability milestones. The Commonwealth recommenced accepting aircraft in November 2011 after negotiating a remediation plan to address a number of engineering and reliability issues; however acceptance of aircraft was again suspended in February 2012 pending resolution of another technical concern related to the aircraft's cargo hook. In May 2012 the Commonwealth agreed to accept a further four aircraft based on Airbus AP's agreement to the commercial terms associated with the rectification of the cargo hook issue. Scheduled aircraft acceptance recommenced in June 2012 with the final aircraft (#47) accepted in July 17. IMR was declared on 13 May 2013, based on 6 Product Baseline 003 aircraft.				
2	Affected by delays to IMR. (Refer to Note 1 above)				
3	Affected by delays to IMR. (Refer to Note 1 above)				
4	Dates directly impacted by delay to IMR. (Refer to Note 1 above). The remediation of technical deficiencies and issues through replacement or re-design will draw upon significant engineering, logistic and commercial resources and will therefore form the critical path toward achieving FMR. The FMR and FOC dates have been reviewed to reflect this.				
5	FOC is now only forecast as a single date. The last capability subset is to be realised by Army as Operational Capability Special Operations 2 (OCS2) in November 2021, which is expected to trigger FOC.				



## Section 4 – Materiel Capability Delivery Performance

### 4.1 Measures of Materiel Capability Delivery Performance

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



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

Item	Explanation	Achievement
Initial Materiel Release (IMR)	<ol style="list-style-type: none"> <li>Six Product Baseline 003 aircraft with associated role equipment to support Initial Operational Capability milestones;</li> <li>Issue of Australian Military Type Certificate and Service Release;</li> <li>Completion of all MRH90 facilities at Townsville, Oakey and Nowra;</li> <li>Establishment of mature planned contractor support to maintenance and logistics; and</li> <li>Provision and certification of Mission Management systems necessary for Initial Operational Capability milestones.</li> </ol> <p>Initial Materiel Release was achieved in May 2013.</p>	Achieved
Initial Operational Capability (IOC)	<ol style="list-style-type: none"> <li>Achievement of Operational Capability Maritime Support 1 (OCM1) – embarkment of a single flight for limited daytime operations.</li> </ol>	Achieved

## Project Data Summary Sheets

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	<p>2. Achievement of Operational Capability Amphibious 1 (OCA1) Milestones – deployment of a single troop (three aircraft) in a permissive environment.</p> <p>Initial Operational Capability was achieved in Army – December 2014 and Navy – February 2015.</p>	
Final Materiel Release (FMR)	<p>1. Forty-seven aircraft configured to the contractual baseline including configuration amendments specified in Deeds 1 and 2 (one aircraft to be used as a Maintenance Training Device);</p> <p>2. Role equipment delivered to support aircraft. Role equipment completion criteria is to include the transfer of Project funding and contract management responsibilities concerning the completion of the remaining long lead time acquisition activities for Aeromedical Evacuation Equipment (AMEE) to the Army Aviation System Program Office (AASPO);</p> <p>3. A mature sustainment organisation capable of discharging all in-service responsibilities; including logistic and training requirements;</p> <p>4. Mature training system with all training devices accepted, supported by an effective, functioning training organisation. Training completion criteria to include the transfer of Project funding and contract management responsibilities concerning the completion of the remaining long lead time acquisition activities for an additional Aircraft Maintenance Trainer (AMT) to AASPO; and</p> <p>5. All facilities and support equipment, required to support the capabilities accepted.</p> <p>FMR is forecast to be achieved in June 2021.</p>	Not yet achieved
Final Operational Capability (FOC)	<p>FOC is expected to be declared on achievement of all Operational Capability Milestones providing the following capabilities.</p> <p>1. Operational Capability Maritime (OCM3) - Three embarked flights</p> <p>2. Operational Capability Land (OCL3) - Two Airmobile Squadrons</p> <p>3. Operational Capability Amphibious (OCA4) - One Squadron capable of supporting amphibious operations</p> <p>4. Operational Capability Special Operations Support (OCS2) - One Special Operations Aviation Task Unit.</p> <p>Final Operational Capability is forecasted to be achieved in December 2021.</p>	Not yet achieved

