

---

The Parliament of the Commonwealth of Australia

# Review of the Defence Annual Report 2006-2007

Joint Standing Committee on Foreign Affairs, Defence and Trade

December 2008  
Canberra

---

© Commonwealth of Australia 2008

ISBN 978-0-642-79117-7 Printed Version

ISBN 978-0-642-79118-4 HTML Version

### **Cover photographs captions**

Australian soldiers from the 1<sup>st</sup> Reconstruction Task Force disembark an Australian C-130J Hercules on the ground in Southern Afghanistan - 13 September 2008

(Official Image No. 20060913adf8185016\_0170)

An M1A1 Abrams tank returns after engaging a number of targets across the moving target range at the Mr Bundy Training Area in the Northern Territory - 29 May 2007.

(Official Image No. 20070529adf8243523\_65)

Boeing F/A-18F Super Hornet

(Image courtesy of Boeing)

Adelaide Class Frigate (FFG) - HMAS Newcastle.

(Official Image No. 20081007ran8484535\_013)



# Contents

Foreword .....	vii
Membership of the Committee .....	ix
Terms of reference .....	xi
List of abbreviations .....	xii
List of recommendations .....	xv
<b>1 Introduction .....</b>	<b>1</b>
Defence objectives, personnel and 2006-07 Budget allocation .....	2
Annual Report review objectives and scope .....	6
Focus areas .....	7
<b>2 Defence Materiel Organisation .....</b>	<b>9</b>
Significant funding slippages for DMO's Top 30 Projects.....	9
Status of individual projects.....	12
Australian Industry Capability .....	34
Leading Edge Customer .....	36
Managing Risk and Training Project Managers.....	40
Procurement Issues.....	41
Cost-cutting.....	44
Reallocation of Funding .....	44
Conclusion .....	45

---

<b>3</b>	<b>Department of Defence - Joint Strike Fighter F35.....</b>	<b>47</b>
	Background .....	47
	Cost of the JSF program .....	49
	Progress of the JSF program.....	51
	Air Superiority .....	56
	Industry involvement.....	58
	Submissions to the Inquiry .....	59
	Conclusion .....	63
<b>4</b>	<b>Department of Defence – Personnel .....</b>	<b>65</b>
	Progress of Military Justice Changes .....	65
	Recruitment and Retention, including Personnel Shortages in Specialist Trades .....	71
	Increases in Middle and Senior Management Positions.....	79
	Impacts of fringe benefits tax and reportable allowances.....	81
<b>5</b>	<b>Department of Defence – Other issues .....</b>	<b>87</b>
	<b>ADF’s preparedness to conduct peacekeeping operations .....</b>	<b>87</b>
	Introduction .....	87
	Review of ADF peacekeeping .....	89
	<b>Abrams Tank – Current and future role of armour .....</b>	<b>94</b>
	Background .....	94
	Progress of the Abrams tank project .....	95
	Interoperability of the Abrams tank.....	96
	Deployability of the Abrams tank.....	97
	<b>Communications – lack of interoperability of new and legacy communications equipment.....</b>	<b>98</b>
	Summary of current interoperability challenges .....	98
	Network centric warfare capability.....	98
	Coalition interoperability challenges.....	100
	Other technical issues.....	101
	High Frequency Communications System .....	101
	<b>The Hardened and Networked Army .....</b>	<b>103</b>
	<b>Appendix A – List of Submissions .....</b>	<b>105</b>

**Appendix B – List of Exhibits.....107**

**Appendix C – Witnesses appearing at public hearings .....109**

Canberra ..... 109

Canberra ..... 110





## Foreword

This review of the Defence Annual Report 2006-2007 focuses on the activities, achievements and undertakings of the Australian Defence Force (ADF) and the Department of Defence during the period July 2006 to June 2007. At the end of this reporting period, Defence had over 3,800 personnel deployed on overseas operations, and around 450 personnel engaged in protecting Australia's northern borders, and was successfully conducting 14 operations and military campaigns across Africa, the Middle East, the Pacific and Australia. During this period, the ADF also carried out five short-notice emergency relief operations in Lebanon, Tonga, Indonesia and Solomon Islands.

In September 2006, around 400 Australian soldiers of the 1<sup>st</sup> Reconstruction Task Force (RTF) arrived in Uruzgan Province as part of Australia's commitment to the reconstruction and stabilisation of Afghanistan. The 1<sup>st</sup>RTF achieved outstanding success and provided a solid foundation for subsequent RTF rotations. In April 2007, a Special Forces Task Group and an Air Force Radar Reporting Element were also deployed to Afghanistan, taking Australia's commitment to Operation Slipper to over 800 personnel. Australia's commitment to the reconstruction and stabilisation of Afghanistan continues today.

In late June 2007, the ADF became a major support agency to the Government's Northern Territory Emergency Response Task Force (Operation Outreach) to provide logistics, communications, mobility and liaison to this whole-of-government initiative.

During the 2006-2007 reporting period, in addition to the significant operational tempo, Defence also maintained a focus on equipment acquisition, as well as seeking improvements in the areas of finance, management and accountability.

The review of the Defence Annual Report is an important task and an opportunity for the Defence Sub-Committee to inquire into a broad range of Defence issues as part of the process of accountability of Government agencies to Parliament. The Defence Sub-Committee takes this responsibility very seriously.

This year, the Defence Sub-Committee selected a broad range of issues for examination at public hearings held on 10 July 2008 and 29 August 2008. The major topics included the Defence Materiel Organisation (DMO); the Joint Strike Fighter (JSF); Personnel issues; and several other issues of interest.

The first topic examines a number of key DMO responsibilities, including significant funding slippages in DMO's Top 30 Projects list and Australian industry capability.

Topic two JSF examines the Joint Strike Fighter (F35); the background of the project, the progress to date and cost estimates. The issue of future air combat capability was also raised with the CDF and is discussed in this section of the review.

Under the heading of 'personnel', the Committee examined the progress of the Military Justice Reforms, recruitment and retention, personnel shortages in critical trades and the issue of reportable fringe benefits for selected Defence conditions of service and allowances.


Under the heading of 'Other issues', the Committee examined the ADF's preparedness to conduct peacekeeping operations; the current and future role of armour; interoperability of new communications platforms with legacy systems; and the Hardened and Networked Army.

To conclude the review of the Defence Annual Report 2006-2007, the Chief of the Defence Force made himself available at the end of the second Public Hearing for wide-ranging discussions on current issues across the entire Defence Annual Report.

The Committee would like to thank all of the individuals and organisations that participated in this Review of the Defence Annual Report 2006-2007. We would also like to express our ongoing appreciation to the men and women of the ADF for the outstanding work that they continue to do in Australia and around the world. Finally, the Committee would also like to thank the families for the support they provide and the sacrifices they endure, to enable our Service men and women to contribute to Australia's security.

The Hon Arch Bevis MP  
Chair Defence Sub-Committee





## Membership of the Committee

Chair            Senator M Forshaw

Deputy Chair    The Hon D Hawker MP

Members

Senator M Arbib (from 01/07/08)

Senator A Bartlett (till 30/06/08)

Senator M Bishop

Senator M Cormann (till 23/09/08)

Senator A Eggleston (till 19/03/08)

Senator the Hon A Ferguson  
(from 01/07/08)

Senator M Fifield

Senator the Hon D Johnston  
(from 23/09/08)

Senator L J Kirk (till 30/06/08)

Senator the Hon J A L (Sandy)  
Macdonald (till 30/06/08)

Senator C M Moore

Senator K O'Brien (from 01/07/08)

Senator M Payne (from 19/03/08)

Senator N Stott Despoja (till 30/06/08)

Senator R Trood

Senator R S Webber (till 30/06/08)

The Hon B Baldwin MP

The Hon A Bevis MP

Mr M Danby MP

Ms A Ellis MP

Mr S W Gibbons MP

Ms S Grierson MP

Mr D Hale MP

The Hon I Macfarlane MP

Mrs L Markus MP (from 25/09/08)

Ms S Mirabella MP

Ms M Parke MP

Ms K Rea MP

Mr B Ripoll MP

The Hon A Robb AO MP (till 25/09/08)

Mr S Robert MP

The Hon P Ruddock MP

Ms J Saffin MP

The Hon B Scott MP

Mr K Thomson MP

Ms M Vamvakinou MP

Secretary        Dr M Kerley

## Membership of the Defence Sub-Committee

Chair           The Hon A Bevis MP

Deputy Chair   The Hon B Baldwin MP

### Members

Senator M Arbib

Ms S Grierson MP

Senator M Bishop

Mr D Hale MP

Senator the Hon A Ferguson

The Hon D Hawker MP (*ex officio*)

Senator M Fifield

The Hon I Macfarlane MP

Senator M Forshaw (*ex officio*)

Mrs L Markus MP

Senator the Hon D Johnston

Ms S Mirabella MP

Senator K O'Brien

Mr B Ripoll MP

Senator M Payne

Mr S Robert MP

Senator R Trood

Ms J Saffin MP

Mr M Danby MP

The Hon B Scott MP

Mr S W Gibbons MP

Mr K Thomson MP

## Committee Secretariat

Secretary           Dr Margot Kerley

Defence Adviser    LTCOL Paul Nothard AM CSC

Inquiry Secretary   Mr Muzammil Ali

Research Officer    Ms Philippa Davies

Officer Manager     Mrs Donna Quintus-Bosz

Administrative Officers   Mr Paul Jeanroy

Mrs Sonya Gaspar

Graduate            Ms Juliet Sironi



## Terms of reference

Pursuant to paragraph 1 (b) of its resolution of appointment, the Joint Standing Committee on Foreign Affairs, Defence and trade is empowered to consider and report on the annual reports of government agencies, in accordance with a schedule presented by the Speaker of the House of Representatives.<sup>1</sup>

The Speaker's schedule lists annual reports from agencies within the Defence and Foreign Affairs portfolios as being available for review by the Committee.<sup>2</sup>

---

1 See *Votes and Proceedings*.

2 Speaker's Schedule: Allocation to Committees of Annual Reports of Departments, Agencies, Authorities and Companies.



## List of abbreviations

39PSB	39 <sup>th</sup> Personnel Support Battalion, Sydney
ACPB	Armidale-Class Patrol Boats
ADF	Australian Defence Force
ADFPKC	Australian Defence force Peacekeeping Centre
ADI	Australian Defence Industries
AEW&C	Airborne Early Warning and Control Aircraft
AMC	Australian Military Court
ANAO	Australian National Audit Office
APCML	Asia Pacific Centre for Military Law
APS	Australian Public Service
ARH	Armed Reconnaissance Helicopters
AWD	Air Warfare Destroyer
BCSS	Battlefield Command Support System
BY	By Year
CAIG	Cost Analysis Improvement Group
CATB	Cooperative Avionics Test Bed
CDF	Chief of Defence Force

---

CO	Commanding Officer
DFAT	Department of Foreign Affairs and Trade
DMO	Defence Material Organisation
DMP	Director of Military Prosecutions
DOD	Department of Defence
DRP	Defence Reform Program
DVA	Department of Veterans' Affairs
ELF	Enhanced Land Force
ESFS	Emergency Support for Families Scheme
ESM	Electronic Support Measures
FBT	Fringe Benefit Tax
FFG	Royal Australian Navy's Guided Missile Frigates
GAO	United States Government Accountability Office
GOPS	Graded Officer Pay Structure
GORPS	Graded Other Ranks Pay Structure
HECS	Higher Education Contribution Scheme
HELP	Higher Education Loan Program
HF	High Frequency
HNA	Hardened and Networked Army
IGADF	Inspector General of the Australian Defence Force
IOC	Initial Operational Capability
IOT&E	Initial Operational Test and Evaluation
JPO	Joint Strike Fighter (JSF) Program Office
JSF	Joint Strike Fighter

MRH-90	Multi Role Helicopters
NACC	New Air Combat Capability
NGOs	Non Government Organisations
PAES	Portfolio Additional Estimates Statements 2007-08
PBS	Portfolio Budget Statements 2007-08
PSFD	Production Sustainment and follow-on Development
PWC	Joint Standing Committee on Public Works
RAAF	Royal Australian Air Force
RAN	Royal Australian Navy
RAR	Royal Australian Regiment
RLLT	Remote Locality Leave Travel
RSM	Regimental Sergeant Major
SAR	Selected Acquisition Report
SDD	System Development and Demonstration
SJFADT	Senate Joint Committee on Foreign Affairs, Defence and Trade
SWAPP	Service Workforce Access Program for Partners
TY	Then Year
UN	United Nations



## List of recommendations

### 2 Defence Materiel Organisation

#### Recommendation 1

That subject to national security requirements, the ADF and Government schedule large acquisitions in a sustainable manner over time, to avoid peaks and troughs for Australian industry and to better provide a long-term through-life support capability.

### 3 Department of Defence - Joint Strike Fighter F35

#### Recommendation 2

That consideration of Australia's future combat aircraft needs, including the critical air to air combat role, be determined by the paramount strategic importance of this capability, as recognised in the 2000 White Paper. That the decision on future air combat capability be determined by the analysis of available platform capabilities against Australia's strategic requirements and not be constrained by a predetermined requirement for a single platform.

### 4 Department of Defence – Personnel

#### Recommendation 3

The Committee recommends that the Government exempts the Remote Locality Leave Travel entitlement from fringe benefits reporting.

## 5 Department of Defence – Other issues

### Recommendation 4

The Committee recommends that the Government consider the acquisition of battlefield mobility assets for the Abrams tank, such as a bridge-laying capability.

### Recommendation 5

The Committee recommends that the Government expedite a solution to upgrade communications suites to ensure integration of all battle management systems to create a modern and effective Network Centric Warfare capability.



## Introduction

- 1.1 During the period July 2006 to June 2007, Defence continued to maintain a focus on military operations and equipment acquisition, as well as seeking improvements in the areas of finance, management and accountability.
- 1.2 The Australian Defence Force (ADF) was involved in 10 overseas operational deployments during the year, as well as a number of peacetime National tasks, such as support to APEC 2007, Border Protection Operations (Operation Resolute) and the Northern Territory Emergency Response Task Force, supporting indigenous communities. As at June 2007, over 3,800 ADF personnel were deployed to areas such as Iraq, Afghanistan, Timor Leste, the Solomon Islands and a number of other locations for ongoing Peace Keeping commitments.
- 1.3 Along with the annual classified Defence Planning Guidance, Defence produced two major public strategy documents in 2006-07. In May 2007, the Chief of the Defence Force outlined his 'vision' for future military operations in *Joint Operations for the 21<sup>st</sup> Century*. In July 2007, the Prime Minister launched a new *Defence Update*, which reviewed the Government's response to the changing security environment, including Defence's evolving military posture and capabilities and emphasised the importance of partnerships in securing Australia's strategic interests at the global, regional and local levels. Both documents underlined the increasing integration within the separate arms of the ADF, and between Defence and other government agencies.
- 1.4 In August 2006, the Minister for Defence established the *Defence Management Review*. Led by Ms Elizabeth Proust, the review team

examined organisational efficiency and effectiveness across Defence. The aim of the review was to make recommendations for clarifying accountabilities and streamlining the governance framework, improving the quality of advice to Ministers, providing better support to Defence's people, and reforming Defence's business systems and processes. The report and Defence's response were released publicly on 5 April 2007. Of the review's 53 recommendations, Defence agreed to implement 50 in full and two in part; it did not agree with one recommendation relating to the 'diarchy' arrangement where the Secretary and the Chief of Defence Force act essentially as joint CEOs of the Defence organisation.

- 1.5 Defence has continued to focus on improving its financial management and made significant progress during the year. During 2006 – 2007, Defence built on the work of the previous year and has no new areas of qualification by the Australian National Audit Office (ANAO). In addition, the 2006–07 ANAO qualification relating to *Repairable Items* has been successfully remediated, with the only outstanding area of qualification relating to the uncertainty around *General Stores Inventory*.

## **Defence objectives, personnel and 2006-07 Budget allocation**

- 1.6 The Portfolio Budget Statements (PBS) 2007–08, in conjunction with the Portfolio Additional Estimates Statements 2007–08 (PAES), provide the information on the overall Budget allocation and key initiatives. Defence's strategic objectives are influenced by the strategic principles set out in: Defence 2000 – Our Future Defence Force (the Defence White Paper); in Australia's National Security: A Defence Update 2003 (Defence Update 2003); Australia's National Security: A Defence Update 2005 (Defence Update 2005); and Australia's National Security: A Defence Update 2007 (Defence Update 2007). The strategic environment of recent times is dynamic and challenging, and Defence's strategy for Australia has evolved to meet these changing demands. The Defence Updates provide a framework to ensure the ongoing security of Australia and our national interests, as well as enabling the development of an ADF that is capable enough and flexible enough to contribute with increasing effectiveness to global, regional and domestic tasking as necessary. A new White Paper is due for completion in December 2008.

- 1.7 As at 30 June 2007, the ADF was maintaining a force structure that comprised the following combat elements:
- a surface combatant force of five Adelaide-class guided missile frigates (reduced to four at the end of 2007) and eight Anzac-class frigates;
  - a naval aviation force comprising 16 Seahawk naval combatant helicopters, six Sea King maritime support helicopters and 13 Squirrel naval training helicopters. The Sea King helicopters are due to be progressively replaced by MRH90 helicopters from 2010;
  - 12 Armidale-class patrol boats (ACPB) to provide patrol, and response capability in Australia's maritime approaches (an additional two ACPB were delivered in late 2007);
  - six Collins-class submarines;
  - an amphibious lift and sea command force comprising two amphibious landing ships, one heavy landing ship and six heavy landing craft;
  - a mine warfare force comprising six Huon-class coastal mine hunter vessels, two auxiliary minesweepers and two clearance diving teams;
  - a hydrographic force comprising two Leeuwin-class hydrographic ships, four Paluma-class survey motor launches, a laser airborne depth sounder aircraft and a deployable geospatial support team;
  - an afloat support force comprising one auxiliary oil tanker and one fleet replenishment ship;
  - nine combined arms battlegroups to provide depth, sustainability, utility and flexibility for the Army;
  - a Reserve Force designed to provide specified individual and collective capabilities to support, sustain and reinforce the Army's operational forces;
  - three regional force surveillance units;
  - a Special Operations Command consisting of the Special Air Services Regiment, a Regular Army commando regiment, an Army Reserve commando regiment, an Incident Response Regiment, a Special Forces Training Centre and a Special Operations Logistics Squadron;
  - as part of implementing Stage 1 of the Enhanced Land Force initiative, an additional infantry battalion was raised in December 2006. In 2007, infantry battalion growth is to occur and support capabilities are being raised;

- an air combat force consisting of three F/A-18 squadrons and two F-111 squadrons (to be retired from service in 2010), supported by a training wing comprising four units;
- an airlift and air-to-air refuelling force that operates one heavy airlift squadron operating two Boeing C-17 Globemaster III aircraft (an additional two C-17s were in-service by 2008), one C-130 Hercules airlift squadron, one squadron each of DHC-4, B-707, and Special Purpose Aircraft (B-737 BBJ and CL-604 Challenger) supported by a training squadron;
- a combat support group consisting of two expeditionary combat support wings that provide the essential air base combat support required to conduct deployed air operations on bare bases and in low infrastructure conditions, and a health support wing;
- a maritime patrol force comprising two P-3 Orion squadrons and one conversion unit;
- a battlespace management force consisting of a command and control capability for air operations, wide-area surveillance system (Jindalee Operational Radar Network) monitoring Australia's northern approaches, and a range of ground radars and other supporting elements; and
- diverse capabilities for intelligence collection and analysis.<sup>1</sup>

1.8 Defence commented that:

The major combat elements are being integrated through a robust communications network and information systems required to support the ADF's mission command, intelligence, surveillance, reconnaissance, imagery and military geospatial information sharing requirements. Capabilities such as satellite communications, tactical information exchange links and the command support environment are being progressed. The delivery of Defence capabilities continues to be dependent on the support of the Defence Science and Technology Organisation<sup>2</sup>.

