

Defence Materiel Organisation

- 5.1 This chapter of the report focuses on reform and procurement, projects of concerns and selected major projects. In addition to this, the Committee notes the large contribution that the Defence Materiel Organisation (DMO) makes to force protection measures for ADF members on active service. Given current pressures due to ADF operations in the Middle East DMO's force protection role is perhaps higher now than at any other point in its history and the Committee commends DMO for this work.
- 5.2 The Committee also notes the following statement from the ANAO's 2009 - 2010 Major Projects Report:
- The large portfolio of projects that the DMO manages is also one of the most complex and technically difficult in the country. Benchmarking undertaken by the Helmsman Institute in 2009, comparing DMO and industry project levels of complexity, indicates that the DMO projects are more complex than the average of other industries such as IT, construction, telecommunications, engineering and finance sector projects.¹
- 5.3 The Committee also notes the resignation on 7 July 2011 of Dr Stephen Gumley the Chief Executive Officer of the DMO.

¹ Australian National Audit Office, *2009-2010 Major Projects Report Defence Materiel Organisation*, November 2010, pp. 71-72.

Reform and Procurement

Background

- 5.4 Defence procurement has been the topic of much discussion, with performance of the DMO being an issue of particular interest. This discussion generally arises from failure to achieve Government expectations for timely and cost-effective delivery of the capabilities needed to equip the Australian Defence Force (ADF).
- 5.5 The responsibility for delivering this capability extends further than DMO, with Government providing strategic and resource guidance, Capability Development Group (within Defence, separate to DMO) guiding the future acquisition process, the Services themselves as Capability Managers, and Defence industry providing materiel and services.

The Kinnaird Review

- 5.6 The Kinnaird Review in 2003 commenced a process of cultural change and organisational renewal, based on the following assessment:

As the body responsible for the management of major projects, the Defence Materiel Organisation (DMO) needs to become more business-like and outcome driven. But reform must extend beyond the DMO. It is clear that change is needed at each stage of the cycle of acquisition and whole-of-life management of the equipment that comprises the core of defence capability.²

- 5.7 The Kinnaird Review's recommendations were largely accepted by Government, and a significant change process implemented. The key objectives were as follows:
- A more systematic approach to Government guidance and better clarity in advice to Government, including enhancements to the Two Pass approval process.
 - Early investment to ensure quality advice to Government and better set the conditions for ultimate project success (including: needs definition, enhanced cost estimation, identification of whole-of-life costs, and project delivery considerations for industry).

2 Defence Procurement Review 2003, August 2003., p. iii
<<http://www.defence.gov.au/publications/dpr180903.pdf>> accessed on 8 August 2011.

- Better oversight and coordination within Defence of all capability and procurement activities (which resulted in appointment of a three star officer as Chief of Capability Development Group).
- Establishment of DMO as “an executive agency within the Defence portfolio.”
- Greater control by CEO DMO over military staff appointments, to ensure appropriate skill sets and tenure in key project management roles.
- Measures by DMO to enhance project management as a profession and invaluable skill set for Defence procurement.³

The Mortimer Review

5.8 The Mortimer Review in 2008 assessed progress to date and made further recommendations. These continued in the same direction as the Kinnaird Review, and were aimed at addressing the five principal areas of concern identified by the Review:

- Inadequate project management resources in the Capability Development Group
- The inefficiency of the process leading to Government approvals for new projects
- Shortages in DMO personnel
- Delays due to inadequate industry capacity and
- Difficulties in the introduction of equipment into full service.

5.9 The Review also noted that “greater business acumen and commercial discipline” are required by the DMO.⁴ The Mortimer Review’s 46 recommendations were largely accepted by Government (42 agreed, three agreed in part and one not agreed (DMO to become an “executive agency”), and implementation is underway.

3 Kinnaird, Malcolm, *Defence Procurement Review*, Commonwealth of Australia, August 2003., p. iii <<http://www.defence.gov.au/publications/dpr180903.pdf>> viewed 8 August 2011.