## Section 5 – Major Risks and Issues

### 5.1 Major Project Risks

Identified Risks (risk identified by standard project risk management processes)	
Description	Remedial Action
There is a chance that the MRH90 capability transition into 6 Avn Regt will be affected by delays in delivery of key capability and role equipment leading to a delay of MRH90 transition and extension of Black Hawk for 6 Avn Regt operations.	1. <b>This Risk has been realised and is now being managed by the project as an Issue and is reported in Section 5.2.</b>
There is a risk that the MRH Program may not be able to retain sufficient levels of experienced and skilled manpower to achieve the required rate of Acquisition deliverables leading to an impact on schedule and capability.	1. <b>This Risk has been realised and is now being managed by the project as an Issue and is reported in Section 5.2.</b>
There is a risk that Industry may not be able to retain sufficient workforce, prior to Acquisition Project closure, to sustain the timely delivery of the remaining capability elements.	1. <b>This risk is the responsibility of and being managed by Industry without involvement or financial risks to Defence.</b> 2. <b>This risk is CLOSED.</b>
Emergent Risks (risk not previously identified but has emerged during 2019-20)	
Description	Remedial Action
There is a chance that additional spares are required to support Fast Roping and Rappelling Extraction System (FRRES).	1. <b>This Risk has been realised and is now being managed by the project as an Issue and is reported in Section 5.2.</b>