1.9 For 2006-07, the most recent Budget estimates for Defence are shown in the PBS. The Defence budget for 2006-07 is summarised in Table 1.1 below.

---

1 Department of Defence, *Portfolio Budget Statements 2007-2008*, pp. 4 - 6.

2 Department of Defence, *Portfolio Budget Statements 2007-2008*, p. 6.

Table 1.1 Defence Resourcing Summary 2006-07

	<b>2006-07 Budget Estimate \$000<sup>1</sup></b>	<b>2006-07 Additional Estimate \$000<sup>2</sup></b>	<b>Actual Result \$000</b>
Revenue from Government for outputs	19,001,283	19,155,941	19,219,939
Own source revenue <sup>3</sup>	594,645	751,380	771,226
Net Capital receipts	23,192	57,603	95,005
Administered appropriation	2,632,000	2,817,000	2,804,999
<b>Total Defence resourcing</b>	<b>22,251,120</b>	<b>22,781,924</b>	<b>22,891,169</b>

## Notes:

1. Budget estimates are consistent with Portfolio Budget Statements 2006-07.
2. Revised estimates are consistent with Portfolio Additional Estimates Statements 2006-07.
3. Own-source revenue excludes revenue from 'assets now recognised' and 'net gains from sale of assets'.

Source *Defence Annual Report Volume 1 2006-2007, p. 33*

1.10 The average funded strength of the three services for 2006-07 is shown in Table 1.2 below.

Table 1.2 ADF Permanent Force Average Funded Strength

	<b>2005-06 Actual</b>	<b>2006-07 Budget Estimate</b>	<b>2006-07 Revised Estimate</b>	<b>2006-07 Actual</b>
Navy	12,767	12,784	12,700	12,690
Army	25,241	25,220	25,467	25,525
Air Force	13,143	13,249	13,280	13,289
<b>Total Permanent Force</b>	<b>51,151</b>	<b>51,253</b>	<b>51,447</b>	<b>51,504</b>

## Notes:

1. Figures in this table are average funded strengths; they are not a headcount. Reservists undertaking full-time service are included in the figures. The average funded strength of Reservist undertaking full-time service in 2006-07 was 1,364 comprising Navy 301, Army 854 and Air Force 209. Personnel on forms of leave without pay are not included.
2. Includes ADF members in the DMO.

Source *Defence Annual Report Volume 1 2006-07, p. 125*

1.11 ADF Reserve paid strength is shown in Table 1.3 below.

Table 1.3 2006-07 ADF Reserve paid strength

	<b>2005-06 Actual</b>	<b>2006-07 Budget Estimate</b>	<b>2006-07 Revised Estimate</b>	<b>2006-07 Actual</b>
Navy	1,598	1,850	1,850	1,730
Army	15,579	15,000	15,000	15,413
Air Force	2,287	2,400	3,100	2,419
<b>Total paid Reserves</b>	<b>19,464</b>	<b>19,250</b>	<b>19,950</b>	<b>19,562</b>

Notes:

1. Figures in this table are average funded strengths; they are not a headcount. Reservists undertaking full-time service are included in the figures. The average funded strength of Reservist undertaking full-time service in 2006-07 was 1,364 comprising Navy 301, Army 854 and Air Force 209. Personnel on forms of leave without pay are not included.
2. Includes ADF members in the DMO.

Source *Defence Annual Report Volume 1 2006-07, p. 126*

1.12 APS full-time equivalent civilian staffing is shown in Table 1.4 below.

Table 1.4 2006-07 APS full-time equivalent - average

	<b>2005-06 Actual</b>	<b>2006-07 Budget Estimate</b>	<b>2006-07 Revised Estimate</b>	<b>2006-07 Actual</b>
ADF	13,577	14,148	14,227	14,516
DMO	4,895	4,994	5,304	5,249
<b>Total</b>	<b>18,472</b>	<b>19,142</b>	<b>19,531</b>	<b>19,765</b>

Notes:

1. Figures in this table are average full-time equivalent (FTE); they are not a headcount.
2. The DMO figures include Professional Service Providers (individuals under contract filling line positions).

Source *Defence Annual Report Volume 1 2006-07, p126 and Defence Annual Report Volume 2 2006-07, p. 79*

## Annual Report review objectives and scope

1.13 The review of the Defence Annual Report is an important task and an opportunity for the Defence Sub-Committee to inquire into a broad range of Defence issues as part of the process of accountability of Government agencies to Parliament. The Defence Sub-Committee takes this responsibility very seriously.

1.14 The review examined a combination of information from the Portfolio Budget Statements 2007-08 (including Portfolio Additional Estimates Statements 2007-08), both Volumes of the Defence Annual Report 2006-07 and took evidence from senior Department of Defence officials at two public hearings. The Committee also encouraged public input through a wide public advertising campaign, resulting in

six submissions and three exhibits being provided to the Committee for consideration. The Committee thanks those individuals and organisations that have contributed.

## Focus areas

- 1.15 The Defence Sub-Committee selected a broad range of issues for examination at public hearings held on 10 July 2008 and 29 August 2008. The public hearings provided an opportunity for the Committee to seek further information on how Defence is addressing current opportunities and challenges. In broad terms, the focus areas were:
- Defence Materiel Organisation (DMO);
  - Joint Strike Fighter (JSF);
  - Personnel; and
  - Other issues.
- 1.16 In addition, the Chief of the Defence Force (CDF) attended the final session of the hearing on 29 August 2008, providing an opportunity for the Committee to discuss a range of issues across the entire Defence portfolio.
- 1.17 The first topic examines a number of key DMO responsibilities, including significant funding slippages in DMO's Top 30 Projects list and Australian industry capability.
- 1.18 The consideration of the JSF examines the background of the project, the progress to date and cost estimates. The issue of future air combat capability was raised with the CDF and is discussed in this section of the review.
- 1.19 Under the heading of 'personnel', the Committee examined the progress of the Military Justice Reforms, recruitment and retention, personnel shortages in critical trades and the issue of reportable fringe benefits for selected Defence conditions of service and allowances.
- 1.20 'Other issues' examined include:
- ADF's preparedness to conduct peacekeeping operations;
  - the current and future role of armour;
  - interoperability of new communications platforms with legacy systems; and
  - the Hardened and Networked Army.





## Defence Materiel Organisation

- 2.1 The Defence Materiel Organisation (DMO) is Australia's largest project management organisation. DMO is part of the Department of Defence; its mission is to acquire and sustain equipment to support the Australian Defence Force (ADF). DMO employs over 7,500 people in more than 40 locations around Australia and overseas. DMO is currently managing over 230 major projects and 180 minor projects.<sup>1</sup>
- 2.2 In 2006-07 DMO had a budget of over \$8.5 billion; from this amount, over \$4.2 billion forms the capital budget, and over \$4 billion will be spent on sustainment (through-life support) of equipment.

### **Significant funding slippages for DMO's Top 30 Projects**

- 2.3 The Committee raised concerns about the discrepancies between the budget estimates and actual expenditure for DMO's Top 30 Projects in 2006-2007.
- 2.4 The DMO Top 30 Projects for 2006-2007 are ranked by expenditure as forecast in the *Portfolio Budget Statements 2006-2007*.<sup>2</sup> The expenditure for the Top 30 Projects represents approximately 77 per cent of the total expenditure on major capital equipment in 2006-07.

---

1 <http://www.defence.gov.au/dmo/about/index.cfm>

2 Defence Annual Report 2006-2007 Volume 2 pp. 21-23.

2.5 Of concern to the Defence Sub-Committee were the significant variations in budget estimates compared to actual expenditure. The initial budget estimate for the DMO's Top 30 Projects was \$3,798 million and the revised estimate was reduced to \$3,209 million. Actual expenditure was finalised as \$2,879 million; \$330 million (10 per cent) less than the revised estimate and \$1,099 million (29 per cent) less than the initial budget estimate.<sup>3</sup>

2.6 The Committee questioned Defence about these substantial variations:

The parliament and the public have a pretty fair expectation that when budgets are adopted the expenditure mirrors as closely as possible what transpires. This is not an isolated incident. This is not the first year we have seen annual reports where these things happen.<sup>4</sup>

2.7 Defence replied that:

The biggest problem we are facing in Defence equipment acquisition is schedule. As we have benchmarked ourselves against other countries and as we have looked at our own performance, we find that, once you make corrections for foreign exchange, inflation, changes of quantity and transfers to other parts of the Defence organisation, that post-second pass or post-contract formation we are bringing in most of the projects at/or around the budget. This is a surprise to many people. When you look at the data, it shows that about 20 per cent of the projects go over in cost, about 20 per cent of the projects come in or around the budget, and about 60 per cent actually come in under. Those that come in under pretty much pay for those that come in over after you make those corrections for the quantities. I would point out that this is post-second pass approval when we are into actually building or delivering the equipment. In other words, cost is not the thing that gives us deep concern. The statistics we have are that in 239 major projects – and we define a major project as over \$20 million – closed over the last 10 years with an accumulated value of \$27 billion, when you make those corrections for foreign exchange, inflation, quantities and transfers they came in on average at 98 per cent of the budget. Typically, the more complex the weapons system, the greater

---

3 Defence Annual Report 2006-2007 Volume 2 p. 23.

4 Hon Arch Bevis MP, *Transcript 10 July 2008*, p. 2.

the project delays. Most of our major projects run two or three years late. We have been doing quite a bit of analysis on the causes of those schedule delays.<sup>5</sup>

- 2.8 Difficulties with cost arise during the period before 'second pass' approval, when stakeholders are still determining requirements. There is typically a difference of 60-70% between the Defence Capability Plan, and when the project arrives at 'second pass' approval. Therefore, the biggest cost issues occur up to 'second pass,' although there are several costly projects after this period. This is commensurate with the British and American experiences.<sup>6</sup>
- 2.9 The largest hurdle facing Defence is project scheduling, where projects typically run two to three years late, with the more complex projects having the longest delays. DMO only pays when invoices are received; therefore, if projects are behind schedule, invoices are not submitted, which affects cost and results in underspending.<sup>7</sup>
- 2.10 The Committee enquired whether schedule slippages were factored into the budget estimate, especially as Australia's experiences are in line with the experiences of other Defence forces.<sup>8</sup>
- 2.11 Defence replied that the project estimates are over-programmed by 15 per cent, on the assumption that 15 per cent of milestones will not be met. Any milestones not met in excess of 15 per cent will be counted as underspend. Recent project delays have been 'running a bit higher than 15 per cent.'<sup>9</sup>
- 2.12 Given that budget estimates on major acquisitions assume a 15 per cent slippage, the resulting substantial shortfall is all the more worrying. The real impact of this slippage is a delay in necessary capability for Australia's Defence Force. Defence and the DMO, need to improve performance in this area.
- 2.13 Committee Determination: The Committee will continue to monitor Defence performance in its major acquisitions program.

---

5 Dr Stephen Gumley, *Transcript 10 July 2008*, p. 3.

6 Dr. Stephen Gumley, *Transcript 10 July 2008*, p. 3.

7 Dr. Stephen Gumley, *Transcript 10 July 2008*, p. 3.

8 Hon Arch Bevis MP, *Transcript 10 July 2008*, p. 3.

9 Dr. Stephen Gumley, *Transcript 10 July 2008*, p. 4.

## Status of individual projects

- 2.14 In order to seek a greater understanding on the reasons for the significant variations to budget estimates, the Committee enquired about the status of several individual projects. These are discussed below.

### Super Seasprite

- 2.15 The Anzac Ship Helicopter (Super Seasprite) was a maritime combat helicopter being introduced as part of Project SEA 1411 Phase 1. The project commenced in 1994 and initial contracts were signed in 1997. Due to significant project delays, escalating costs and concern that the Seasprite's full capability could not be delivered, the project was cancelled in March 2008.
- 2.16 The project was to acquire 11 Super Seasprite helicopters for the Anzac class frigates. The package included a full mission flight simulator and software support centre. The Super Seasprite was to provide enhanced capability for surface surveillance, anti-ship warfare, contact investigation and maritime utility tasks.<sup>10</sup>
- 2.17 In the year under review, 2006-2007, the Super Seasprite was delayed into operational service due to software development issues and problems with automatic flight control. In 2006-2007 the Super Seasprites did not achieve their targeted 100 flying hours for testing. This was due to suspension of flying since March 2006.<sup>11</sup>
- 2.18 On 25 March 2007, the Government announced that subject to satisfactory contract arrangements, the project was to continue.<sup>12</sup> It was expected that all 11 Super Seasprite aircraft, with full tactical systems functionality, would be delivered by 2010-2011. This represented a further 3-year delay to the program.<sup>13</sup>
- 2.19 On 5 March 2008, following concerns that the software development issues and automatic flight control problems would not be rectified in an acceptable timeframe, the Minister for Defence announced:

---

10 Defence Annual Report 2006-2007, Volume 2, p. 31.

11 Defence Annual Report 2006-2007, Volume 1, p. 64.

12 Defence Annual Report 2006-2007, Volume 1, p. 73; Defence Annual Report 2006-2007, Volume 2, p. 31.

13 Defence Annual Report 2006-2007 Volume 1 p. 73; Defence Annual Report 2006-2007 Volume 2 p. 31.

In late 2007 the Rudd Labor Government initiated a review of the Seasprite helicopter project, in line with the promises made prior to the election. After careful consideration of all the issues involved, the Government has decided that it intends to cancel the project.<sup>14</sup>

2.20 The Committee expressed concerns about how Defence spent such a large amount of money, over such a long period of time, which resulted in a product that was demonstrably not what was required?<sup>15</sup>

2.21 Defence acknowledged the serious nature of the issues, and the magnitude of financial loss to the Commonwealth. However, as part of the deed of negotiation that is being reached with Kaman, Defence advised:

What we have agreed is a minimum amount, regardless of whether the aircraft are sold by Kaman or not, and that is the \$39.5 million. Plus, there is an additional \$30 million that we have retained for spares and transferred them out of the Seasprite program across to Sea Hawk and some to Black Hawk. It is our expectation that we will gain far more than that. I cannot put a figure on that at the moment.<sup>16</sup>

We have reached a mutually agreed outcome with Kaman on the cancellation of the program, which is subject to US government approval. We have requested that US government approval, but it is in process at the moment and has not yet been provided. The objective is for Kaman to take the aircraft and equipment back, sell it on the open market and provide a share of profits back to the Commonwealth, which is at least 50 per cent and at an increasing level.<sup>17</sup>

2.22 Defence noted that the Australian National Audit Office (ANAO) is also conducting an audit into the Super Seasprite project; the report is expected to be tabled in 2008.<sup>18</sup> It will focus on 'project management, the design acceptance process, the certification process and the advice that goes with the certification process.'<sup>19</sup>

---

14 Hon Joel Fitzgibbon MP, Minister for Defence, Media Release 14/08, 5 March 2008

15 Hon Arch Bevis MP, *Transcript 10 July 2008*, p. 8.

16 Major General Anthony Fraser, *Transcript 10 July 2008*, pp. 8 – 9.

17 Major General Anthony Fraser, *Transcript 10 July 2008*, p.8.

18 Dr Stephen Gumley, *Transcript 10 July 2008*, p. 14.

19 Ms Jane Wolfe, *Transcript 10 July 2008*, p. 14.

- 2.23 Defence advised the Committee that lessons have been learnt from the Super Seasprite:

Essentially it is a lot more risk mitigation prior to entering contract. The time to bail out of a project is early, and from time to time we will make recommendations to government that a project is simply too risky and we should bail out.<sup>20</sup>

- 2.24 Following this explanation, the Committee was concerned that, after \$1b had been spent on the Super Seasprite, the reasons why the project 'went wrong' cannot be disclosed as it would impinge on the settlement with Kaman. The Committee believed this was unsatisfactory.<sup>21</sup> Defence accepted this position, and replied that the issues with Seasprite were:

In capability they have made compromises, concessions, both by the contractor and ourselves, to try to deliver a capability as soon as they could to Navy. There is no capability in lieu for Seasprite and so along the way they have attempted, by changes, to make variations to deliver a capability. It is the cumulative effects of those that have caused the problem. Each one in isolation over many years might have been acceptable to bring the aircraft through to fruition, but they have not been able to step back and look at the collective effects as time has moved on.<sup>22</sup>

- 2.25 The Defence Sub-Committee, while disappointed with the Seasprite project outcomes, notes that an external audit of the project is being conducted by the ANAO. The Committee looks forward to receiving the ANAO Report.
- 2.26 Committee Determination: The Committee will be seeking further briefings from DMO following the release of the ANAO Audit.