4 Mortimer, David, *Going to the Next Level: the report of the Defence Procurement and Sustainment Review*, Commonwealth of Australia 2008, p. ix. <<http://www.defence.gov.au/publications/mortimerReview.pdf>> viewed 12 October 2011.

Current Status

5.10 On 6 May 2011, the Hon Stephen Smith MP, Minister for Defence and the Hon Jason Clare MP, Minister for Defence Materiel announced the “implementation of all outstanding agreed recommendations made by Mortimer as a matter of priority.”⁵ These include:

- Project directives issued by the Secretary of the Department of Defence and the Chief of the Defence Force to ensure Defence acquisitions progress according to Government direction; and
- Benchmarking all acquisition proposals against off-the-shelf options where available.⁶

5.11 Further to this, the Government also announced “a small number of reforms that build on the recommendations of Kinnaird and Mortimer” to improve project management and identifying problems early. They include:

- The introduction of a two-pass approval system for minor capital projects valued between \$8 million and \$20 million;
- Implementation of an Early Indicators and Warning system;
- The expansion of the Gate Review system; and
- The introduction of Quarterly Accountability Reports.⁷

Establishment of Independent Project Performance Office to oversee major Defence projects

5.12 The Mortimer Review into Defence Procurement and Sustainment recommended the establishment of an Independent Project Performance

5 Hon Stephen Smith MP, Minister for Defence and Hon Jason Clare MP, Minister for Defence Materiel, ‘Strategic Reform Program’, Media Release, 6 May 2011
<<http://www.defence.gov.au/minister/Claretpl.cfm?CurrentId=11769>> viewed 12 October 2011.

6 Hon Stephen Smith MP, Minister for Defence and Hon Jason Clare MP, Minister for Defence Materiel, ‘Strategic Reform Program’, Media Release, 6 May 2011
<<http://www.defence.gov.au/minister/Claretpl.cfm?CurrentId=11769>> viewed 12 October 2011.

7 Hon Stephen Smith MP, Minister for Defence and Hon Jason Clare MP, Minister for Defence Materiel, ‘Strategic Reform Program’, Media Release, 6 May 2011
<<http://www.defence.gov.au/minister/Claretpl.cfm?CurrentId=11769>> viewed 12 October 2011.

Office (IPPO). On 29 June 2011 the Minister for Defence and the Minister for Defence Materiel announced the Independent Project Performance Office would begin operating from 1 July.⁸

- 5.13 The IPPO will be established within the Defence Materiel Organisation and will:
- Conduct annual full diagnostic reviews (Gate Reviews) of all major Defence capital acquisition projects;
 - Implement the new Early Indicator and Warning system announced by Mr Smith and Mr Clare on 6 May;
 - Implement the reforms announced today to the Project of Concern process and oversee the remediation of all Projects of Concern;
 - Implement a 'lessons learned' process as recommended by the Mortimer Review to improve the way projects are delivered by learning from past mistakes and successes; and
 - Assist project teams to develop more robust cost and schedule information to improve the accuracy of this information when it is provided to the Government.⁹
- 5.14 To ensure there are at least two external members on every significant Gate Review board an additional 14 independent experts with significant project management and commercial experience will be contracted by Defence to act as board members on Gate Reviews.¹⁰

8 Hon Stephen Smith MP, Minister for Defence and Hon Jason Clare MP, Minister for Defence Materiel, 'Independent Project Performance Office to oversee major Defence projects established', Media Release, 29 June 2011
<<http://www.defence.gov.au/minister/Claretpl.cfm?CurrentId=12044>> viewed 12 October 2011

9 Hon Stephen Smith MP, Minister for Defence and Hon Jason Clare MP, Minister for Defence Materiel, 'Independent Project Performance Office to oversee major Defence projects established', Media Release, 29 June 2011
<<http://www.defence.gov.au/minister/Claretpl.cfm?CurrentId=12044>> viewed 12 October 2011

10 Hon Stephen Smith MP, Minister for Defence and Hon Jason Clare MP, Minister for Defence Materiel, 'Independent Project Performance Office to oversee major Defence projects established', Media Release, 29 June 2011
<<http://www.defence.gov.au/minister/Claretpl.cfm?CurrentId=12044>> viewed 12 October 2011

Committee conclusions

- 5.15 The Committee notes that, according to the ANAO's 2009 – 2010 Major Projects Report:
- . . .while projects have been managed within approved budgets, schedule performance remains the key issue for delivery of projects.¹¹
- 5.16 The Committee is heartened by the establishment of the Independent Project Performance office, however, it is concerned with how programs are monitored and reported.