5.2 Major Project Issues

Description	Remedial Action
The current Cargo Hook Design is incompatible with Australian Defence Equipment which will delay the final solution delivery.	<ol style="list-style-type: none"> <li>1. Contract for the design and production of a new Cargo Hook</li> <li>2. Qualify and test the Cargo hook</li> <li>3. DASA Design Acceptance Following NQO Review - NLT - <b>27 Apr 2020.</b></li> <li>4. MRHPO and Industry to work together to achieve service release by <b>Q3 2020.</b></li> </ol>
The Fast Roping and Rappelling is not suitable which has affected the achievement of operational capability leading to an impact to schedule and performance.	<ol style="list-style-type: none"> <li>1. <b>The enduring solution the Fast Roping, Rappelling and Extracting System has achieved Service Release</b></li> <li>2. <b>This issue is CLOSED.</b></li> </ol>
The achievement of the FMR has been delayed by the late delivery of supplies according to the contracted schedule, leading to an impact on cost, schedule and performance	<ol style="list-style-type: none"> <li>1. Formation of Cabin Integration Working Group;</li> <li>2. Industry Prototyping;</li> <li>3. Accept incremental improvements;</li> <li>4. Use of Liquidated Damages as offset</li> <li>5. Leverage NATO Helicopters 90 (NH90) community solutions</li> </ol> <p>A new MAA has formally approved a re-baselined FMR.</p>
The initial AME solution is not suitable for high care or multiple extractions which will delay the final solution delivery schedule.	<ol style="list-style-type: none"> <li>1. <b>An Aero-Medical Evacuation capability working group was initially formed and has now evolved into an IPT.</b></li> <li>2. <b>The functional requirements specification has been agreed with Commonwealth stakeholders and Industry.</b></li> <li>3. <b>Phase 1 of the AME solution is in contract.</b></li> <li>4. <b>Industry has been contracted to conduct an Advanced Change Study Notice to inform and de-risk the solution for the remaining AME capability to be delivered.</b></li> <li>5. <b>After agreement of the results of the ACSN the agreed solution will be contracted.</b></li> </ol>
Existing helicopter support facilities will require modification or upgrade to accommodate the MRH90.	<ol style="list-style-type: none"> <li>1. <b>Facilities works for 6 Avn Regt are complete.</b></li> <li>2. <b>Funding for additional facilities works at 5 Avn Regt has been approved and is expected to be used with E&amp;IG to complete support facilities improvements in 5 Avn Regt to support MRH90.</b></li> </ol>
The current design of the self-protection weapons system is not meeting capability requirements.	<ol style="list-style-type: none"> <li>1. Refurbishment of armouries</li> <li>1. Maintenance Training for Armourers on M134</li> <li>2. Deployable packaging (Pelican cases) from M134 OEM (Dillon)</li> <li>3. Additional Workforce funding for Item Manager</li> <li>4. Additional spares and S&amp;TE.</li> </ol>
The existing Ground Mission Management System (GMMS) is not suitable for integration with the ADF mandated Joint Mission Planning System (JMPS) leading to an impact on MRH90 operational performance.	<ol style="list-style-type: none"> <li>1. Formation of user working group.</li> <li>2. Develop and agree on options to meet capability requirements.</li> <li>3. Implement agreed solution - <b>CMMS.</b></li> <li>4. Contracts for enduring solution are in place.</li> </ol>
The Enhanced MRH Armament Sub-System (EMAS) is incompatible with an introduced weapon leading to an impact on operational performance and delivery schedule.	<ol style="list-style-type: none"> <li>1. <b>This issue is now CLOSED.</b></li> <li>2. <b>The Taipan Gun Mount has demonstrated its capability with all required weapons.</b></li> <li>3. <b>All Taipan Gun Mount requirements are fully contracted.</b></li> </ol>
Existing packaging for some equipment has been identified as unsuitable for deployment, due to rapid deterioration and excessive size and weight.	<ol style="list-style-type: none"> <li>1. <b>This issue is now CLOSED.</b></li> <li>2. <b>Deployable containers and packaging has been delivered.</b></li> <li>3. <b>Additional packaging for specific role equipment sought via CCP-176 is fully contracted.</b></li> <li>4. Personnel have been trained in manual handling procedures and provided with equipment to manage the weight of existing packaging.</li> </ol>
<b>Additional deployment spares are required to support transition into 6 Avn Regt.</b>	<ol style="list-style-type: none"> <li>1. <b>With the transition of MRH90 into 6 Avn Regt and ongoing development of the Logistics Support Concept additional spares are being procured to support the transition.</b></li> </ol>
<b>Spares will need to be procured to support the new role equipment and capabilities being developed for the MRH90</b>	<ol style="list-style-type: none"> <li>1. <b>As new Role Equipment is developed for MRH90 spares to support the new items are being procured.</b></li> <li>2. <b>Spares Assessments are planned to be conducted after in-service use of the role equipment to ensure that spares are procured on the basis of actual failure rates in use rather than forecast failure rates</b></li> </ol>
<b>The MRH90 capability transition into 6 Avn Regt has been affected by delays in delivery of key capability and role equipment leading to a delay of MRH90 transition and extension of Black Hawk for 6 Avn Regt operations.</b>	<ol style="list-style-type: none"> <li>1. <b>Form 6 Avn Regt Integrated Project Team.</b></li> <li>2. <b>Monitor delivery of key capabilities.</b></li> <li>3. <b>Mitigate delays including through Industry collaboration.</b></li> <li>4. <b>Implement solution for each deliverable.</b></li> </ol>

The MRH Program may not be able to retain sufficient levels of experienced and skilled work force to achieve the required rate of Acquisition deliverables leading to an impact on schedule and capability.

1. Early identification of staff transition and turnover.
2. Detailed succession planning.
3. Early engagement with Army and Royal Australian Air Force posting Directorates and CASG, to identify solutions.
4. Identify areas where contracted workforce can supplement where applicable.