### Tiger Armed Reconnaissance Helicopter

- 2.27 Project Air 87 will provide Defence with 22 Tiger Armed Reconnaissance Helicopters (ARH); a training system, including simulation devices for aircrew and maintenance personnel; a software support facility and a ground mission management system.<sup>23</sup>

---

20 Dr Stephen Gumley, *Transcript 10 July 2008*, p. 9.

21 Senator Mark Bishop, *Transcript 10 July 2008*, p. 9.

22 Major General Anthony Fraser, *Transcript 10 July 2008*, p. 10.

23 [http://www.defence.gov.au/dmo/lsp/armed\\_rec\\_helicopter.cfm](http://www.defence.gov.au/dmo/lsp/armed_rec_helicopter.cfm)

2.28 Costings for the Tiger ARH project in 2006 – 2007 were:<sup>24</sup>

Budget Estimate 2006-2007	Revised Estimate 2006-2007	Actual Expenditure 2006 - 2007	Variation from Revised Estimate	Variation from Budget Estimate
\$312m	\$246m	\$151m	\$ -95m	\$ -161m

2.29 In explanation, the Defence Annual Report 2006-2007 states:

Delivery of operational capability to the Army is delayed by 24 months, primarily because of delays in the Franco-German program on which the Australian Tiger relies for certification and qualification. This has caused slippage in the aircraft and system certification, simulator development and aircrew training. The delays in the program have resulted in the contractor failing to achieve a critical milestone – initial operational capability – and, as a result, the DMO imposed a contractual stop payment from the milestone schedule delivery date of 1 June 2007.<sup>25</sup>

2.30 The Department of Defence told the Committee that the Tiger project's underachievement was attributed to two factors: that the contractor did not produce what was expected, and that Australian Aerospace did not achieve a stop-payment milestone (which resulted in payment being suspended).<sup>26</sup>

2.31 The Committee asked about the current status of the project. The Department of Defence replied that:

Since negotiating a successful outcome through the dispute, the program has gained significant momentum. The aircraft in Australia has flown 2,700 hours, 24 personnel have trained, and the aircraft have been deployed to Darwin ... into the regiment and into the operational capability to start that work.<sup>27</sup>

Importantly for us, the negotiation converted the through-life support contract from essentially what was a cost-plus type

24 Defence Annual Report 2006-2007, Volume 2, p. 22.

25 Defence Annual Report 2006-2007, Volume 2, p. 30.

26 Major General Anthony Fraser, *Transcript 10 July 2008*, p. 4.

27 Major General Anthony Fraser, *Transcript 10 July 2008*, pp. 4-5.

contract to a performance based contract, driving an incentive on the contractor therefore to reduce the total cost of ownership to the Commonwealth. It has also focused on delivering an operational capability to Army as quickly as we can possibly do so.<sup>28</sup>

The first four instructors were to be trained on their [French] aircraft. Because the French army had not accepted their aircraft and the French equivalent to DMO had not accepted their aircraft, we were unable to affect that training in the time frame that we envisaged and was contracted. The second was that much of the data from their aircraft was to be used for our simulator – for example, to assist us with the certification and the development of the simulator. The result of that was a two-year schedule slip in the training of our staff and training of the initial cadre of flight crew.<sup>29</sup>

2.32 The Committee enquired further about other options available for training.<sup>30</sup> Defence replied that:

We managed as best as we possibly could to recover training, but there are no other Tigers in service in the world at this point in time. We did send some personnel across to fly with the US. We have looked at lead-in skills, and part of the resulted negotiations here is to put two EC135s into Darwin - glass cockpit aircraft - to compress the training on the aircraft type as much as we possibly can. We have deployed some instructors across to France to train with the French army to catch up as best we possibly can. We cannot recover those first two years of basic training.<sup>31</sup>

2.33 The Committee also expressed reservations over DMO's decision to go with a platform that was not developed, as opposed to one already developed and in service across the world.<sup>32</sup> Defence replied:

... there was risk in [acquiring] an early developmental program. Perhaps part of many of the lessons learned.....is the full understanding of the maturity level of the product and the off-the-shelf level of the product that we are trying to gain for the Defence Force and to introduce into service to

---

28 Major General Anthony Fraser, *Transcript 10 July 2008*, p. 5.

29 Major General Anthony Fraser, *Transcript 10 July 2008*, p. 5.

30 Mr Stuart Robert MP, *Transcript 10 July 2008*, p. 5.

31 Major General Anthony Fraser, *Transcript 10 July 2008*, p. 5.

32 Mr Stuart Robert MP, *Transcript 10 July 2008*, p. 6.



make an informed decision. It does not mean we should not take some risk, because in some cases we do need to take some risk with the developmental program. It just needs to be understood that we have that risk and therefore there is potential delay to the operational capability.<sup>33</sup>

- 2.34 When asked why risks were not being accounted for, when projects are running two to three years behind schedule, Defence replied that the Tiger program was doing well, and lessons have been learnt.<sup>34</sup> These include applying the Kinnaird two-pass process, and that:

a lot more work needs to be done between first and second pass on analysing risks, reducing risks, and working out risk mitigators ...<sup>35</sup>

- 2.35 Committee Determination: The Committee will continue to monitor the ongoing progress of the Tiger ARH project and intend to visit the Australian Aerospace assembly facility in the first half of 2009.

### Multi-Role Helicopter (MRH-90) Project

- 2.36 Costings for the MRH-90 (AIR9000) in 2006 – 2007 were:<sup>36</sup>

Budget Estimate 2006-2007	Revised Estimate 2006-2007	Actual Expenditure 2006 – 2007	Variation from Revised Estimate	Variation from Budget Estimate
\$183m	\$360m	\$329m	\$ -31m	\$146m

- 2.37 The MRH-90 project will consolidate and reduce the number of helicopter fleets operated by the Australian Defence Force. The project will acquire 46 Multi Role Helicopters (MRH-90) and support systems for the Army and Navy. The support systems will include an electronic warfare self protection support cell, a ground mission management system, a software support centre, and instrumented aircraft with telemetry, up to three full flight and mission simulators and facilities infrastructure. The initial flight for the first Australian MRH-90 was conducted on 28 March 2007. An additional 10-year

33 Major General Anthony Fraser, *Transcript 10 July 2008*, p. 6.

34 Major General Anthony Fraser, *Transcript 10 July 2008*, p. 7.

35 Dr. Stephen Gumley, *Transcript 10 July 2008*, p. 7.

36 Defence Annual Report 2006-2007, Volume 2, p. 21.

sustainment contract starts from the in-service date of 18 December 2007. When completed, the project will have enhanced the ADF capability in airmobile operation and special mission roles and enhanced troop lift helicopter operations from HMA Ships *Manoora* and *Kanimbla*.<sup>37</sup>

2.38 On 30 June 2006, a contract change proposal to the project was signed for the procurement of an additional 34 helicopters to replace the Army Blackhawk and Navy Sea King helicopters, bringing the total to 46 aircraft.<sup>38</sup> This contract change accounts for the \$173 million increase from the budget estimate to the revised estimate.

2.39 The Australian MRH-90 program is the only one in the world that is on schedule.<sup>39</sup> The Committee was advised:

The first two aircraft were accepted on 18 December last year ... The training in France, unlike for the Tiger, was effected completely and fully. In fact, we overtrained; we completed more training in France than what we had expected to do as part of the risk mitigation. The training [in Australia] will commence in earnest very shortly.<sup>40</sup>

2.40 Defence further advised the Committee that the first four aircraft will be in-service by 2011; that is the initial operational capability. All 46 aircraft should have been delivered by the end of 2014.<sup>41</sup>

2.41 Committee Determination: The Committee acknowledges that this project is currently on schedule and progressing well and believes this is due, in part, to Defence being second or third customer (as opposed to being first customer or first of type). The Committee will continue to monitor the project's progress, particularly the risk associated with the Australian training program.

---

37 [http://www.defence.gov.au/dmo/lsp/Multi\\_Role\\_Helicopter\\_Program.cfm](http://www.defence.gov.au/dmo/lsp/Multi_Role_Helicopter_Program.cfm)

38 Defence Annual Report 2006-2007, Volume 2, p. 29.

39 Major General Anthony Fraser, *Transcript 10 July 2008*, p. 7.

40 Major General Anthony Fraser, *Transcript 10 July 2008*, pp. 14-15.

41 Major General Anthony Fraser, *Transcript 10 July 2008*, p. 16.

## Airborne Early Warning and Control Aircraft (AEW&C) - Project Wedgetail

2.42 Costings for Project Wedgetail in 2006 – 2007 were:<sup>42</sup>

Budget Estimate 2006-2007	Revised Estimate 2006-2007	Actual Expenditure 2006 - 2007	Variation from Revised Estimate	Variation from Budget Estimate
\$439m	\$159m	\$58m	\$ -101m	\$ -381m

2.43 The AEW&C 'Wedgetail' is based on Boeing's next generation 737 aircraft, modified to accommodate various sophisticated mission systems. The primary sensor on the aircraft is a phased-array radar, with no moving parts, that can scan through 360 degrees. Six aircraft are being procured (AIR 5077), along with associated supplies and support systems.<sup>43</sup>

2.44 The Annual Report notes that:

Expenditure was less than that estimated, primarily due to slippage against the prime contract. Events included a two-year delay, announced by Boeing, which would shift initial operational capability to 2011. Delays were caused by problems associated with sub-systems integration, supplier hardware availability, radar and electronics support measures maturity, and aircraft modification.<sup>44</sup>

2.45 The Committee sought an explanation as to why the budget estimate was for \$439 million, yet only \$58 million was spent.<sup>45</sup> Defence replied:

... in June 2006 ... an 18-month delay to the program was declared by Boeing. In February 2007 a further six-month delay was declared, bringing the total delay to the program of, in the order of, 28 months. Just recently, Boeing has declared a 10-month additional delay to the program, which is associated with delivering full operational capability to the aircraft. It intends to deliver an increment in the July 2009 timeframe, which will allow us to commence training. The

42 Defence Annual Report 2006-2007, Volume 2, p. 22.

43 <http://www.defence.gov.au/dmo/lsp/AEW&C.cfm>

44 Defence Annual Report 2006-2007, Volume 2, p. 32.

45 Hon Arch Bevis MP, *Transcript 10 July 2008*, p. 16.

significant variances in the budget are specifically related to those delays and the failure to achieve milestones on the program, including progress payments, and we have had to slip those out into further years.<sup>46</sup>

Incidentally, a critical lesson learnt here is the importance of the DMO having full visibility of the contractor's schedule and the contractor being contracted to deliver that schedule to us. It is very hard for us to make estimates of money to be spent if we do not have a fully populated schedule. On Project Wedgetail we waited for that schedule for two years.<sup>47</sup>

Boeing, one of the largest defence contractors in the world and one of the largest aircraft builders in the world, was unable to provide us with a detailed schedule for some two years and we waited. We were making our basis of estimates on our expenditure without clarity of that schedule.<sup>48</sup>

Contractually, they were obligated to deliver us a schedule, but they did not. We stopped paying them. We are not going to pay contractors for work they do not do.<sup>49</sup>

The significant issues that we are confronting are the developmental issues associated with things like the multi-role electronically scanned array MESA radar, and that is an area that is highly technical. We are at the cutting edge. We are the first customer of a first of type, so there are many issues associated with those developmental areas.<sup>50</sup>

2.46 The Committee noted that Boeing was contracted to provide a product and a timetable for delivery in accordance with set milestones. The Committee then asked:

Do we have anyone embedded at a senior level with the technical know-how to identify early on apparent non-compliance with contract milestones?<sup>51</sup>

---

46 Air Vice Marshal Christopher Deeble, *Transcript 10 July 2008*, p. 16.

47 Dr. Stephen Gumley, *Transcript 10 July 2008*, p. 16.

48 Mr Kim Gillis, *Transcript 10 July 2008*, pp. 16-17.

49 Dr. Stephen Gumley, *Transcript 10 July 2008*, p. 17.

50 Air Vice Marshal Christopher Deeble, *Transcript 10 July 2008*, p. 17.

51 Senator Mark Bishop, *Transcript 10 July 2008*, p. 17.

2.47 Defence replied:

We have a resident project team working co-sited with Boeing in Seattle. I also have a small resident team co-sited with Northrop Grumman in Baltimore. They are responsible for the development of the radar. I have a resident team with British Aerospace in Adelaide that provide me with the data and their assessment against schedule and the technical risks that we face on the program. We have a good insight. In some areas, in particular with the radar, we are constrained by technology transfer issues associated with the US, so we do not have full insight into some of those areas where those licensing arrangements with the US constrain us. We engage with US government agencies that provide additional support to us in that regard to provide some level of insight where we do not get through to that technology transfer.<sup>52</sup>

2.48 The Committee further enquired:

With respect to the series of teams identified ... are they embedded to the extent such that they can keep you sufficiently informed? Secondly, do they have the level of technical know-how to keep you sufficiently informed about the progress of multi-billion dollar projects, instead of you being told irregularly that the project has blown out by another 10 or 12 months?<sup>53</sup>

2.49 Defence replied:

The embedded teams are absolutely critical for us to understand where the contractor is on their project. On Wedgetail, it would be fair to say that we were predicting the delays long before Boeing was acknowledging the delays. We were getting regular reports saying that there were this many milestones being missed and that technical delivery was not going to happen, and we were in a position in which we were informing government of this extra delay a good year to a year and a half before it happened. The lesson learnt there is that if you are going to do a major international development program, you must have embedded staff if you are going to do it effectively.<sup>54</sup>

---

52 Air Vice Marshal Christopher Deeble, *Transcript 10 July 2008*, p. 17.

53 Senator Mark Bishop, *Transcript 10 July 2008*, p. 18.

54 Dr. Stephen Gumley, *Transcript 10 July 2008*, p. 18.

One of the issues we are finding with both Boeing US and Boeing Australia is a systemic problem with schedule management. We are working with Boeing to assist them to improve how they conduct and draft up their schedules and to provide good schedule analysis, because the same problems in schedule management and delivery of schedule are occurring on Vigilare and HF Modern and a number of other Boeing projects. So we are working with the supplier to assist them in improving their schedule management. Boeing is a very good company in respect to its provision of commercial aircraft, but it is having some problems with its delivery of projects in Australia.<sup>55</sup>

- 2.50 At the public hearing held on 29 August 2008, Defence further reported to the Committee on the current status of the project, taking into account recent additional delays announced by Boeing:

They are estimating a full operational capability will be delivered in January 2010 and that a training capability would be delivered in June of 2009.

Initial operational capability is based on when we start training, and it is some 15 months evolution to achieve the number of crews trained and the level of capability subsequent to that. If we start training in the June 2009 time frame we would expect that initial operational capability to be established by the end of 2010.

... predominantly driven by technical risks associated with the radar and achieving specification in the radar. We are working closely with Boeing through those issues as we speak. We formed a number of working groups that are looking at those very issues and we will be able to assess that residual technical risk associated with the radar in the immediate future. We also believe that the test program has some other risks associated with it, predominantly that it is a very complex platform. The test and evaluation program aims to take over 12 months before we would look at getting to that training capability in the January 2010 time frame.

Initial operational capability is based on when we start training, and it is some 15 months evolution to achieve the number of crews trained and the level of capability

---

55 Mr Kim Gillis, *Transcript 10 July 2008*, p. 18.

subsequent to that. If we start training in the June 2009 time frame, we would expect that initial operational capability to be established by the end of 2010.<sup>56</sup>

- 2.51 The Committee enquired if that meant that Defence would expect a fully operational aircraft that could be sent to any theatre of operation in 2010.<sup>57</sup> Defence replied:

That is currently the Boeing plan – to deliver a fully operational capability in January 2010. You do not have the capability unless you have the crews trained. The initial operational capability would be at the end of the 2010 time frame, assuming that we start training in June of 2009. That assumes that the aircraft are delivered fully compliant in the January 2010 time frame and crews are then subsequently trained.<sup>58</sup>

- 2.52 The Committee then enquired how confident Defence was of the aircraft being fully compliant in that time frame.<sup>59</sup> Defence replied:

I believe that there is technical risk associated with the radar, predominantly. The technical risk associated with the radar will bound other risks related to the electronic support measures, some of our communications, mission computing and data link aspects of that. We are working closely with Boeing in terms of looking at those issues and looking at the resolution path that we would need to take.<sup>60</sup>

- 2.53 Committee determination: The Committee regards the failures of Boeing in 2006-2007 to meet most of the progress targets for the Wedgetail project as serious and unacceptable. The Committee hopes that the changes made by DMO will prevent any further slippages for this important project. The Committee will seek update briefings from DMO in 2009.

- 2.54 Following the public hearing on 29 August 2008, the Committee sought additional information from Defence on the interchangeability of Wedgetail's sensor suites, through-life support costs and whether any other countries were expected to purchase the Wedgetail capability. Defence replied:

---

56 Air Vice Marshal Christopher Deeble, *Transcript 29 August 2008*, p. 40.

57 Hon Bob Baldwin MP, *Transcript 29 August 2008*, p. 40.

58 Air Vice Marshal Christopher Deeble, *Transcript 29 August 2008*, p. 40.

59 Hon Bob Baldwin MP, *Transcript 29 August 2008*, p. 41.

60 Air Vice Marshal Christopher Deeble, *Transcript 29 August 2008*, p. 41.

It is customary for sensors and components to be common across the fleet and interchangeable between platforms within the fleet. This will be the case on delivery of the Wedgetail platforms. However, while the surveillance radars (the primary sensor) will all be delivered to the same build configuration, each one will be calibrated to the airframe upon which it is mounted. Interchanging radars between platforms is not envisaged.

Through-life-support costs for Wedgetail were the subject of detailed consideration during the tender evaluation/source selection phase conducted in 1999. Initial cost estimates that formed part of the source selection decision were based on the assumption that Australia would be the sole customer for the B737-AEW&C product.