Projects of Concern

Background

- 5.17 The Projects of Concern list was established in 2008 to focus the attention of Defence and industry senior management on solving the issues required to remediate listed projects. Projects are put on the list when there are significant challenges with scheduling, cost, capability delivery or project management.¹²
- 5.18 The total number of projects placed on the list since 2008 is 18, with seven removed. Six due to remediation and two due to cancellation.¹³
- 5.19 From 2011, the DMO Annual Report will also provide an update on the Projects of Concern list, including work being undertaken to remediate these projects.¹⁴
- 5.20 The current list as released by the Hon Stephen Smith MP, Minister for Defence and the Hon Jason Clare MP, Minister for Defence Materiel on 1 February 2011 is as follows:
- CN10: Collins Class Submarine Sustainment and Projects;

11 Australian National Audit Office, *2009-2010 Major Projects Report Defence Materiel Organisation*, November 2010, p. 105.

12 Department of Defence – *Defence Annual Report Volume 2*, p. 126

13 Department of Defence – *Defence Annual Report Volume 2*, p. 126

14 Hon Stephen Smith MP, Minister for Defence, 'Projects of Concern – Update', Media Release, 15 October 2010 <<http://www.defence.gov.au/minister/105tpl.cfm?CurrentId=10942>> viewed 12 October 2011.

- AIR 5077: Phase 3 'Wedgetail' Airborne Early Warning and Control aircraft;
- SEA 1448: Phase 2B Anti-Ship Missile Defence radar upgrades for ANZAC Class;
- JOINT 2043: Phase 3A High Frequency Modernisation (HFMOD) – communications and data exchange capability for sea, air and land forces;
- AIR 5333: 'Vigilare' – Aerospace surveillance and command and control system;
- JOINT 129: Phase 2 Tactical Unmanned Aerial Vehicles – airborne surveillance for land forces;
- LAND 121: Phase 3 'Overlander' replacement field vehicles, trailers and modules for land forces ('Medium Heavy' class of vehicles only);
- JOINT 2070: Lightweight torpedo replacement for ANZAC and ADELAIDE Class Frigates;
- AIR 5402: Multi-Role Tanker Transport aircraft – Air to Air Refuelling Capability;
- JOINT 2048: Phase 1A LCM2000 Watercraft for Landing Platform Amphibious ships;
- AIR 5276: Phase 8B Electronic Support Measures upgrade for AP-3C Orion aircraft; and
- AIR 5418 Phase 1: Joint Air to Surface Standoff Missiles¹⁵

5.21 The Hon Jason Clare, Minister for Defence Materiel also indicated that meetings between Government, Defence and Industry would be held twice a year in an effort to address remediation of these projects with the ultimate goal of taking them off the list¹⁶.

15 Hon Stephen Smith MP, Minister for Defence, 'Projects of Concern – Update', Media Release, 15 October 2010 <<http://www.defence.gov.au/minister/105tpl.cfm?CurrentId=10942>> viewed 12 October 2011.

16 Hon Stephen Smith MP, Minister for Defence, 'Projects of Concern – Update', Media Release, 15 October 2010 <<http://www.defence.gov.au/minister/105tpl.cfm?CurrentId=10942>> viewed 12 October 2011.