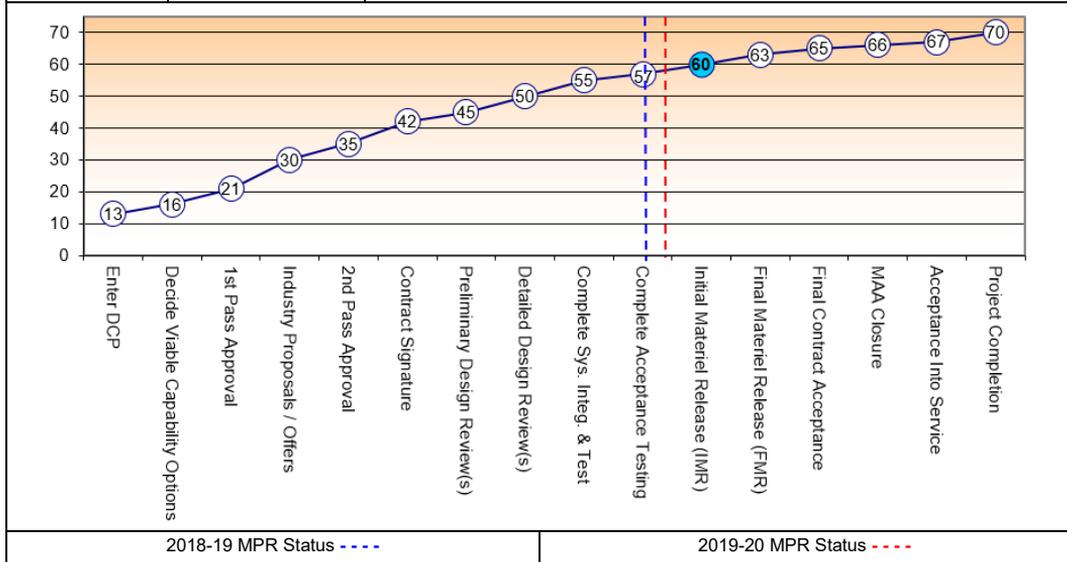
**Note**

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

**Section 6 – Project Maturity**

6.1 Project Maturity Score and Benchmark

Maturity Score		Attributes							Total
		Schedule	Cost	Requirement	Technical Understanding	Technical Difficulty	Commercial	Operations and Support	
Project Stage	Benchmark	10	8	8	8	9	8	9	60
Initial Materiel Release	Project Status	8	8	9	9	8	7	9	58
	Explanation	<ul style="list-style-type: none"> <li>• <b>Schedule:</b> The Final Materiel Release and Final Operational Capability dates have been reviewed and approved in a revised Materiel Acquisition Agreement.</li> <li>• <b>Requirement:</b> 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.</li> <li>• <b>Technical Understanding:</b> The knowledge necessary to operate and support the platform is being transferred to the in-service providers. The aircraft has been in-service with Army and Navy since achievement of IOC in 2015.</li> <li>• <b>Technical Difficulty:</b> Capability is still being tested fully due to the immaturity of elements of the capability <b>and to assess systems compatibility</b>. New capabilities tested during the last 12 months include the new cargo hook, Taipan Gun Mount, <b>Helicopter Aircrew Respiratory System, new Mission Troop Seats</b> and an upgrade to the helmet mounted sight and display system.</li> <li>• <b>Commercial:</b> <b>Following the execution of Deed 2 which settled a number of technical and commercial issues the project has worked with Airbus to develop a productive relationship through initiatives such as Common Objectives and an agreed Code of Communication. Further, all outstanding capabilities are now either in contract or in limited cases subject to Study Notices to develop final solutions.</b></li> </ul>							



## Section 7 – Lessons Learned

### 7.1 Key Lessons Learned

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

## Section 8 – Project Line Management

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

Position	Name
Division Head	Mr Shane Fairweather
Branch Head	BRIG James Allen
Project Director	COL Andrew Thomas
Project Manager	Mr Kieran Gahan