Boeing is currently under contract to two other countries for the B737-AEW&C: Turkey ordered four aircraft in 2002 and the Republic of South Korea ordered four aircraft in 2006. The United Arab Emirates is currently conducting a competitive evaluation for the supply of four AEW aircraft and Boeing is an active bidder in that process with the B737-AEW&C. A number of other nations, including Oman and India, have also expressed interest in the AEW&C capability. The US Air National Guard has also expressed interest in acquiring some aircraft for its Homeland Defense role in due course. The Wedgetail capability is the cornerstone of the B737-AEW&C product line and, once the capability is delivered, greater US government and international interest is anticipated.<sup>61</sup>

- 2.55 The Committee also requested comment on the number of aircraft considered to be “critical mass” for cost effective through-life support and whether Australia would have to pay an additional premium if Boeing did not achieve critical mass for the Wedgetail platform. Defence replied:

The through-life-support cost analysis conducted during the tender evaluation/source selection phase did not include consideration of the ‘critical mass’ that would be required to optimise through-life-support costs. Demonstrated in-service performance, including exercising supply chains, would be required to support this assessment, noting that Wedgetail is a first-of-type. The premium Australia might pay as a result

---

61 Department of Defence, Submission No 10, p. 11.



of world-wide fleet numbers remaining at their current level of 14 is not able to be estimated with any reliability at this time.<sup>62</sup>

## FFG Program

2.56 Project SEA 1390 Ph 4B provides for the integration of the SM-2 missile into four Guided Missile Frigates, delivery of missiles with mid-course guidance capability, and acquisition of initial ship outfit and inventory stock missiles.<sup>63</sup> Costings for SEA 1390 Ph 4B in 2006 – 2007 were:<sup>64</sup>

<b>Budget Estimate 2006-2007</b>	<b>Revised Estimate 2006-2007</b>	<b>Actual Expenditure 2006 – 2007</b>	<b>Variation from Revised Estimate</b>	<b>Variation from Budget Estimate</b>
\$96m	\$77m	\$66m	\$ -11m	\$ -30m

2.57 This Project seeks to ensure that the four Adelaide-class Guided Missile Frigates remain effective and supportable through to their end of life in 2013–2021. The project is upgrading ship combat systems including sensors, missile launchers and associated platform systems for the Adelaide-Class Guided Missile Frigates.<sup>65</sup> Costings for SEA 1390 Ph 2 in 2006 – 2007 were:<sup>66</sup>

<b>Budget Estimate 2006-2007</b>	<b>Revised Estimate 2006-2007</b>	<b>Actual Expenditure 2006 – 2007</b>	<b>Variation from Revised Estimate</b>	<b>Variation from Budget Estimate</b>
\$74m	\$91m	\$48m	\$ -43m	\$ -26m

2.58 The Committee asked for an update on the FFG upgrades, and cited concerns with the radar upgrade program. Defence replied:

---

62 Department of Defence, Submission No 10, p. 11.

63 [http://www.defence.gov.au/dmo/lsp/SM\\_1\\_Replacement.cfm](http://www.defence.gov.au/dmo/lsp/SM_1_Replacement.cfm)

64 Defence Annual Report 2006-2007, Volume 2, p. 22.

65 [http://www.defence.gov.au/dmo/lsp/Adelaide\\_Class.cfm](http://www.defence.gov.au/dmo/lsp/Adelaide_Class.cfm)

66 Defence Annual Report 2006-2007, Volume 2, p. 22.

The FFG upgrade program is at a challenging stage where we are nearing the completion of a great deal of the development and production work but getting to the deliberate, difficult completion and sign-off phase.<sup>67</sup>

- 2.59 Defence noted that the lead ship, *HMAS Sydney*, was offered for initial release, and in 2007 Chief of Navy declined this, due to issues with the electronic surveillance system, the maturity of the integrated logistics support package, and issues with safety case documentation.<sup>68</sup>

We have been working with the prime contractor ... to get the Rafael electronic surveillance system over the line. It is a C-Pearl electronic surveillance system. We have had good progress and successes during this year of debugging the system, finding faults in software, finding faults in some of the inputs for that system ...

... the real issue was major reliability programs and upgrade of the weapon systems ... We have major upgrades to the radar and sensor suites ... The anti-air warfare capability of the FFG is much improved with the installation of the evolved Sea Sparrow missiles and a Mark 41 vertical launching system in the forward part of the ship. That is a huge capability multiplier and we know that the ship is far superior in anti-air warfare terms to the pre-upgraded FFG.

We are on a get-well program to get over the line on the electronic warfare electronic surveillance systems and tactical data links and working with the contractors to deliver the best capability. The critical review point will be in November this year, which is a key contract milestone for delivery and acceptance of the lead ship, its combat systems and the supporting software.<sup>69</sup>

- 2.60 In response to the Committee's query about whether data from the testing and trialling is being assessed<sup>70</sup>, Defence stated:

We are assessing data from program trials over several years. We have had to provide additional trial windows for demonstration and debugging of the electronic surveillance

---

67 Commodore Andrew McKinnie, *Transcript 10 July 2008*, p. 32.

68 Commodore Andrew McKinnie, *Transcript 10 July 2008*, p. 32.

69 Commodore Andrew McKinnie, *Transcript 10 July 2008*, pp. 32-33.

70 Senator Mark Bishop, *Transcript 10 July 2008*, p. 33.

system ... We have programmed further trials ... to again assess the adequacy of the new software fixes from Rafael that they have developed ...<sup>71</sup>

## C-Pearl

2.61 C-Pearl is the electronic support measures (ESM) system aboard the Royal Australian Navy's Adelaide-class FFG frigates. It is manufactured by Rafael.<sup>72</sup>

2.62 The Committee noted concerns raised by the former Chief of Navy that:

his single biggest concern was the Rafael C-Pearl electronic surveillance system. My understanding is that the tests earlier this year failed to meet all the requirements of Navy and that you are moving forward to October-November. . If the Rafael C-Pearl does not pass, what is the plan?<sup>73</sup>

2.63 Defence replied:

We are focused on satisfying the contract requirements and the requirements of Navy right now. Our energies are very much focused on getting C-Pearl over the line ... We are focused on getting the C-Pearl system to the highest level of capability possible and offering that to Navy. I have to add here that the requirements baseline against which the C-Pearl is being offered evolved after the original contract was signed. The FFG contract was signed against a certain system of specification and the detailed operational requirements and operational concept documentation for FFG upgrade evolved after that contract signature. This is a pre-Kinnaird project; it is imperfect. Some of the reasons why we are having pain and difficulties in demonstrating the required capability is precisely because of the immaturity of requirements that were originally put in place.<sup>74</sup>

---

71 Commodore Andrew McKinnie, *Transcript 10 July 2008*, p. 33.

72 <http://www.janes.com/extract/jdw2008/jdw36844.html>;  
[http://www.rafael.co.il/marketing/SIP\\_STORAGE/FILES/6/726.pdf](http://www.rafael.co.il/marketing/SIP_STORAGE/FILES/6/726.pdf).

73 Mr Stuart Robert MP, *Transcript 10 July 2008*, p. 38.

74 Commodore Andrew McKinnie, *Transcript 10 July 2008*, p. 38.

2.64 The Committee accepted the explanation; however, sought further confirmation:

... [DMO] are still the acquisition organisation, which means you actually need to have a risk mitigation strategy and a plan for when things do not go right. So the question remains: if the tests in October-November do not meet requirements, what is the plan?<sup>75</sup>

2.65 Defence replied:

It will go back to the Defence Investment Committee and it will have to go through the government processes again because there will be no money; therefore, anything that is alternative will have to be funded from somewhere, which means we are into an entirely new acquisition process.<sup>76</sup>

2.66 The Committee asked:

Are you implying that the October-November trials are indeed a drop-dead trial? If it does not pass then we are back into a new funding process?<sup>77</sup>

2.67 Defence replied:

The FFG upgrade prime contractor has absolute requirements on the prime (ADI, trading as Thales) to provide delivery and acceptance of lead ship in its systems in November [2008]. Final acceptance of the total program is in November 2009. The obligation is on them to demonstrate a compliant system and yes, that is a very pointed position of review where, as you say, no-go decisions are made.<sup>78</sup>

If they have not met the contract, then it is the contractor's obligation to remedy until they do meet the contract.<sup>79</sup>

One of the things we have to do is ensure that we do have a contractual obligation through Thales to Rafael, to give Rafael every opportunity to actually deliver against their contract. And that is what we are doing. We have risk mitigation strategies, but we are not putting our resources towards that.

---

75 Mr Stuart Robert MP, *Transcript 10 July 2008*, p. 38.

76 Dr Stephen Gumley, *Transcript 10 July 2008*, p. 38.

77 Mr Stuart Robert MP, *Transcript 10 July 2008*, p. 38.

78 Commodore Andrew McKinnie, *Transcript 10 July 2008*, p. 38.

79 Dr Stephen Gumley, *Transcript 10 July 2008*, p. 39.

Our resources are being put towards actually getting the Rafael system to work.<sup>80</sup>

- 2.68 Committee determination: The Committee will watch, with a good deal of interest, the results of the testing in November 2008. The Committee will seek an update briefing from DMO in 2009.
- 2.69 In response to a written request from the Committee for information regarding the FFG upgrade and the potential erosion of costs if funding is not maintained until at least the concurrent introduction of the Air Warfare Destroyer in 2015, Defence replied:

The four upgraded FFGs are planned to be decommissioned progressively between 2015 and 2021 to align with the Air Warfare Destroyer's introduction into service. The Defence Management and Finance Plan (10-year planning basis) and current Materiel Support Agreement between the Navy and the Defence Materiel Organisation include the necessary funding to keep the FFGs operational, materially safe and fit for purpose throughout that period.<sup>81</sup>

### ADF Air Refuelling Capability (AIR 5402)

- 2.70 Costings for AIR 5402 in 2006 - 2007 were:<sup>82</sup>

Budget Estimate 2006-2007	Revised Estimate 2006-2007	Actual Expenditure 2006 - 2007	Variation from Revised Estimate	Variation from Budget Estimate
\$167m	\$147m	\$116m	\$ -31m	\$ -51m

- 2.71 The ADF Air Refuelling Capability project involves the acquisition of five Airbus A330 multi-role tanker aircraft and through-life support services.<sup>83</sup> Defence updated the Committee on the progress of this project:

The first aircraft arrives in 2009 and the next few come over the next two years after that.<sup>84</sup>

80 Mr Kim Gillis, *Transcript 10 July 2008*, p. 38.

81 Department of Defence, Submission No 10, p. 13.

82 Defence Annual Report 2006-2007, Volume 2, p. 21.

83 Department of Defence, Defence Annual Report 2006-07, Volume Two, p. 28.

84 Air Vice Marshal Clive Rossiter, *Transcript 29 August 2008*, p. 18.

We have two aircraft in play at the moment. For the first one, the modification is being conducted in Madrid... That is about three-quarters of the way through the second stage of the ground testing program, so it is progressing. The second one – what we call the ‘green’ aircraft, based on the commercial platform – arrived in Brisbane in, I think, June this year. That has been lifted up onto jacks and is being prepared to commence the modification, and Qantas are doing that in Brisbane.

...The next commercial aircraft is in the Airbus production line [and] the others are programmed as part of that production line. So the commercial platform part of the program is progressing as per the schedule.<sup>85</sup>

- 2.72 The aircraft’s primary use will be for refuelling purposes, but will also have capacity for use for deployment of squadron personnel and equipment.<sup>86</sup>
- 2.73 In response to the Committee’s query<sup>87</sup>, Defence confirmed that Australia does not currently have its own air refuelling capability, but has made arrangements to access refuelling assets from the United States when necessary.<sup>88</sup>
- 2.74 In 2006-07, there was an underspend on this project of \$51 million from the budget.<sup>89</sup> Defence clarified that while it could partially be attributed to delays in the military conversion from commercial platform to tankers:

It is difficult to directly relate it to that because we have different milestones. Some of those milestones are stop payment milestones. So the schedule in a lot of areas can be continuing along quite fine but we will not be making payments because a particular stop payment milestone is in delay and then once they have satisfied that stop payment milestone there is a flood of payments made. This project is characterised by some of those stop-start milestone payment arrangements.<sup>90</sup>

---

85 Air Vice Marshal Clive Rossiter, *Transcript 29 August 2008*, p. 17.

86 Air Vice Marshal Clive Rossiter, *Transcript 29 August 2008*, p. 19.

87 Hon Bruce Scott MP, *Transcript 29 August 2008*, p. 18.

88 Air Vice Marshal Clive Rossiter, *Transcript 29 August 2008*, p. 18.

89 Department of Defence, *Defence Annual Report 2006-07*, Volume 2, p. 21.

90 Air Vice Marshal Clive Rossiter, *Transcript 29 August 2008*, p. 18.

## Air Warfare Destroyer (AWD) Project (SEA 4000)

2.75 Costings for the AWD project in 2006 – 2007 were:<sup>91</sup>

Budget Estimate 2006-2007	Revised Estimate 2006-2007	Actual Expenditure 2006 - 2007	Variation from Revised Estimate	Variation from Budget Estimate
\$141m	\$141m	\$135m	\$ -6m	\$ -6m

2.76 The AWD project received second pass consideration in June 2007, a month earlier than anticipated.<sup>92</sup>

2.77 The Committee raised concerns with Defence about the AWD's being fitted to accommodate one helicopter rather than being designed to take its two helicopters on a single deployment without requiring second platform support.<sup>93</sup> The DMO representative advised that:

One of the choices we had to make was whether we actually purchased an existing Air Warfare Destroyer or an evolved Air Warfare Destroyer. A 2½-year analysis was made about the risks associated with buying a variance of the two. The existing Air Warfare Destroyer that we are purchasing is the F100 Navantia design, which has one helicopter. One of the things that we have learnt from the past is that trying to change existing designs to meet our specific requirements actually adds risk. The Spanish Armada [with operations very similar to that of the Australian Navy] operates its warfare destroyers with a single helicopter, and so do a number of others.<sup>94</sup>

2.78 The Committee expressed concern that if a decision was made in the future to deploy an individual AWD, their ability to conduct operations would be severely restricted if the single helicopter was to crash. In such an instance, there would be no backup systems to pick up the people in the crashed helicopter.<sup>95</sup> Defence replied:

---

91 Defence Annual Report 2006-2007, Volume 2, p. 22.

92 Department of Defence, Annual Report 2006-2007, Volume 2, p. 33.

93 Hon Bob Baldwin MP, *Transcript 29 August 2008*, pp. 20-21.

94 Mr Kim Gillis, *Transcript 29 August 2008*, p. 21.

95 Hon Bob Baldwin MP, *Transcript 29 August 2008*, p. 21.

This issue was debated at length through the whole of the defence capability cycle, through the Defence Committee and through to Cabinet. The decision was made based on good, reliable information and advice from Navy.<sup>96</sup>

## M-113 Armoured Vehicles

2.79 Costings for the project to upgrade Army's M-113 Armoured Personnel Carriers (LAND 106) in 2006 – 2007 were:<sup>97</sup>

Budget Estimate 2006-2007	Revised Estimate 2006-2007	Actual Expenditure 2006 - 2007	Variation from Revised Estimate	Variation from Budget Estimate
\$118m	\$8m	\$13m	\$ 5m	\$ -105m

2.80 The LAND 106 project is upgrading 350 of the Army's fleet of M-113 armoured vehicles that provide transport and fire support for the Army's mechanised forces. It will improve protection, firepower, mobility and habitability. The upgrade replaces most of the existing vehicle, retaining only the hull, hatches, rear door and communications systems. It also includes appliqué armour, a new armoured turret and machine gun, and a new engine, drive train and suspension. Expenditure was much lower than the budget estimate because of delays in resolving technical problems; predominantly with the brakes. The introduction into service date was delayed from July 2007 to November 2007.<sup>98</sup>

The Committee notes that delivery of the initial capability of 16 upgraded M-113s was delivered to the 1<sup>st</sup> Brigade in Darwin in December 2007.

96 Mr Kim Gillis, *Transcript 29 August 2008*, p. 21.

97 Defence Annual Report 2006-2007, Volume 2, p. 22.

98 Department of Defence, Defence Annual Report 2006-2007, Volume 2, p. 43.



## Vigilare

2.81 Costings for Project Vigilare (AIR 5333) in 2006 – 2007 were: <sup>99</sup>

Budget Estimate 2006-2007	Revised Estimate 2006-2007	Actual Expenditure 2006 - 2007	Variation from Revised Estimate	Variation from Budget Estimate
\$32m	\$10m	\$10m	\$ 0m	\$ -22m

2.82 The AIR 5333 project will replace the existing Air Defence command and control system with two new systems located at RAAF Tindal and RAAF Williamtown. It will also design and deliver an integrated ADF Air Defence System communications network. <sup>100</sup>

2.83 Following the public hearing on 29 August 2008, the Committee sought additional information from Defence on the status of the Vigilare project; whether the first command and control system was still expected to be installed and operational in Tindal by early 2009 or whether Boeing was still struggling to deliver this capability on time. Defence replied:

Vigilare's initial operational capability, represented by conditional acceptance of the Northern Regional Operations Centre at RAAF Tindal, is currently planned to be provided to the RAAF in April 2010. Boeing commenced installation at the Northern Regional Operations Centre in May 2008.

Vigilare's final operational capability, represented by conditional acceptance of the Eastern Regional Operations Centre at RAAF Williamtown, is currently planned to be provided to the RAAF in June 2011.

Progress on the project has been slower than all parties anticipated, but the criteria for the first few major milestones have been satisfied. The dates depend on the current schedules being met for other new and existing systems to which Vigilare is required to interface. <sup>101</sup>

<sup>99</sup> Defence Annual Report 2006-2007, Volume 2, p. 23.

<sup>100</sup> Department of Defence, Defence Annual Report 2006-2007, Volume 2, p. 50.

<sup>101</sup> Department of Defence, Submission No 10, p. 10.

## Australian Industry Capability

2.84 In discussion with the Committee, Defence stated that a large portion of some of the cash flow slippages in 2006-2007 were '...directly attributable to industry capacity constraints', with industry not being able to meet the demand increase.<sup>102</sup>

2.85 The program to replace the F/A-18 centre barrels is a good example to highlight this issue. Current arrangements are seeing Australia's F/A-18 Aircraft shipped to Canada for centre barrel replacements. As Defence had been aware at least four years ago of the need for this maintenance, the Committee queried what had been done to develop industry capacity for this to be carried out in Australia.<sup>103</sup> Defence responded that:

...in DMO we did a lot to try and develop that capability in Australia. We worked over several years over that period with both Boeing and BAE, as the major industry presence at the Williamstown site, to try and collectively bring both those companies' resources to bear on the problem, because neither one of them at the time could individually cater for the volume of work that was required. So we actually spent several years working in partnership with those companies trying to establish a commercial proposition to start that work in Williamstown.<sup>104</sup>

It is not just a matter of stripping down the aircraft, pulling it apart and putting it back together again... [There were] factors that both industry and DMO took into account when we were determining whether we could set this work up in Australia, because that was our aspiration. We collectively determined that we could not do it without significant risk, and we were not prepared to take that risk on when there was a viable alternative.<sup>105</sup>

2.86 In the case of the F/A-18s, ultimately only 10 centre barrel replacements were required, which would not have justified the required investment to establish such an operation in Australia.<sup>106</sup>

---

102 Dr Stephen Gumley, *Transcript 29 August 2008*, p. 15.

103 Air Vice Marshal Rossiter, *Transcript 29 August 2008*, p. 13.

104 Air Vice Marshal Rossiter, *Transcript 29 August 2008*, pp. 13-14.

105 Air Vice Marshal Rossiter, *Transcript 29 August 2008*, p. 14.

106 Air Vice Marshal Rossiter, *Transcript 29 August 2008*, p. 15.

2.87 The Committee though, remained concerned about the level for support of defence industry capacity in Australia.

... the question of support for industry capability and avoiding what seems to be the plague of the Australian defence industry – namely, peaks and troughs – what is the approach that DMO takes in respect of that? <sup>107</sup>

2.88 Defence commented:

We monitor the health of industry fairly carefully to ensure that there is enough work to keep everyone busy. As far as we can work out, the defence industry in Australia has been growing at about four or five per cent in capacity in real terms in each of the last four years. Each time we attempt to provide more demand than that, we find that the products do not flow. At the moment we are in a very firm demand period and we are not seeing any spare capacity around the industry as a whole. <sup>108</sup>

Clearly, it is in everybody's interests to level load demand as much as possible, and those sorts of questions are part of the industry capacity deliberations that are in the White Paper. It is not productive for DMO either to ask for too much demand and then fail to be able to supply or to do it the other way. Level loading is important to us. <sup>109</sup>

2.89 Defence informed the Committee that their strategy is moving towards becoming part of global supply and support chains, for example by investing over one million hours of engineering expertise in the new JSF platform. <sup>110</sup>

2.90 Defence also discussed the consideration given to industry capacity in future project planning:

On the maritime projects, we have mapped out the demand for skilled labour on each of the projects out to about 2030. It reaches a peak in about 2012 or 2013, as the air warfare destroyer is at maximum build rate. There is a bit of a gap in 2016 and 2017. Then it builds again towards the latter part of the next decade.