Reforms to Projects of Concern

- 5.22 On 29 June 2011 the Minister for Defence and the Minister for Defence Materiel announced reforms to the Project of Concern process:
- The reforms include incentives for companies to fix projects that are on the list.
 - The performance of companies in addressing Projects of Concern will be considered when evaluating their tenders for other projects.
 - If companies are not satisfactorily remediating the project this will result in a negative weighting against them and in extreme circumstances could result in exclusion from further tenders until the project is fixed.¹⁷
- 5.23 Other reforms to the Projects of Concern process include:
- The establishment of a more formal process for adding projects to the list;
 - The establishment of a formal process for removing projects from the list;
 - The development of agreed remediation plans, including formal milestones for the removal of a project from the list; and
 - Increased Ministerial involvement and oversight of the process.¹⁸

17 Hon Stephen Smith MP, Minister for Defence and Hon Jason Clare MP, Minister for Defence Materiel, 'Reform to Projects of Concern', Media Release MIN187/11, 29 June 2011 <<http://www.minister.defence.gov.au/2011/06/29/reforms-to-projects-of-concern/>> viewed 12 October 2011.

18 Hon Stephen Smith MP, Minister for Defence and Hon Jason Clare MP, Minister for Defence Materiel, 'Reform to Projects of Concern', Media Release MIN187/11, 29 June 2011 <<http://www.minister.defence.gov.au/2011/06/29/reforms-to-projects-of-concern/>> viewed 12 October 2011.

Specific Projects

Joint Strike Fighter

Background

- 5.24 AIR 6000 will deliver a new air combat capability comprising around 100 Conventional Take Off & Landing (CTOL) F-35 Joint Strike Fighters (JSF) and all necessary support, infrastructure and integration to form four operational squadrons and a training squadron.¹⁹
- 5.25 Australia joined the System Development and Demonstration phase of the JSF Program in October 2002 and, through project AIR 6000 Phase 1B (approved), undertook a program of detailed definition and analysis activities leading up to Government second pass (Acquisition) approval for Phase 2A/2B Stage 1 in November 2009.
- 5.26 Phase 2A/B will acquire no fewer than 72 CTOL JSF to form three operational squadrons and a training squadron, with first deliveries in 2014 to achieve Initial Operational Capability (IOC) in 2018 and Final Operational Capability (FOC) in 2021.
- 5.27 Phase 2C (unapproved) is the acquisition of a fourth operational JSF squadron to bring the total number of aircraft to around 100. The decision to acquire the fourth operational JSF squadron will be considered in conjunction with a decision on the withdrawal of the Super Hornet. A decision on this final batch of JSF is not expected before 2015.

Current Status

- 5.28 The first 14 Joint Strike Fighters, with infrastructure and support required for initial training and testing, will be acquired at an estimated cost of \$3.2 billion. However, it should be noted that this figure is in 'Then Year' dollars, i.e. it takes inflation into account, is based on a Australia/United States exchange rate of US\$0.84, includes a considerable amount of contingency, and the proportion of the funds for aircraft is considerably less for this phase than for the overall project because of the higher proportion of broader project support elements for this first stage of the project.

19 Department of Defence, 'Defence Capability Plan', p. 57

5.29 On current plans:

- Australia's first two aircraft will be delivered in 2014 in the United States. Australia's first 10 aircraft will be based in the United States for a number of years for pilot and maintainer training and operational testing. The next four aircraft will be delivered in Australia in 2017.
- The first aircraft to arrive in Australia in 2017 will have completed Block 3 developmental and operational test and evaluation activities and will, therefore, be fully capable of meeting endorsed Australian New Air Combat Capability requirements.
- Australian-specific operational testing - primarily to ensure effective integration with other Australian Defence Force air and ground systems - will take place during 2017 and 2018, leading to Initial Operational Capability in 2018.
- Subsequent aircraft deliveries (leading to a total of no fewer than 72 aircraft) will lead to Full Operational Capability of the first three operational squadrons being achieved by 2021.
- In broad terms, the operational cost of each aircraft as a component of a mature fleet of three squadrons would be in the order of \$200-250 million (using a reasonably conservative exchange rate) over a 30 year life at the currently expected rate of effort, or about \$2.8-3.5 billion for the 14 aircraft currently approved.²⁰

5.30 The Committee enquired as to the provision for the New Air Combat Capability - AIR 6000:

As advised to the Committee by Dr Gumley in July 2008, the Defence Capability Plan (DCP) provision for our procurement of around 100 Joint Strike Fighters was approximately \$12-14 billion. The provision has not needed to have been changed other than for adjustments for exchange rate and inflation.²¹

5.31 Following the period of this review there have been many announcements and issues relating to the JSF.

5.32 In an April 2011 report the United States Government Accountability Office was critical of the JSF. It made statements as follows:

20 *Senate Hansard*, No 4, 2010 22 November 2010, p. 1856.