---

107 Hon Arch Bevis MP, *Transcript 29 August 2008*, p. 15.

108 Dr Stephen Gumley, *Transcript 29 August 2008*, p. 15.

109 Dr Stephen Gumley, *Transcript 29 August 2008*, p. 17.

110 Air Vice Marshal John Harvey, *Transcript 29 August 2008*, p. 16.

There is some work to be done in the latter part of the next decade to try and get better level loading. And it is being duly considered. We have been thinking about it very intensively over the last six months.<sup>111</sup>

## Recommendation 1

**That subject to national security requirements, the ADF and Government schedule large acquisitions in a sustainable manner over time, to avoid peaks and troughs for Australian industry and to better provide a long-term through-life support capability.**

- 2.91 The Committee queried the feasibility of Australia developing an export industry around light and heavy armoured vehicles.<sup>112</sup> Defence observed:

It is about having the continuity so that you can maintain that particular industry in the long term. We are actively working with the defence export unit to export the Bushmasters. We are doing everything we possibly can ... It is difficult to crack the international export market for these types of vehicles. Bushmasters are very capable vehicles, and we are trying to support Thales as to their export opportunities as much as we possibly can. But, as you have said, we have only been marketing and selling them in small numbers.<sup>113</sup>

## Leading Edge Customer

- 2.92 During the discussions surrounding DMO's Top 30 Projects, the Committee raised concerns that first customer/first of type development projects exhibit substantial slippage problems.<sup>114</sup>

Should we as a nation be first customer/first of type in what we do and what we procure or should we perhaps be looking at things like the MRH-90, where we are the second customer?<sup>115</sup>

---

111 Dr Stephen Gumley, *Transcript 29 August 2008*, p. 17.

112 Hon Ian Macfarlane MP, *Transcript 29 August 2008*, p. 32.

113 Mr Kim Gillis, *Transcript 29 August 2008*, p. 32.

114 Mr Stuart Robert MP, *Transcript 10 July 2008*, p. 20.

115 Mr Stuart Robert MP, *Transcript 10 July 2008*, p. 18.

2.93 Defence replied:

The sweet spot is to be just behind the curve. It is no good being right down the back of the queue because you end up with obsolete equipment. The sweet spot is one or two years behind the lead customers.<sup>116</sup>

2.94 The Committee asked what DMO is doing to ensure that Australia is 'one behind the curve, as opposed to first customer/first of type.'<sup>117</sup>

2.95 Defence replied:

A good example ... was the Air Warfare Destroyer decision. There was a competition, effectively, between an evolved ship – which is a nice way of saying a brand-new ship that has never been built before – and an existing ship where you just do the absolutely necessary, but no more than necessary, Australian modifications. When they looked at the risk profile, the government chose the existing ship based on the Spanish F105, because the Spanish have already built five of them. We were coming in as second customer. There will be some technical problems on the AWD, but there is nowhere near the risk you might have been taking on if you had been lead customer with a ship that had never been built before. The LHD [Landing Helicopter Dock] is another example. We are second customer there, rather than first customer. [The LHD] is the big amphibious ship.<sup>118</sup>

2.96 The Committee further enquired:

Will you be recommending to government, based on your comments there, that we go with second customer status, that we go with embedding staff within project teams as much as possible, and that first customer/first of type should be a last resort?<sup>119</sup>

2.97 Defence replied:

There are some technologies for which, just from the sheer capability point of view, you might want to be right up the front. But my strong preference is not to be that lead customer

---

116 Dr. Stephen Gumley, *Transcript 10 July 2008*, p. 18.

117 Mr Stuart Robert MP, *Transcript 10 July 2008*, p. 18.

118 Dr. Stephen Gumley, *Transcript 10 July 2008*, pp. 18-19.

119 Mr Stuart Robert MP, *Transcript 10 July 2008*, p. 19.

unless you walk in with your eyes wide open to the risk profile that you are truly taking on. The same applies in other sectors of the economy. It's not just in Defence. When you go first you are taking on very substantial technical and contractual risk.<sup>120</sup>

2.98 The Committee notes the comments by Dr. Gumley and concurs with his assessment that the ADF should only take on lead customer status when it is essential to do so.

2.99 Apart from Project Wedgetail, the Committee enquired whether there were 'any other first customer/first of type projects on the DMO's [Top 30] project list, especially in the developmental space?'<sup>121</sup>

2.100 Defence replied:

The Armidale class patrol boat was an indigenous, designed in Australia, first of class, never been built, 56-metre vessel delivered on schedule and on budget ... a great result.<sup>122</sup>

Nor should we leave the impression that everything Boeing does is unsuccessful. If you look at the C-17 Heavy Airlift Aircraft, that is a hugely successful project ... four C-17s in service now, on time, on budget.<sup>123</sup>

2.101 Confirming the category of each of the projects on the Top 30 list, Defence referred the Committee to Table 3.2 on page 21 of Volume Two of the Defence Annual Report 2006 – 2007:

- The Globemaster C-17 [AIR 8000] is off-the-shelf.
- The F18 Hornet Upgrade [AIR 5376 Phase 2] is an integration project where you get the kit from overseas, but clearly you have to get the wiring and do everything yourself locally, so I put that into integration.
- The next F18 Hornet project [AIR 5376 Phase 2.4] is also integration, as is the third one – the structural refurbishment [AIR 5376 Phase 3.2]. I should point out that all of the F18 Hornet projects are going well.
- For the ADF air refuelling capability [AIR 5402] we are a lead customer. At the moment we are suffering about a five-month delay.
- The MRH [AIR 9000 Phase 2] is off the shelf.

---

120 Dr. Stephen Gumley, *Transcript 10 July 2008*, p. 19.

121 Mr Stuart Robert MP, *Transcript 10 July 2008*, p. 20.

122 Mr Kim Gillis, *Transcript 10 July 2008*, p. 21.

123 Dr. Stephen Gumley, *Transcript 10 July 2008*, p. 21.

- We have pretty much found ourselves as the lead customer with regard to the Tiger [AIR 87 Phase 2], although we did not start as the lead customer.
- We [were] the lead and only customer with regard to the Seasprite [SEA 1411].
- We are the lead customer with regard to Wedgetail [AIR 5077 Phase 3].
- AWD [SEA 4000 Phase 2] is an off the shelf design, but it is an integration project, so we have lowered the risk.
- Aegis Combat System [SEA 4000 Phase 3.1] is off the shelf.
- Armidale Class Patrol Boats [SEA 1444] we are the lead customer there, but it is more of a commercial design.
- FFG [SEA 1390 Phase 2] is somewhere between an integration project and a lead customer.
- The SM1 Missile replacement [SEA 1390 Phase 4B] is off the shelf.
- For a long time now we have been the lead customer for the Anzac Ship project [SEA 1348 Phase 2].
- Anti-Ship Missile Defence [SEA 1348 Phase 2A] is lead and technological high-risk.
- The replacement integrated torpedo system [SEA 1429 Phase 2] is off the shelf using an American torpedo.
- The Collins class reliability [SEA 1439 Phase 3] is lead customer. We are in fact the only customer, because we have got a unique design.
- The replacement combat system [SEA 1439 Phase 4A] is off the shelf. It is the American combat system that we have to integrate into the submarine.
- The Main Battle Tank Replacement Project [LAND 907] is off the shelf and on time and on budget. It is low risk and is going well.
- We are a lead customer on the M113 Armoured Vehicles [LAND 106] and we dropped about \$100 million of spend because the braking system did not work and it took a year for the technological issues around the braking system to be proved. That project is back on track ... but it did go through the lead customer process.
- We are lead customer on Project Bushranger [LAND 116 Phase 4].
- The Echidna Project [AIR 5416] is integration.
- The lightweight torpedo project [JP2070 Phase 2] is an integration project. We have got some difficulties on that – in the integration. We are off the shelf for the actual torpedo itself.

- Explosive ordnance reserve stock [JP 2085] is off the shelf.
- Jindalee [JP 2025] was lead customer.
- Vigilare [AIR 5333] was lead customer and only customer.
- Amphibious maritime support [SEA 1654] is a combination of off-the-shelf and integration.
- The Joint Strike Fighter [AIR 6000] is a development project now, but it will be off the shelf by the time we get around to taking aircraft.<sup>124</sup>

2.102 The Committee noted that about half of the DMO's Top 30 projects are either lead customer or integration-type projects. It is also noted that the greatest funding variations/slippages occur in these types of projects. While DMO recognise that being lead customer for leading edge projects is indeed high risk, the Committee expects DMO to provide more accurate spending calculations when determining budget estimates.

## Managing Risk and Training Project Managers

2.103 In response to the Committee's concerns, DMO highlighted some of the measures it has since introduced to more effectively recognise and manage risk and also ensure value for money.

The corollary of all that is that you need a commercially savvy, strong and intervening Defence Materiel Organisation or the equivalent in other countries, to manage the buyer's risks intensively.... To manage what I call that massive amount of residual risk that always stays with the Commonwealth, what DMO is doing is building up the professionalism of our staff in contracting, engineering and program management. Only by having a cadre of about 2,000 experienced professional people are we really going to be able to manage the risk properly for the Commonwealth.<sup>125</sup>

We are leading the world in the development of training for very high-end project managers. We have developed with the Queensland University of Technology the first ever advanced executive masters program in complex project management, which is now the world leader. That was as a result of one of the lessons learnt, which was that managing these very high-

---

124 Dr. Stephen Gumley, *Transcript 10 July 2008*, pp. 40-41.

125 Dr. Stephen Gumley, *Transcript 10 July 2008*, p. 12.



end projects is a very high level skill. You need very special people to run those types of programs. We need to make sure that we train them as best we possibly can. These people are dealing in billions of dollars of taxpayers' money and we need to make sure that we have the best possible people running those particular jobs.<sup>126</sup>

## Procurement Issues

2.104 The Committee commented on the importance of DMO negotiating up front, a clear arrangement with the respective service, prior to commencing any acquisition program, and sought DMO's comments on this aspect.<sup>127</sup> Defence replied:

Having just recently worked as the program manager for the LHD [Landing Helicopter Dock] program, we had two years of consultation with Navy, Army and Air Force to ensure that the certification baseline for those ships was absolutely documented down to the condition of the PA speaker in the second level being assessed at a particular standard by a particular person for the first vessel, not the second, and that would be acceptable, and that was signed off by 11 signatories with the services.

The difficulty we have with a legacy program, like FFG, was that the documentation of the acceptance process ... was not as clear as it should have been. One of the things that we have increased and we have improved significantly is to ensure that the documentation about what DMO as an organisation actual have to deliver through capability development to the Services is documented as best that we can at the time prior to contract, which is part of the Kinnaird two-pass process. We actually have documented tender quality pricing with detailed processes in respect of acceptance because that is what industry wants. Industry wants clarity of exactly what they have to deliver to us. So there was a three-way process between industry, DMO and the [Defence] organisation. But

---

126 Mr Kim Gillis, *Transcript 10 July 2008*, p. 13.

127 Hon Arch Bevis MP, *Transcript 10 July 2008*, p. 36.

also with capability development there is the broker to ensure that everybody was clear about the requirements.<sup>128</sup>

- 2.105 The Committee asked how a piece of equipment enters service, using a ship as an example. Defence explained the process:

The Navy has a ship acceptance certificate, T1338. When the contractor believes they can offer a contractually compliant product there is a formal offer. There is a disclosure of everything we know about the state of the ship and its systems, trial cards, problems and bugs. There is never 100 per cent full compliance of every requirement and contractual issue. We then go into the 'so what' analysis about the significance of those issues and we make resolutions as to what issues have to be resolved by the contractor at their expense post-delivery; what needs to be resolved by DMO and what other issues need to be resolved by Navy. They are in various categories which are risk-based and a number of them are focused in the safety regime. It is all about assessing that fitness for service. The T1338 is then the basis for us saying to Navy: 'We want you to consider this for operational release or initial operation release'. The T1338 set of certificates is supplemented by a bunch of other assessments made by Navy and specifically by the RAN Test Evaluation and Acceptance Authority. Recommendations are taken by Director-General Navy Certification Safety and Acceptance [then] go to Chief of Navy and present a case. We say 'This is what you have; these are the risks; these are transitional measures proposed by the contractor, DMO and Navy'.<sup>129</sup>

- 2.106 The Committee observed that while significant improvements have been made in this regard, they were surprised that the Services still had the absolute right to refuse delivery of a platform, even after DMO had either signed off, or substantially signed off, on contract compliance.<sup>130</sup>

---

128 Mr Kim Gillis, *Transcript 10 July 2008*, p. 36.

129 Commodore Andrew McKinnie, *Transcript 10 July 2008*, pp. 36-37.

130 Senator Mark Bishop, *Transcript 10 July 2008*, p. 37.

### 2.107 Defence replied:

The way to get it right is to make sure that the original specification is correct ... then there will not be a dispute at the back end.<sup>131</sup>

Industry is only required to deliver what is in the contract. It would be unconscionable of us to ask industry to do more than that.<sup>132</sup>

With a 10-year project, it is possible that ... military technology [requires] you to do something to upgrade your platform as you are bringing it into service. The correct way of doing it is probably a new project fully open and visible to everybody, fully costed, and you work on it then. Of course, we did that with the Collins submarine. The contract went for many years and then there was a subsequent project – SEA1439 – which was to bring it up to the next level of capability.<sup>133</sup>

An example of the improvements is that we were able to recently deliver a replacement to HMAS *Westralia* actually ahead of schedule and under budget and Navy accepted. Tenix, who delivered the vessel, was paid a bonus for delivering ahead of schedule and actually meeting all their criteria, but there were a number of items that we had to improve and work with Navy on. Navy accepted the ship and the ship is in operation. There are still some things that were outstanding that we are resolving even today.<sup>134</sup>

### 2.108 The Committee raised its concerns with Defence, questioning the fairness to tenderers when Defence specifications may still be evolving during the contract negotiation stage with a preferred tenderer and even after contract signature, which may require new tenders in order to meet the altered specifications. In the case of Project Overlander (LAND 121):

...the company spent the time, effort and money submitting a tender to the specification you had out there at that stage, it had been successful at that stage and then the specification changed. What compensation are you paying to industries

---

131 Dr. Stephen Gumley, *Transcript 10 July 2008*, p. 37.

132 Dr. Stephen Gumley, *Transcript 10 July 2008*, p. 35.

133 Dr. Stephen Gumley, *Transcript 10 July 2008*, p. 37.

134 Mr Kim Gillis, *Transcript 10 July 2008*, p. 37.

that spend money and time developing tenders only to have those specifications changed so that they cannot compete? <sup>135</sup>

2.109 Defence replied:

For Defence contracting as a whole, we do not pay tenderers' costs – this has been well established over a long time. However, in this particular circumstance [the medium and heavy weight trucks in the LAND 121 Project], we are offering those who wish to retender, some monetary assistance to help them with their tendering costs and, in particular, their test and evaluation costs. <sup>136</sup>

## Cost-cutting

2.110 As part of the Government's whole-of-government savings program, Defence advised that 5 per cent of savings is being offered across the DMO sustainment budget (\$230m from a \$4.5b budget). Savings will be derived from industry, from the service fee area, and from the acquisitions area. <sup>137</sup>

## Reallocation of Funding

2.111 In July 2008, the United Kingdom House of Commons' Committee of Public Accounts published a report titled "Ministry of Defence: Major Projects Report 2007". <sup>138</sup> The Report was quite critical of UK Defence spending, particularly concerning major project slippages and the subsequent reallocation of funding. Defence were requested to comment on whether the same criticisms could be applied to the ADF. Defence replied:

The report made seven conclusions and recommendations, of which three directly related to specific UK projects or processes and therefore are not relevant to the DMO. The remaining four could be viewed as having applicability to

---

135 Hon Bob Baldwin MP, *Transcript 29 August 2008*, p. 34.

136 Dr Stephen Gumley, *Transcript 29 August 2008*, p. 34.

137 Dr. Stephen Gumley, *Transcript 10 July 2008*, p. 13.

138 United Kingdom House of Commons' Committee of Public Accounts Report *Ministry of Defence: Major Projects Report 2007* dated 22 July 2008.

Australia. The UK report's major criticisms centred on cost shifting and therefore placing increasing burdens on non-project budgets to absorb these transferred costs.

Post Kinnaird and the introduction of the Two Pass process, the DMO has demonstrated, backed up by Mark Thomson from ASPI's analysis in his 2008-09 Budget Brief, that project costs post-Second Pass overall are within about 98 per cent of project approval value when corrected for foreign exchange, inflation, changed quantities, and scope. Pre-Second Pass cost estimation remains problematic for Defence, given the uncertainty over the type and number of capabilities required in the future and the future environment in which they will operate.

The Two Pass process, and associated Net Personnel and Operating Costs process, ensures that all areas within Defence are engaged in the development and assessment of project costs and ongoing operating costs. Therefore, the criticisms of the UK Defence process could not be said to be a concern in the Australian context.<sup>139</sup>

## Conclusion

- 2.112 DMO is a complex and diverse organisation that has undergone significant change since the Kinnaird Review<sup>140</sup> was released in 2003. Both Defence and DMO have undertaken a considerable amount of work to remediate and reform their practices and to implement the recommendations in the Kinnaird Review.
- 2.113 The Defence Sub-Committee acknowledges the report released in August 2008 by the Joint Standing Committee on Public Accounts and Audit titled *Progress on equipment acquisition and financial reporting in Defence*.<sup>141</sup> This report analyses the progress made by DMO since the Kinnaird Review. The Government response to this Report is due in November 2008.

---

139 Department of Defence, Submission No 10, p. 14.

140 Defence Procurement Review 2003

141 Joint Standing Committee on Public Accounts and Audit, Report 411

- 2.114 The Defence Sub-Committee also acknowledges the recent Defence Procurement and Sustainment Review (the Mortimer Review 2008).<sup>142</sup> The Review evaluated DMO's progress made under the Kinnaird reforms and examined current acquisitions and sustainment processes. This review has made a number of key recommendations to Government. The Review was still under consideration when this Report was drafted.
- 2.115 Both of the above documents are of interest to the Committee and will inform future briefings and hearings.

## Department of Defence - Joint Strike Fighter F35

### Background

3.1 In the 2000 Defence White Paper, the Australian Government reaffirmed that the primary priority for the ADF is to maintain the capability to defend Australian territory from any credible attack, without relying on help from the combat forces of any other country [and] the key to defending Australia is to control the air and sea approaches to our continent, so as to deny them to hostile ships and aircraft, and provide maximum freedom of action for our forces.<sup>1</sup> Similar views were contained in earlier Defence White Papers.

3.2 The 2000 Defence White Paper further states:

Air combat is the most important single capability for the defence of Australia, because control of the air over our territory and maritime approaches is critical to all other types of operation in the defence of Australia. The Government believes that Australia must have the ability to protect itself from air attack, and control our air approaches to ensure that we can operate effectively against any hostile forces approaching Australia. The Government's aim is to maintain the air combat

---

<sup>1</sup> Defence 2000: Our Future Defence Force, pp. 46 – 47.

capability at a level at least comparable qualitatively to any in the region, and with a sufficient margin of superiority to provide an acceptable likelihood of success in combat. These forces should be large enough to provide a high level of confidence that we could defeat any credible air attack on Australia or in our approaches.<sup>2</sup>

- 3.3 The F-35 Joint Strike Fighter (JSF) is an aircraft being considered for acquisition by Defence as part of the AIR6000 Leading Edge Air Combat Capability project. The Australian Government is yet to make a decision on how best to address its future New Air Combat Capability (NACC) requirement to replace the air combat capability provided by the current fleet of F/A 18 Hornet aircraft and F-111 aircraft. The final decision will be considered in the context of the new Australian Defence White Paper which is currently being developed.<sup>3</sup>
- 3.4 While the Australian Government's acquisition decision will not be made until some time in 2009, Australia remains an enthusiastic development partner in the JSF Program. The JSF Program is of immense importance to Australia as the JSF is the leading contender to replace Australia's current ageing fleet of fighter jets.<sup>4</sup>
- 3.5 The AIR6000 project is currently working towards second pass approval (now expected in mid-2009). This current phase funds Australia's contribution to the nine-nation System Development and Demonstration stage of the JSF program. Other approved funding comprised initial funding for the Production Sustainment and follow-on Development (PSFD) stage of the program and project officer funding to achieve the second pass outcome.<sup>5</sup>

---

2 Defence 2000: Our Future Defence Force, pp. 84 – 85.

3 <http://www.defence.gov.au/dmo/lsp/JSF>

4 <http://www.defence.gov.au/dmo/lsp/JSF>

5 Defence Annual Report 2006-2007, Volume 2, p. 52.



## Cost of the JSF program

- 3.6 At the public hearing on 10 July 2008, Defence provided estimates on acquisition costs for the JSF aircraft and additional components needed to make it operational. Defence stated:

I would be surprised if we paid more than about \$75 million a copy for the aircraft, measured in 2008 dollars and assuming we buy at least 75, or three squadrons.<sup>6</sup>

- 3.7 The costing provided by Defence at that public hearing was well below costs that many in aerospace and defence industry circles had estimated.

- 3.8 At the public hearing held on 29 August 2008, the Committee questioned the basis upon which that earlier evidence on costing was provided. Defence then clarified the basis of their earlier advice, confirming that the \$75 million per aircraft related to the Unit Flyaway Cost, which is the cost of the platform only, and not inclusive of the other necessary components to provide an operational capability.<sup>7</sup>

- 3.9 Ensuring Parliamentary Committees are provided with complete and accurate information, especially by public servants who appear before them is important. Evidence that is misleading is equally unacceptable. Had the evidence provided on 10 July 2008 about the costing of the F35 been allowed to stand, it would present a very different and misleading picture. As the chair commented:

I do not think anyone was seeking to find out the cost of a platform that we could not do anything with. [We were trying to] find out the cost to get a plane that could be used, not something on a factory line that had no manuals, no resources and nothing else that was going to help us fly it.<sup>8</sup>

- 3.10 Defence provided further information on pricing, and referred to estimates for the Acquisition Cost (which includes the aircraft, ancillary equipment, support and training equipment and initial spares):

The published figure in the latest public defence capability plan, if you add up all the phases in the banding, is between \$11.5 billion and \$15.5 billion. The middle of the band is \$13.5

---

6 Dr Stephen Gumley, *Transcript 10 July 2008*, p. 23.

7 Dr Stephen Gumley, *Transcript 29 August 2008*, pp. 11-12.

8 Hon Arch Bevis MP, *Transcript 29 August 2008*, p. 12.

billion, so the average for 100 would be 135 million [per aircraft].<sup>9</sup>

- 3.11 Additionally, Defence advised that the through-life cost will then be two times the acquisition cost.<sup>10</sup> In total:

If we were sitting here 35 to 40 years from now and we were able to look backwards at what the JSF cost, probably in today's dollars it would be of the order of \$40 billion whole-of-life. That would include midlife upgrades and all sorts of things we are not aware of yet. But certainly our experience of running aircraft is that they are the sorts of numbers you look at.<sup>11</sup>

- 3.12 Another factor affecting costs is:

... unlike civilian aircraft programs where normally the companies have a commercial incentive to get you to buy early to get their production line going and therefore will give early buyers a discount, in military aircraft ... the early aircraft cost you a lot more. Typically, early aircraft can be two or three times the price of aircraft two, three or four years later ... as they build up production, knowledge and capacity. The implication of that is that there is actually a commercial incentive for all 11 existing proposed customers of the JSF to rush to the back of the queue. That quickly leads to destabilisation of the program, because if everybody wants to delay purchasing so they do not buy the expensive early aircraft, the production line never really gets going at the rate that gives you the volume effect that is going to drive down the cost of the JSF.<sup>12</sup>

- 3.13 Stabilisation of the cost of the program will occur by:

... [trying to get] everybody to make their commitments and [therefore] everybody pays the same price for the aircraft for, say, the first five years of production. As soon as you can get people to make that commercial decision, you then actually reduce the costs for everybody. We are ... working with the US authorities to get what is called consortium buy or level pricing, but whatever we want to call it, it is about getting the

---

9 Air Vice Marshal John Harvey, *Transcript 29 August 2008*, p. 12.

10 Dr Stephen Gumley, *Transcript 29 August 2008*, p. 26.

11 Dr Stephen Gumley, *Transcript 29 August 2008*, p. 27.

12 Dr Stephen Gumley, *Transcript 10 July 2008*, p. 22.

same price for each of the first five or six years of production of the aircraft.<sup>13</sup>

3.14 Defence advised that there were four broad groups responsible for JSF cost estimates:

The manufacturer, Lockheed Martin, tend to report the lowest costs; they are quite optimistic. The Joint Program Office tend to add contingency for risk, and they are a bit higher. The CAIG [Cost Analysis Improvement Group] ...is next, and then the Government Accountability Office tends to have the most pessimistic view. When we do our estimating in Australia, what we have tended to do is to take a price somewhere in the middle of all that. In the arc of optimism to pessimism we take a middle position in most of the work we do.<sup>14</sup>

3.15 Committee determination: The Committee commends DMO for their approach in seeking greater certainty and stabilisation of the program's costs through level pricing or consortium buy options, should Australia decide to buy the JSF capability.

## Progress of the JSF program

3.16 The Committee raised with Defence various concerns which came out of reports by the US Government Accountability Office (GAO) to the US Armed Services Committee. The US GAO concerns included:

- reducing test resources to pay for development cost overruns;
- that midway through its 12 year development cycle the JSF is over cost and behind schedule.
- the JSF plan is too risky because it increases the risk of not finding and fixing design and performance problems until late into production, when it is more expensive and disruptive to do so; and
- the official JSF cost estimate is unreliable, and is not comprehensive or well-documented.<sup>15</sup>

---

13 Dr Stephen Gumley, *Transcript 10 July 2008*, p. 22.

14 Dr Stephen Gumley, *Transcript 29 August 2008*, p. 26.

15 Hon Arch Bevis MP, *Transcript 10 July 2008*, pp. 24-25.

3.17 At the public hearing on 10 July 2008, Defence replied that:

The cost they are referring to relates more to the development costs of the aircraft, and they have gone up. It is likely that each of the customers will be asked to pay a small part of that extra cost. At the moment we are expecting Australia's contribution, if we are asked to pay, will be less than \$1 million per aircraft ... not a huge amount.<sup>16</sup>

The GAO's comments have been contested by the program, the contractor and others. It becomes a balance as to how pessimistic or optimistic you are on that ... if you reduce the number of tests, you increase the risk ... therefore the tests they were going to do will have to be done on the other [test] aircraft.<sup>17</sup>

... we do acknowledge there have been schedule slips ... and are trying to come to grips with the magnitude of them.<sup>18</sup>

3.18 Defence subsequently provided additional written advice:

Any concern regarding the quality of JSF cost estimates is of concern to Defence. And as the Minister for Defence has stressed, the Government will not make an acquisition decision on the JSF until it is confident about costs and schedule. Prior to the GAO's recommendation for an independent cost estimate, the JSF Project Executive Officer had initiated an independent review of cost estimates in January 2008 in preparation for the US President's FY2010 budget. Defence welcomes the independent review which requires reconciliation of the JSF Program Office (JPO) estimate with estimates generated by US Government stakeholders by around October this year. This is to be a joint exercise involving the JPO, the CAIG (Cost Analysis Improvement Group - an independent review body in OSD) and the costing agencies from both the US Navy and US Air Force. The results of this review will inform the NACC Second Pass consideration in 2009.<sup>19</sup>

During 2007 the US JPO implemented a Mid Course Risk Reduction Plan to replenish management reserves.

---

16 Dr Stephen Gumley, *Transcript 10 July 2008*, p. 24.

17 Dr Stephen Gumley, *Transcript 10 July 2008*, p. 25.

18 Dr Stephen Gumley, *Transcript 10 July 2008*, p. 31.

19 Department of Defence, Submission No. 6, p. 2.

Replenishment was achieved through the removal of two developmental test aircraft, thereby reducing the developmental test assets from 21 to 19. This action was flagged as a concern by the GAO. The JPO continually reviews the JSF test program to ensure all necessary testing is done in the most cost effective way. This process has resulted in the elimination of several test flights from those planned in the initial flight test program and the transfer of some flights to the 737-based Cooperative Avionics Test Bed (CATB). The JPO believes that the combination of the 19 JSF test aircraft, the CATB and extensive integration laboratories provides the most cost effective means to complete flight test with acceptable risk. In comparison with earlier test programs the JSF is still very well resourced. For example, the 1990's F-22 Program had only nine test aircraft. Significant challenges still remain, however. In early 2008, the JPO recognised the reworked flight test program would require additional time. Accordingly, a one year flight test extension has been incorporated into the program resulting in Block 3 Initial Operational Test and Evaluation (IOT&E) now planned for completion in 2014.<sup>20</sup>

- 3.19 The Committee enquired about the cost blow-outs on the JSF program. These included an increase of US\$23 billion in 12 months, and a \$55 billion increase since the program's restructure in 2004.<sup>21</sup> In subsequent written advice, Defence explained:

The US\$23 billion increase referred to in the 2008 US Government Accountability Office Report is the difference between the estimates for the total US acquisition cost in the December 2006 Selected Acquisition Report (SAR) and the December 2005 SAR. A critical point to note in any examination of these Reports is that they are based on Then Year (TY) or 'out-turn' estimates; that is, they take into account projected inflation across the period being examined. TY costs are therefore considerably higher than costs against a Base Year (BY) estimate which is referenced to a specific year and indicates "real" cost changes.

...Discounting inflation shows that the "real" cost increase incurred during this period was much more limited at US\$7.7 billion in 2002 BY prices or approximately 3.7 per cent.

---

20 Department of Defence, Submission No. 6, p. 4.

21 Hon Arch Bevis MP, *Transcript 10 July 2008*, p. 30.

This "real" increase was anticipated by Defence and therefore allowed for in the cost estimates presented at New Air Combat Capability (NACC) First Pass consideration in November 2006. As a result, there was almost no adjustment needed to NACC First Pass estimates once the December 2006 SAR was formally released.<sup>22</sup>

Normally a substantial increase in a TY estimate is the result of a substantial increase in the BY estimate. The major TY increase between the December 2006 and December 2005 SAR, however, did not result in a major increase in the BY estimate. This is because much of the cost increase was associated with a significant extension to the period over which the US plans to buy its aircraft. This effect is not associated with an increase to forecasts of future inflation rates; rather, because aircraft are acquired over a longer period, inflation compounds over a longer period.<sup>23</sup>

- 3.20 The Committee asked whether any issues have been raised by the Government's two-part review of the JSF; specifically if there were issues regarding accuracy of costs. Defence replied that:

Mr Orme [the chief reviewer for Minister Fitzgibbon's Air Combat Capability Review program] had a look at the GAO reports as part of his review. As you will recall, [the] second part of [his] report is still with government for consideration.<sup>24</sup>

- 3.21 The Committee enquired about the schedule for delivery and operational readiness of the JSF.<sup>25</sup> Defence replied that the first aircraft had been flying for eight months.

The US marines are the first service to declare operational capability and they are planning 2012 for IOC (initial operational capability), and the USAF I believe is at 2013 ... [and] that by 2013 a [US] JSF would have been in some combat operation.<sup>26</sup>

... there is planned to be nine aircraft [built] in 2011; 13 in 2012; 28 in 2013, of which [the ADF] might get four, but those

---

22 Department of Defence, Submission No. 8, p. 3.

23 Department of Defence, Submission No. 6, pp. 2-3.

24 Dr Stephen Gumley, *Transcript 10 July 2008*, p. 26.

25 Mr Stuart Robert MP, *Transcript 10 July 2008*, p. 28.

26 Group Captain Don Thornton, *Transcript 10 July 2008*, pp. 28-29.

four will probably be rolled out a little bit later; and in 2014 there are 68.<sup>27</sup>

2015 is when [ADF] are planning initial operational capability and that would be with the first squadron operational in Australia and then it will build up from there.<sup>28</sup>

- 3.22 In response to the Committee's concern about risk mitigation for the JSF, given that testing has lapsed, and the time it takes for Australia to receive and have combat ready JSFs,<sup>29</sup> Defence responded that:

... the government's [decision] to go ahead with the Super Hornets is [the] master risk mitigator. Australia is getting a squadron of Super Hornets to cover a capability gap that does not exist now but could exist if something unexpected or disastrous happened with an alternative program.<sup>30</sup>

- 3.23 The Committee enquired about the alternative engine program for the JSF, and whether GAO was justified in criticising the decision to end this program<sup>31</sup>:

There are conflicting arguments. One is running two development programs, and two development engines, means that there are double the fixed costs and double the engineering costs. The alternative is that it provides competition in the marketplace for years to come and will keep both the engine manufacturers competitively focused. I can see merit in both arguments.<sup>32</sup>

- 3.24 Defence also clarified for the Committee that the increase identified in the GAO report did not include an additional US\$6.8 billion for alternative engines:

The Project Office have said they do not believe the second engine represents good value for money. The US DOD have agreed with that, but congress over the last couple of years have come back and directed them to put the funding in for it.<sup>33</sup>

---

27 Dr Stephen Gumley, *Transcript 10 July 2008*, p. 28.

28 Group Captain Don Thornton, *Transcript 10 July 2008*, p. 30.

29 Mr Stuart Robert MP, *Transcript 10 July 2008*, pp. 28-29.

30 Dr Stephen Gumley, *Transcript 10 July 2008*, p. 29.

31 Hon Arch Bevis MP, *Transcript 10 July 2008*, p. 31.

32 Dr Stephen Gumley, *Transcript 10 July 2008*, p. 31.

33 Air Vice Marshal John Harvey, *Transcript 29 August 2008*, p. 25.

- 3.25 The Committee questioned Defence on the merit of considering the Netherlands' approach in acquiring aircraft for testing purposes. Defence advised the Committee<sup>34</sup>:

We have been involved in this Joint Strike Fighter SDD – system development and demonstration – phase for a long time, since 2002. We know an awful lot about the platform. We are very confident that it will emerge as a top class capability. But the Netherlands is a European country, a member of NATO and has a lot of strategic depth and my understanding is that they have decided that they will take a close look at the Joint Strike Fighter; not so much to do a comparative analysis with other aircraft, but to better understand how it will fit into their system and, indeed, the NATO system. So it is a completely different set of circumstances.<sup>35</sup>

- 3.26 The Committee questioned whether or not the Netherlands were effectively purchasing two JSF aircraft to compare them against the Gripen and the Typhoon prior to committing to the JSF capability.<sup>36</sup> Defence replied:

The Netherlands certainly are buying two test aircraft. We work closely with them and they are not doing it as fly-off. They see that as their best way to assess the capability before buying. We have looked at that as well. Those two aircraft upfront are very expensive. We decided in our business case that our involvement in the US test program was the best way to do it. [The Dutch] are just taking a different approach.<sup>37</sup>

## Air Superiority

- 3.27 The Committee sought comment regarding Australia's ability to maintain air superiority within our region:

... the current planning seems to be predicated on a view that one platform is the desired solution for us as a nation for both air superiority and air-to-ground capabilities. In the past, at

---

34 Hon Arch Bevis MP, *Transcript 29 August 2008*, p. 44.

35 Air Chief Marshal Angus Houston, *Transcript 29 August 2008*, p. 44.

36 Hon Arch Bevis MP, *Transcript 29 August 2008*, p. 44.

37 Air Vice Marshal John Harvey, *Transcript 29 August 2008*, p. 44.



least, that has always involved a trade-off of capabilities, notwithstanding advances in technology. Aren't we still in the same dilemma?<sup>38</sup>

3.28 Defence replied:

I suppose you are suggesting that our future is probably in the area of the JSF. Should the government decide to go the JSF route, that would come out as a consequence of the white paper and the second pass review of air combat capability. We really had a good look at all of the candidates. There are not a lot of options out there. One of the things that was decided by the previous government back in 2000 – and it is in the 2000 White Paper – was that if possible, to cut down on the cost of maintaining these incredibly expensive capabilities, the best way to proceed would probably be to have a hundred aircraft that could perform both roles: the role of control of the air – air superiority, if you like – and the role of strike, interdiction, close air support and so on. That is where the JSF stands out. I am confident that [JSF] will develop into a front-line capability that will serve Australia's needs very well in the future.<sup>39</sup>

I have had a close association over the years with air combat capability. I have been a fighter pilot myself. I have had a chance to look at the development of JSF, where we are going at the moment, and not only do I look at it as probably the best multi-role platform coming down the track, but I take a system view as well. Based on what I have seen working closely with the team and in my past experience in operating aircraft like this in a multi-role environment, I consider the ...JSF ... to be probably the best multi-role air combat aircraft available to us. It will be equipped with the best sensors; it will be supported by the best tanker available; and it will be manned and supported by the best men and women available around the world today. I do not think it is going to get any better than that as a package for this country.<sup>40</sup>

3.29 To the question of "Is there a danger with a multi-role aircraft that we lose our capacity for air dominance,"<sup>41</sup> Defence replied:

---

38 Hon Arch Bevis MP, *Transcript 29 August 2008*, p. 38.

39 Air Chief Marshal Angus Houston, *Transcript 29 August 2008*, pp. 38-39.

40 Air Marshal Mark Binskin, *Transcript 29 August 2008*, p. 39.

41 Hon Arch Bevis MP, *Transcript 29 August 2008*, p. 39.

No, I do not believe so. I think the important thing here is to think in terms of systems: system against system, not platform against platform. If you are seduced into the platform versus platform debate, inevitably people have visions of the Battle of Britain in World War II, with one aircraft on another. In the information age, the age of low-visibility platforms, stealth platforms, those sorts of preconceptions are no longer applicable. What we are talking about is a system whereby the fighter pilot is better informed, through his sensors and his connection to a variety of sensors, than he has ever been before. His situational awareness is just unbelievable. He is in a platform that is largely invisible to radar, so his situational awareness is likely to be better than the other guy's and, using the system that is available to him – the whole system and the systems that are resident in the aircraft – he is able to see first, shoot first and kill first. I think that that is what this system that we are developing is all about.