21 Department of Defence, *submission 5*, p. 25.

- Affordability Expectations Are Challenged as JSF Acquisition Costs Rise and Schedules Slip²²
- Program Has Still Not Fully Demonstrated a Stable Design and Mature Manufacturing Processes as It Enters Its Fifth Year of Production.²³
- Manufacturing Processes are Not Yet Mature Enough for Efficient Production at Increased Rates²⁴
- Aircraft Are Not Meeting Early Reliability Growth Plans²⁵
- Testing Has Been Slow and Has Not Demonstrated That the Aircraft Will Work in Its Intended Environment²⁶

5.33 In his May 2011 paper for the Australian Strategic Policy Institute (ASPI) entitled *What's Plan B? – Australia's air combat capability in the balance* Andrew Davies outlined some of the issues of concern and indicators of future cost effectiveness as follows:

The result is a schedule and cost estimate that is probably still workable for Australia – but with margins for error that are much reduced. The biggest risks are:

- The approved funding for the initial buy of fourteen F-35s for the RAAF beginning in 2014 is becoming very marginal. Additional cost increases could see those aircraft become more expensive than budgeted. Planned later buys probably remain affordable within the existing budget.
- On current plans the full warfighting capability of the F-35 won't be delivered until 2016 and the US Air Force have moved their in-service date to some time after that – perhaps 2017. Australia may find itself moving to initial operating capability only slightly later than the USAF. Additional slippages could further compress the timeframe.

22 United States Government Accountability Office, *Joint Strike Fighter: Restructuring Places Program on Firmer Footing, but Progress Still Lags*, April 2011, p. 6.
<<http://www.gao.gov/new.items/d11325.pdf>> viewed 20 September 2011.

23 United States Government Accountability Office, *Joint Strike Fighter: Restructuring Places Program on Firmer Footing, but Progress Still Lags*, April 2011, p. 15.
<<http://www.gao.gov/new.items/d11325.pdf>> viewed 20 September 2011.

24 United States Government Accountability Office, *Joint Strike Fighter: Restructuring Places Program on Firmer Footing, but Progress Still Lags*, April 2011, p. 18.
<<http://www.gao.gov/new.items/d11325.pdf>> viewed 20 September 2011.

25 United States Government Accountability Office, *Joint Strike Fighter: Restructuring Places Program on Firmer Footing, but Progress Still Lags*, April 2011, p. 22.
<<http://www.gao.gov/new.items/d11325.pdf>> viewed 20 September 2011.

26 United States Government Accountability Office, *Joint Strike Fighter: Restructuring Places Program on Firmer Footing, but Progress Still Lags*, April 2011, p. 24.
<<http://www.gao.gov/new.items/d11325.pdf>> viewed 20 September 2011.

The fall-back options for the RAAF to manage these contingencies are:

- Costs: slip at least some of the fourteen initial aircraft to later years – with the downside risk of slowing the working up of capability.
- Schedule: for modest further schedule slippage, keep the Hornet in service a year or two longer than is currently planned – albeit at a higher cost and reduced comparative capability. ('Plan B'). For slippages of more than two years the most credible option is a purchase of more Super Hornets. ('Plan C').

Neither of those options needs to be implemented now. But a close eye has to be kept on the F-35 program over the next two years.

The two most important indicators are:

- the price of the fourth and fifth production batches of F-35 compared to respective contracted and estimated prices; and,
- the delivery of software increments according to schedule and with the planned functionality.²⁷

5.34 RAAF officials told the Committee that:

- The JSF is strategically the right aircraft for Australia; and,
- Despite cost and time slippages the 2017 delivery date has been confirmed.