The other side of it is that this platform is also very capable in the strike role, in the interdiction role and in the close air support role. As it matures it will be able to do anything that we need it to do. What we need is the ultimate insurance policy in air combat capability to look after Australia's interests. This is absolutely the sort of platform that we need to fit into the system.<sup>42</sup>

- 3.30 Notwithstanding the substantial capabilities planned for the JSF, the F22 remains a capable air to air combat platform and is expected to continue in that role in the US following the introduction of the JSF.

## Industry involvement

- 3.31 Australia's current participation with the JSF program has enabled some Australian-based companies to become involved in the program:

To date, GKN in Melbourne has employed 200 engineers who are doing over one million hours of work on the Joint Strike Fighter project. So the focus changes as we go between

---

42 Air Chief Marshal Angus Houston, *Transcript 29 August 2008*, p. 39.

platforms, but the focus now, certainly on that platform, is to be part of the global system rather than just have a local system.

...the structural design of the JSF is extremely high level, and we have 25 Australian companies as part of the global support chain at this stage, with about US\$150 million worth of work won to date.<sup>43</sup>

3.32 Regarding future opportunities for Australian industry, Defence observed:

Australian industry has shown it can win work...<sup>44</sup>

Once we go into production, Lockheed have identified opportunities – I want to be very clear on that word ‘opportunities’ – for \$7 billion to \$8 billion worth of work. Each of those opportunities is contested and therefore you have to apply a win rate – what probability Australia has of winning each of those tenders. If Australian industry is truly competitive, we are expecting perhaps \$1 billion to \$2 billion worth of work coming out of it...<sup>45</sup>

We are now stepping into the production phase, so what we are starting to see is those companies that won work in the development phase for the 19 test aircraft now starting to get the contracts for the initial production. So we are getting into the big contracting. Lockheed Martin put a figure of some billions of dollars out there in opportunities, but we are still in competition for those. We can expect to see some of those contracts start flowing through in the near term<sup>46</sup>

## Submissions to the Inquiry

3.33 The Committee received several submissions for this Review of the Defence Annual Report 2006-2007. The submissions have been provided by individuals and interested groups consisting of experienced ex-RAAF officers and people with extensive aerospace industry experience. For some years, these individuals and groups

---

43 Air Vice Marshal John Harvey, *Transcript 29 August 2008*, p. 16.

44 Air Vice Marshal John Harvey, *Transcript 29 August 2008*, p. 44.

45 Dr Stephen Gumley, *Transcript 29 August 2008*, p. 43.

46 Air Vice Marshal John Harvey, *Transcript 29 August 2008*, pp. 43-44.

have provided similar submissions to a number of different Parliamentary Committees.

- 3.34 The Defence Sub-Committee is not in a position to fully address all of the concerns raised in the submissions, as the necessary resources and expertise are not resident in the Committee structure. Additionally, a number of the issues that are raised in the submissions go to highly sensitive and classified matters that the Committee does not normally have access to, nor would be considered appropriate to address in open-source commentary. They are none the less important matters. The Committee thanks those in our community who maintain a healthy interest in the defence and security of our Nation. Their contribution to the public debate provides alternative sources of information and assessments on key issues.
- 3.35 The Committee has sought responses from Defence on a number of the issues raised in these submissions, both in public hearings and subsequent written requests. While some of the issues have been partially answered in previous paragraphs within this Chapter, the following paragraphs are based on answers Defence has provided in response to some of the specific concerns raised in the submissions to the Committee, within the limitations noted above.
- 3.36 With regard to the JSF, at the Senate Estimates Hearing on 20 February 2008, CDF advised that the JSF was one platform in a "system". If this "system" fails, then the individual platforms will fight against our adversaries' individual platforms.<sup>47</sup> Shouldn't the ADF be seeking superior system components that together create a superior "system"? Defence replied:

The planned air combat capability "system" includes the combination of:

- the advanced Super Hornet and Joint Strike Fighter,
- advanced weapons,
- key force multipliers of the Airborne Early Warning and Control and Multi-Role Tanker Transport aircraft,
- advanced intelligence, surveillance and reconnaissance systems such as the Jindalee Operational Radar Network,
- broad command and control capabilities such as Vigilante, and
- highly trained people and advanced tactics and doctrine.

---

47 Exhibit No.1, p. 12.

The total “system” will provide Australia with the edge; however, even at a platform versus platform level, future ADF platforms offer significant benefits over likely threat systems. For example, when considering the capability of an air combat aircraft the entire ‘kill-chain’ (detect, track, shoot, guide, hit, survive) must be considered rather than simple characteristics such as aerodynamics. The JSF’s combination of stealth, advanced sensors, data fusion, data links, situation awareness, weapons and countermeasures, coupled with superior training, currency and professional development of our crews, give it a major advantage over any likely threat systems.<sup>48</sup>

- 3.37 In response to the concern that Australia disregarded USAF analysis that dictates the acquisition of an air dominance fighter is necessary to ensure air superiority,<sup>49</sup> Defence replied:

Maintaining air superiority in likely threat scenarios is a fundamental role of the RAAF. Ongoing Defence analysis shows that the JSF, when integrated into the networked ADF, can achieve that in a way we can afford to acquire and sustain throughout its life. The USAF has a broader range of strategic requirements and has decided it needs a dedicated air dominance fighter, the F-22. It is useful to note that, among the JSF partner nations/services, the USN, USMC, Royal Navy, the Netherlands, Turkey, Canada, Denmark and Norway are looking to the JSF to provide their sole or primary air combat capability.<sup>50</sup>

- 3.38 In response to the concern that capabilities will be fielded in our region that will be superior to both the Super Hornet and the JSF,<sup>51</sup> Defence replied:

Capabilities must be considered in the context of the overall system and environment rather than specific platform elements. That said, air combat aircraft capabilities are a critical element of overall system capabilities. While there is no doubt that there will be an increased air combat capability within our region in the coming years, ongoing analysis by

---

48 Department of Defence, Submission No. 10, p. 6.

49 Exhibit No.1, p. 14.

50 Department of Defence, Submission No. 10, p. 6.

51 Exhibit No.1, pp. 19-21.

Defence shows that the Super Hornet and subsequently the JSF will provide the capability the ADF needs. It should be noted that the Super Hornet will provide the front-line capability for the USN out to around 2015 at which time it will be progressively replaced by the JSF, which will then become the USN's front-line fighter.<sup>52</sup>

- 3.39 Much discussion during the two public hearings into the Defence Annual Report has centred on the "cost" of the JSF. It has been argued that Defence should be looking at the "cost of mission/capability", rather than the "cost of an aircraft".<sup>53</sup> Defence replied:

Defence fully agrees. The ADF's future air combat aircraft must be affordable to acquire, operate, sustain and upgrade throughout its life. Ongoing analysis by Defence, including DSTO, shows that the JSF offers the most cost effective capability for the ADF's needs.<sup>54</sup>

- 3.40 Air Power Australia note the acquisition of advanced fighter aircraft across the region is being paralleled by the acquisition of a wide range of capabilities intended to multiply or enhance the combat effect of these fighters. Defence was asked to comment on the impact of these capabilities in our region and their impact on Australia's ability to maintain air superiority into the future.<sup>55</sup> Defence replied:

The introduction of air-to-air refuelling and airborne early warning and control platforms, and improvement of air launched weapons within the region is expected. Defence analysis takes into account likely developments in regional systems and planned acquisitions, and recognition of the need for ongoing upgrades to ADF systems, are factored in [during] Defence capability planning.<sup>56</sup>

---

52 Department of Defence, Submission No. 10, p. 7.

53 Exhibit No.1, p. 22.

54 Department of Defence, Submission No. 10, p. 7.

55 Exhibit No.2, pp. 19-22.

56 Department of Defence, Submission No. 10, p. 8.

## Conclusion

- 3.41 This review has not been a full scale consideration of Australia's air combat needs or options. However, given the importance of this matter to national security, and the focus of a number of submissions received, some focus has been given to key aspects of the matter in this report.
- 3.42 While the decision to acquire the Joint Strike Fighter will not be made until some time in 2009, the Defence Sub-Committee will remain keenly interested in the acquisition program and the release of the details in 2009 of Australia's Air Combat Capability in the White Paper and the Orme Review.

Of greatest interest to the Committee will be the analysis of the ability of a multi-role aircraft to achieve air dominance in Australia's region in all aspects of air combat capability.

### Recommendation 2

**That consideration of Australia's future combat aircraft needs, including the critical air to air combat role, be determined by the paramount strategic importance of this capability, as recognised in the 2000 White Paper. That the decision on future air combat capability be determined by the analysis of available platform capabilities against Australia's strategic requirements and not be constrained by a predetermined requirement for a single platform.**





## Department of Defence – Personnel

- 4.1 The strength of Australia’s military forces has always been the quality of its people. The Government and the Parliament recognises the unique requirements of service life and that being part of the ADF is more than just another job. We expect a great deal from our men and women in uniform and while attention is often focussed on the ADF’s equipment and high cost acquisitions, it is its personnel that make the difference. To ensure the ADF continues to recruit and retain high quality Australians, it must ensure that its personnel systems and personnel management practices effectively support its people.

### **Progress of Military Justice Changes**

- 4.2 Enhancements to the Australian military justice system are being introduced following the 2005 SFADT *Report into the Effectiveness of Australia’s Military Justice System*.<sup>1</sup> Defence is improving how it investigates, prosecutes, tries, represents and reviews under the disciplinary system; conducts administrative enquiries and manages complaints; audits, reports and reviews the system of military justice; trains/prepares its people; and exercises a duty of care over its people.
- 4.3 There will be a two year implementation period to reform the military justice system. At the time of the 2006-2007 Annual Report, reforms had been implemented for 18 months, [with] 21 out of 30 agreed

---

1 Senate Foreign Affairs, Defence and Trade References Committee Report *The effectiveness of Australia’s military justice system*, dated June 2005

recommendations from the Senate Committee's Report completed. The aim was for completion by the end of 2007.<sup>2</sup>

The task of implementing the many important recommendations arising from the 2005 Senate Committee Inquiry has been, and remains, a considerable undertaking. Overall, I am pleased with the achievements to date. Substantial and commendable progress has been achieved and results are within realistic expectations. Implementation of six recommendations remains outstanding.<sup>3</sup>

- 4.4 Defence reaffirmed its commitment to maintaining the momentum of the military justice reforms, and ensuring that maintenance of discipline is balanced by preservation of individual rights.<sup>4</sup> A representative from Defence provided the following information about the progress of the military justice changes:

30 of the 40 recommendations arising from the 2005 Senate inquiry were agreed for implementation. A further two initiatives were agreed for implementation as alternatives to recommendations made in the report of the Senate committee inquiry. A two-year period was set for implementation... At the conclusion of that two-year implementation period most of the agreed recommendations had been substantially completed. Six recommendations as yet remain incomplete although all of them are underway...<sup>5</sup>

- 4.5 Defence also advised that military justice reforms include creation of an independent Director of Military Prosecutions, permanent Australian Military Court, and a joint ADF Investigative Service. There will also be an 'updating and simplification of a summary justice system[;] ... deaths in service may now be reviewed by a special CDF commission of inquiry, and the ADF complaints handling system has been restructured under ... Fairness and Resolution Branch'. Periodic external reviews by eminent Australians on the military justice reform program, and the health of the military justice system, will also occur. The end result is that 'the ADF military justice system is now considerably more transparent ... [and] broadly accountable...'<sup>6</sup>

---

2 Department of Defence, Annual Report 2006-2007, Volume 1, p. 153.

3 Department of Defence, Submission No. 5, p. 1.

4 Mr Geoff Earley AM, *Transcript 10 July 2008*, p. 70.

5 Mr Geoff Earley AM, *Transcript 10 July 2008*, p. 71.

6 Mr Geoff Earley AM, *Transcript 10 July 2008*, p. 71.

4.6 Defence advised the Committee of the updated summary justice system which was implemented as a result of the introduction of the *Defence Legislation Amendment Act 2008*. The legislation introduced a range of measures including the right of an individual to elect to be tried before, and appeal to, the Australian Military Court (AMC). Other significant changes as a result of this legislation include:

- Provision to ensure that legal officers are able to provide advice independently of potential undue command influence;
- Increased AMC and summary jurisdiction to try offences involving drugs, including cannabis, narcotic substances (amphetamine, cocaine, heroin, methamphetamine etc) and anabolic steroids;
- Extension of the summary system to cover members up to the rank of Rear Admiral/Major General/Air Vice Marshal;
- Provision to disqualify a summary authority from dealing with a charge where he or she was involved in the investigation of, issuing a warrant in relation to, or charging the accused person with the offence in question;
- Provision to require a summary authority trial to commence within three months of a charge being laid, unless, in certain circumstances, a longer period is allowed by a superior authority;
- Where an accused intends to plead guilty in a summary authority trial, provision to allow the accused to apply for the trial to be conducted in his or her absence if there are exceptional circumstances;
- AMC and summary authorities will be given increased flexibility in sentencing, namely, the ability to suspend part of a punishment or order;
- Standardisation of the powers of punishment of summary authorities regardless of the Service of the convicted person. The current differences in the punishments applicable to members of the Navy, from those applicable to Army and Air Force members, will be removed;
- Significant modification of the review process for summary convictions, punishments and orders; and
- Expansion of the discipline officer scheme to cover all ADF members up to the rank of Lieutenant/Captain/Flight Lieutenant.<sup>7</sup>

---

7 Department of Defence, Submission No. 5, pp. 2-3.

- 4.7 In response to the Committee's enquiry into the nature of the process for Inspector General of the Australian Defence Force (IGADF) audits of military justice arrangements, a representative from Defence stated:

The audit program is aimed at visiting units to inspect the arrangements that they have in place to support the military justice system in that particular area. It looks at two areas, basically, of military justice: the discipline side obviously and the administrative side...<sup>8</sup>

- 4.8 Focus groups are also conducted:

... in groups of 20 individuals at each rank. It is a rule that the CO, the RSM or the equivalent is not present at these focus groups so that there is no chance of inhibition of people expressing views.

...there is a comprehensive report written [that] is sent to higher command [and] the commanding officer. Of the 167 units that have been audited so far, three have failed ...<sup>9</sup>

- 4.9 The Committee was concerned that the description of the audit gave the impression that the task was ensuring personnel knew the rules, rather than validating the implementation of rules.<sup>10</sup> Defence responded that the role of the audits was to complete both tasks.

As well as compliance in the sense that the processes are in accordance with the administrative inquiries manual, we look at the quality of it as well.<sup>11</sup>

- 4.10 The Committee was concerned that the current Defence reforms and audits do not rectify long-standing issues, such as ritual abuse or unreasonable punishment.<sup>12</sup> Defence responded:

... by having a more centralised ability to look at the system overall, I think we have got a much better chance of detecting where things are tending to go wrong or where a preponderance of complaints may be and trying to address those things before they become really serious.<sup>13</sup>

---

8 Mr Geoff Earley AM, *Transcript 10 July 2008*, p. 72.

9 Mr Geoff Earley AM, *Transcript 10 July 2008*, pp. 72-73.

10 Hon Arch Bevis MP, *Transcript 10 July 2008*, p. 73.

11 Mr Geoff Earley AM, *Transcript 10 July 2008*, p. 74.

12 Hon Arch Bevis MP, *Transcript 10 July 2008*, p. 74.

13 Mr Geoff Earley AM, *Transcript 10 July 2008*, pp. 74-75.

4.11 The Committee heard about the IG ADF's role. In addition to auditing, they also investigate complaints which come from anyone or any source, including:

- directly,
- e-mail,
- letters to the Minister,
- through a hotline, or by telephone,
- Whistleblower Scheme, or
- private approach to an audit team member.<sup>14</sup>

4.12 Defence further commented:

In that way, the type of incident that you are talking about can be brought to light; but we cannot do anything if we do not know about it.<sup>15</sup>

4.13 The IGADF is a statutory appointment under the *Defence Act 1903* to exercise general oversight of the effectiveness of the ADF's military justice system. A range of reforms were implemented regarding the health of the military justice system in the areas of discipline, administrative sanctions, conduct of administrative inquiries, and the right to complain.