Air Warfare Destroyer

5.35 SEA 4000 is a multi-phased project to acquire a multi-role surface combatant with a strong emphasis on above water warfare. The Air Warfare Destroyer (AWD) will incorporate an integrated Australianised Combat System, which uses the USN Aegis Combat System, and a platform system based upon the design of the Spanish Armada's F-104 warship with specified changes from the F-105 baseline.

5.36 Previous phases were:

- Phase 0: Capability studies undertaken between 2001 and 2002 (Complete)
- Phase 1: Project definition between 2002 and 2005 (Complete)
- Phase 2: Project design phase from 2005 to 2007 (Complete)

27 Davies, A, *What's Plan B? – Australia's air combat capability in the balance* by Australian Strategic Policy Institute, 12 May 2011, pp. 1-2.

- Phase 3: Acquisition and build of three HOBART Class AWDs and logistic support.²⁸
- 5.37 Construction of the lead ship commenced in March 2010 and the forecast IOC is 2014.
- 5.38 Phase 4 provides for the acquisition of a maritime-based land-attack cruise missile capability for the AWD that will provide the Government with additional options to conduct long-range precision strike operations against hardened, defended and difficult access targets, while minimising the exposure of ADF platforms and personnel to attack by enemy forces.

Amphibious Deployment and Sustainment Program

- 5.39 JP 2048 is a multi-phase project to introduce an Amphibious Deployment and Sustainment (ADAS) capability to replace and enhance the current amphibious capability provided by two KANIMBLA Class Amphibious Transport Ships (LPA), the Heavy Landing Ship HMAS Tobruk, the six BALIKPAPAN Class Heavy Landing Craft, and associated Army landing craft.
- 5.40 The phases of this project are:
- Phase 1A – LPA Watercraft (now cancelled);
 - Phase 2 – Project definition study (Completed);
 - Phase 3 – LHD Watercraft (not yet approved);
 - Phase 4 A/B – Amphibious Assault Ships - LHD (Approved);
 - Phase 4C – Strategic Sealift Ship (not yet approved); and,
 - Phase 5 – Replacement Heavy Landing Craft (not yet approved).²⁹

Bushmaster Protected Mobility Vehicle

- 5.41 A total of 737 Bushmaster Protected Mobility Vehicles are being acquired in seven different variants (troop, command, mortar, assault pioneer, direct fire weapon, ambulance and air defence).
- 5.42 All 300 Bushmaster Protected Mobility Vehicles included in the original acquisition contract and all 144 Enhanced Land Force vehicles have been delivered.

28 See <<http://www.defence.gov.au/dmo/awd/sea4000/sea4000.cfm>> viewed 12 October 2011.

29 See <<http://www.defence.gov.au/dmo/adas/jp2048ph4/>> viewed 12 October 2011.

- 5.43 Delivery of the 293 vehicles being acquired under LAND 121 Overlander Phase 3 (Overlander) is on schedule, with 136 vehicles delivered as at 30 July 2010.
- 5.44 The development of the seventh and final variant of the Bushmaster Protected Mobility Vehicle, the Air Defence variant, is progressing on schedule. The prototype of this variant is due to be delivered to Defence in late 2010.
- 5.45 The project has also delivered enhanced capability in support of Operations in the Middle East Area of Operations, approved by the Government in 2007 as rapid acquisitions.
- 5.46 These initiatives have delivered 72 protected weapon stations, 116 automatic fire suppression systems and 116 purpose designed spall curtains.
- 5.47 Additional acquisitions in support of operations are being managed through the Bushmaster sustainment area.
- 5.48 The project is currently working with the original equipment manufacturer, Thales Australia, to certify the Bushmaster Protected Mobility Vehicle for sustained towing.
- 5.49 Bushmaster Protected Mobility Vehicle sustained towing certification is planned for completion in 2011.³⁰

Current status

- 5.50 Defence gave evidence to the Committee that the Bushmaster project was currently on schedule and on budget.³¹

Committee conclusions

- 5.51 The Committee has three main concerns regarding the JSF:
- cost;
 - schedule; and
 - capability.

30 See <<http://www.defence.gov.au/dmo/lsd/land116/>> viewed 12 October 2011.

31 Major General Grant Cavenagh, Department of Defence, *Transcript*, 25 March 2011, p. 98.