4.14 Regarding the health of the military justice system, significant events included:

- preparations for the Australian Military Court in October 2007;
- work to introduce an updated ADF summary justice system;
- consolidation/development of the new ADF Investigative Service to redress deficiencies in the ADF's investigative capability;
- strengthening of the Director of Military Prosecutions; changes to the ADF complaints handling procedures; and
- establishment of the CDF Commissions of Inquiry regime to ensure deaths in service of ADF members are investigated properly.<sup>16</sup>

4.15 The Committee enquired how the effectiveness of the audit and complaint systems are measured. Defence responded:

---

14 Mr Geoff Earley AM, *Transcript 10 July 2008*, p. 75.

15 Mr Geoff Earley AM, *Transcript 10 July 2008*, p. 75.

16 Defence Annual Report 2006-2007 Volume 1 pp. 156-157.

... in the IGADF case we are developing a system called the justice and discipline health and effectiveness system.<sup>17</sup>

... discipline, adverse administrative action, the conduct of inquiries and the handling of complaints, or the right to make a complaint – are the four components that make up the military justice system. The justice, discipline, health and effectiveness pilot scheme that is now running measures each of those ... [with reference to] accessibility, timeliness, fairness, accountability, resources and implementation of change ...<sup>18</sup>

- 4.16 The Committee observed that the Director of Military Prosecutions (DMP) and the Australian Military Court (AMC) are independent. The Committee enquired whether the IGADF may also gain independence, either structurally or legislatively.<sup>19</sup> Defence replied:

... there is already a legislative independence for my office (IG ADF). My office is established under the *Defence Act*, not the *Defence Force Discipline Act*. It is different from the [DMP and AMC] in the sense that the IG ADF was a creature envisioned and created ... to help the CDF. I provide him with a comprehensive annual report each year, extracts of which are published in the Defence Annual Report. There are some advantages in the way that the IG ADF office is structured as being, in a sense, not only acting with my independent authority, but [also] acting with the direct authority of the CDF. In a hierarchical military organisation, that stands for a lot. If you are completely external, then the standard reaction of a bureaucracy is to create a single point of contact, and business is done through [them]. My office does not do business like that. Because of where we are situated and how we are structured, my office can go anywhere in the Defence Force.<sup>20</sup>

- 4.17 Committee determination: Notwithstanding the comments above, the Committee believes that the work of the IGADF would be strengthened by reporting directly to the Minister and the Parliament by way of regular written reports.

---

17 Mr Geoff Earley AM, *Transcript 10 July 2008*, p. 75.

18 Mr Geoff Earley AM, *Transcript 10 July 2008*, pp. 75-76.

19 Senator Mark Bishop, *Transcript 10 July 2008*, p. 78.

20 Mr Geoff Earley AM, *Transcript 10 July 2008*, p. 78.

- 4.18 To confirm their commitment to improving the ADF's military justice system, Defence stated:

The task of implementing the agreed recommendations arising from the Senate Committee's 2005 Report has been a considerable undertaking. The changes being made to the ADF military justice system are the most significant since the introduction of the Defence Force Discipline Act in 1985. While implementation of most of the recommendations has been completed or is well advanced, it will be important that these reforms are given time to bed down. This will allow them to achieve their full potential benefits in practice. I remain confident that the changes being made will substantially improve the capacity of the military justice system to achieve its purpose of ensuring that the correct balance is struck between the requirement to maintain a high standard of discipline with the ADF and the need to make sure that ADF members are treated fairly. I would like to reassure the Committee that my [CDF] personal commitment, and that of the Secretary and the Service Chiefs, to drive the implementation of military justice reforms remains undiminished.<sup>21</sup>

- 4.19 An independent report to assess the effectiveness of the military justice system reform program to date is being undertaken by Sir Laurence Street (former Chief Justice of NSW) and Air Marshal Les Fisher (former Chief of Air Force). Their report is expected to be completed in February 2009.

## **Recruitment and Retention, including Personnel Shortages in Specialist Trades**

- 4.20 The Committee took evidence in relation to recruitment and retention. The Committee was concerned about shortages in specialist trades, high rates of separation, and general issues surrounding recruitment.
- 4.21 The priority for Defence in 2006-2007 was retention, and reform of the recruitment process, including:
- a \$3.1b range of initiatives as part of the 2007-2008 budget;

---

<sup>21</sup> Department of Defence, Submission No. 5, p. 9.

- recruitment of 6500 new ADF entrants each year;
- reduction of the ADF separation rate to below 10%;
- growth of the ADF to 57,000 personnel by 2016-17.<sup>22</sup>

4.22 There were also efforts to make the DMO workforce more professional during 2006-2007, using the CEO's Professionalisation Agenda. Initiatives included obtaining skills through accredited education and training programs, and improving chartering and certifying processes. This Agenda is being delivered through the DMO Institute, and the engagement of professional bodies.<sup>23</sup>

4.23 Furthermore, Defence stated:

... that people strategies [for] recruitment and retention in Defence, at the moment, are in a period of reframing under a new strategic approach. There has been a lot of good progress made in the last two years, but efforts are continuing to improve how [we] approach the issues concerning people, both in the Public Service and in the Defence Force, that impacts their willingness to stay in the organisation. We are doing that work through the process of a Companion Review on people for the White Paper and that will be an extensive strategic and operational review of how [Defence] meets the people requirements of the organisation – and how we ensure that our business processes in the areas to deliver services are effective, have been reviewed and are being improved to generate the capacity to reinvest in people issues in Defence.<sup>24</sup>

4.24 The Committee enquired into the variation between separation rates between June 2001 and June 2003 compared to those between June 2003 and June 2005.<sup>25</sup>

The higher separation rate (peak seen around June 2001) is due to the impact of the 2000-2001 RAAF redundancy program. The lower separation rates (trough seen between June 2002 and June 2005) are due to two reasons. First, the Army increased recruiting in the two to four years prior and, as these people were bound by their obligations to serve out their initial period of service; this had the effect of lowering

---

22 Defence Annual Report 2006-2007 Volume 1 p. 124.

23 Defence Annual Report 2006-2007 Volume 2 p. 77.

24 Mr Philip Minns, *Transcript 10 July 2008*, p. 80.

25 Mr Stuart Robert MP, *Transcript 10 July 2008*, p. 82.



separation rates. Second, after the Air Force's redundancy program, there were fewer people able to separate, which also helped to reduce the separation rate.<sup>26</sup>

- 4.25 The Committee enquired about the strategies to minimise separation rates, and increase recruitment, particularly in specialist trades.<sup>27</sup> Defence observed:

At the moment across the ADF we have 36 critical categories of trades or professions that we are concerned about. That breaks up into 22 in the Navy, 13 in the Army and only one in the Air Force at the moment. Eleven of those are, at this stage, looking as though they are worsening, four are improving and 21 we do not see any immediate change in. Each of the three services has specific [short and long term] recovery strategies for each of those trades that we are concerned about.<sup>28</sup>

- 4.26 Defence also commented that:

On recruitment performance, over the last 12 months we have grown the ADF to 53,071 members. That figure has reservists and gap-year members within it. Over the 12-month period we had more enlistments and fewer separations, resulting in the growth to that level.

...the separation rate has been coming down—0.9 less than the rolling five-year average. We lost 632 fewer people in the last financial year than in the one preceding it.<sup>29</sup>

- 4.27 Specific recruitment and retention strategies are:

Short-term fixes [include] retention bonuses, increased specific recruiting targets in some of those trades where we [are] short [and] organisational restructuring ...<sup>30</sup>

Some of the longer term recovery strategies [include] paying the right quanta of salary<sup>31</sup> ... to ensure [our people] are prepared to stay when the market forces are trying to pull them out in the future and restructuring some of the trades

---

26 Department of Defence, Submission No. 8, p. 6.

27 Hon Arch Bevis MP, *Transcript 10 July 2008*, p. 80.

28 Major General Michael Slater, *Transcript 10 July 2008*, pp. 80-81.

29 Mr Philip Minns, *Transcript 29 August 2008*, pp. 3-4.

30 Major General Michael Slater, *Transcript 10 July 2008*, pp. 80-81.

31 Current ADF Pay Rates and Allowances can be found at <http://www.defence.gov.au/dpe/pac/>

and the professions, to make them more sustainable in the longer term.<sup>32</sup>

4.28 The Navy critical employment category retention bonus is one of these bonuses. It targets positions where the loss of those skills would have a detrimental impact on operational or support capabilities. There has been a 65.6 per cent acceptance rate on this retention bonus. Other examples include the Army expansion rank retention bonus, which has seen acceptance rates of 76.9 per cent and the Army trade transfer and incentive bonuses, which have exceeded anticipated 'target figures'.<sup>33</sup>

4.29 As part of the overall package, Defence is also working towards improving personal benefits, such as housing<sup>34</sup> and accommodation and superannuation, as well as family benefits. The focus is on improving more than just the base salary.<sup>35</sup>

Possible initiatives in the future are medical and dental health support for families and an improved new defence assistance housing loan that is attractive to families so as to encourage members to stay in.<sup>36</sup>

4.30 Initiatives in the recruitment sphere have been:

- Reform of the Defence Force Recruiting Organisation, to get more of the military personnel in that organisation out and engaging with potential candidates, with the back-office work at the recruitment activity being done by our supporting partner organisation.
- Creation of specialist groups of military personnel to focus on recruitment in the critical trades. This includes introducing a scholarship framework for high school students; using a specialist provider; and conducting a review of entry pathways.<sup>37</sup>

4.31 Under the scholarship program:

We are targeting 1,500 scholarships – 600 in year 11 and 900 in year 12. The payment in year 11 is \$2,000 and in year 12 it is \$3,000. I guess this strategy goes to the idea of developing a relationship with people in the target pool and, in the

---

32 Major General Michael Slater, *Transcript 10 July 2008*, p. 81.

33 Mr Philip Minns, *Transcript 29 August 2008*, p. 3.

34 The Defence Home Ownership Assistance Scheme commenced in July 2008.

35 Major General Michael Slater, *Transcript 10 July 2008*, p. 81.

36 Major General Michael Slater, *Transcript 10 July 2008*, p. 81.

37 Mr. Philip Minns, *Transcript 10 July 2008*, pp. 81-82.

language used in the recruiting business, 'keeping the relationship warm' by staying in touch with them and making them predisposed to a career in our organisation.<sup>38</sup>

4.32 The Committee asked about the effect the upcoming eight-month deployments for ADF members will have on families, social services and home norms. Defence responded that the eight-month period is at present only for the Army. Research has shown that the optimal deployment time is eight months (although 6-12 months is possible.) There is usually 16 months at home following an eight-month deployment. There is a strategic review underway by the Defence Community Organisation to analyse the impact on families. There are also individual service benefits that need to be introduced in response to longer deployments.<sup>39</sup>

4.33 The Committee enquired about the Defence outcomes for the cadet program, and whether there was analysis on how cadet participation may affect their decision to join the ADF, rather than an analysis of how many ADF members were previously cadets.<sup>40</sup> Defence advised that an independent review of the Australian Defence Force Cadets Scheme has been announced<sup>41</sup>, which it asserts will '...confirm the strategy and relationship between the cadet organisation and the ADF and its role as a youth development movement'.<sup>42</sup> In a subsequent written submission, Defence advised:

An attitudinal survey of ADF Cadets and Cadet Staff was undertaken in 2007. Cadet views were sought on their knowledge of, and interest in, the ADF and included a measure of the Cadets' intent to join the ADF. The report found that 79.1 per cent of respondents had an interest in joining one of the Services prior to joining the Cadets. This was consistent with the findings of a 2004 survey. Overall, 42.1 per cent of Cadets indicated that they would 'definitely' consider a career in one of the Services, and a further 18.9 per cent indicated they would 'probably consider' such a career.

Defence also commissioned a pilot study in 2008 to measure the awareness of, and perceptions around, ADF Cadets among the broader Australian community. A more detailed

---

38 Mr Philip Minns, *Transcript 29 August 2008*, p. 2.

39 Major General Michael Slater, *Transcript 10 July 2008*, pp. 84-85

40 Hon Arch Bevis MP, *Transcript 10 July 2008*, p. 86.

41 See Department of Defence website at <http://www.defence.gov.au/dpe/cadetreview/>.

42 Mr Philip Minns, *Transcript 29 August 2008*, pp. 2-3.

study was also undertaken into community views of the motivators and barriers to joining the ADF Cadets. This study found that 71 per cent of youth who would consider joining Cadets would also consider joining the ADF, compared to 39 per cent of all youth who would consider joining the ADF.

ADF recruits may also complete a voluntary survey upon enlistment. Results indicate that 51 per cent of respondents had previous military-like experience with the Cadets, and 10.78 per cent indicated that cadet participation influenced their decision to join the ADF.<sup>43</sup>

4.34 The Committee notes that the attitudinal survey quoted by defence identifies that 79.1 per cent of respondents had an interest in joining one of the Services prior to joining the Cadets. Regrettably Defence have not provided any advice on attitudes in this cohort on exiting cadets, from which it would be possible to better judge the impact of cadets on military career choices.

4.35 The Committee also asked about the Gap Year. The Committee questioned whether the Gap Year was designed with long or short-term recruitment in mind; or simply providing an experience.<sup>44</sup> Defence was asked how the Gap Year's success is measured. Defence replied:

[The Gap Year] was designed to give people an experience of life in the ADF, perhaps with the idea that they might do the gap year, proceed on to study or university, and look to return to the ADF at the end of that process.<sup>45</sup>

What we have discovered is that in the order of 50 people from the cohort of 700 have already sought to convert to the permanent ADF. We have had a separation number of about 66 at this stage, and that is a much lower proportion of separation through a training process than we get through the normal intake for the ADF. We are in the process of assessing gap year outcomes.<sup>46</sup>

4.36 The Committee enquired about further problems regarding recruitment within the ADF, excluding trade services. Defence replied:

---

43 Department of Defence, Submission No. 10, p. 4.

44 Mr Stuart Robert MP, *Transcript 10 July 2008*, pp.88- 89.

45 Mr Philip Minns, *Transcript 10 July 2008*, p. 89

46 Mr Philip Minns, *Transcript 10 July 2008*, p. 88

Given the nature of our service model and the fact that 52 per cent of male members leave before 10 years and about 68 per cent of females leave before 10 years. The challenge that we face in a recruitment sense is always a fairly intense one, because finding somewhere between 7,000 and 9,000 recruits a year is a tall order.<sup>47</sup>

- 4.37 The Committee observed that \$350 million is spent on recruitment by Defence per annum.<sup>48</sup> Defence made the following comments about the recruitment contract:

I would like to make a point about the contract that was signed. We use an alliance model in recruitment, so it is Defence personnel, uniformed personnel, some APS members, together with an alliance partner. The current contract is with Manpower and the future contract is with Chandler Macleod. The point of moving to that model was to make sure that our uniformed personnel were actually doing the recruiting and attracting, and not the other work. Before that model was introduced we had something like 1,800 uniform personnel working in recruitment. We now have 230 very well deployed. So as the operational tempo issue has bitten and the ability of the services to provide a service-based delivery model for recruitment has declined, the alliance partner model is a framework that has delivered results and we hope it will continue to in the future.<sup>49</sup>

- 4.38 Noting key concerns with submariner numbers, the Committee sought advice on whether Navy could fully crew the ADF's submarine capability.<sup>50</sup> In a written response, Defence replied:

As at 3 October 2008, the Royal Australian Navy's submarine workforce was at 63.7 per cent of the required number of submariners across the fleet. We need 667 submariners. We presently have 425 submariners. Currently, the Navy is able to crew three submarines using three operational crews. It is expected that a fourth crew can be sustained from mid-2010. A concerted submariner recruitment effort is being made.<sup>51</sup>

---

47 Mr Philip Minns, *Transcript 10 July 2008*, pp. 93-94.

48 Senator Mark Bishop, *Transcript 10 July 2008*, p. 93.

49 Mr Philip Minns, *Transcript 10 July 2008*, pp. 94-95.

50 Hon Bruce Scott MP, *Transcript 29 August 2008*, p. 7.

51 Department of Defence, Submission No. 10, p. 1.

- 4.39 The Committee noted that one of the more recent and pressing recruitment and retention issues related to air traffic controllers (ATC). The Committee sought advice on the discharge rate of ATCs, the current shortfall, what the ADF was doing to address the ATC issue and which bases have had their operational capability affected.<sup>52</sup> Defence provided a written response:

There were 14 Air Force Air Traffic Control separations in the period 1 July 2007 to 30 June 2008. So far this financial year (to 25 September 2008), there have been 18 separations. The surge has been attributed to better remuneration and location conditions offered by Airservices Australia which has recruited 15 of these personnel since July. There may be some additional separations in a follow-on round of recruiting which will take effect in January 2009.

We currently have a shortfall of 14 personnel spread across 11 detachments that deliver air traffic control services. The Air Force maintains a robust training program and intends to start an additional ab-initio course in November 2008 for 12 recruits. Total graduations in 2009 are expected to exceed 30, which will meet Air Force requirements.

The Minister for Defence has approved a retention bonus of \$30,000 to be paid to a target group of experienced controllers for short-term assurance of keeping the experience levels to maintain capability sustainment. Longer term sustainment initiatives are aimed at improving career opportunities, location stability and core remuneration. Resources have been allocated to progress these initiatives and they are underway.

In terms of operational capability, there has been a slight reduction in airfield operating hours at East Sale and Nowra air bases, but operational capability and safety have not been compromised.<sup>53</sup>

- 4.40 Defence advised the Committee that in addition to current strategies, they were also looking at other retention strategies that could be pursued as part of the Workforce Companion Review of the 2008 White Paper.<sup>54</sup>

---

52 Hon Bob Baldwin MP, *Transcript 29 August 2008*, p. 8.

53 Department of Defence, Submission No. 10, p. 2.

54 Mr Philip Minns, *Transcript 29 August 2008*, p. 1.

- 4.41 The Committee applauds Defence for its commitment in seeking to implement innovative recruitment and retention initiatives; however, notes that the revised pay scales for the new Graded Officer Pay Structure (GOPS) became effective on 9 August 2007, yet the new pay scales were not implemented until 20 March 2008, due to “system problems”. Delays such as these can only serve to counter retention initiatives and Defence is strongly encouraged to be better prepared for the roll out of the upcoming Graded Other Ranks Pay Structure (GORPS).

## **Increases in Middle and Senior Management Positions**

- 4.42 The Committee enquired about an increase in personnel at middle manager, senior manager and Deputy Secretary Level:

It is sobering to compare the number of middle and senior managers in Defence from 1998-99, just after the Defence Reform Program (DRP), to the latest available figures.

Civilian senior executive numbers have grown by 59 per cent and star rank military officer numbers have increased by 57 per cent. Most startling has been the increase at Deputy Secretary level, from four to 11, after the DRP suggested a reduction to three.<sup>55</sup>

- 4.43 Defence replied:

- The DRP recommended four SES band 3 positions: Deputy Secretary, Strategy and Intelligence; Chief Defence Acquisition; Chief Defence Scientist; and Deputy Secretary, Budget and Management.
- In reality, four roles were created: Deputy Secretary Corporate; Chief Defence Scientist; Deputy Secretary Acquisition; and Deputy Secretary Strategy and Intelligence.
- In early 2000, a Chief Financial Officer role was created, commensurate with Defence’s role and large size.
- Another position was created when the Intelligence and Strategy position was split. This was mostly driven by the increased overseas activity around deployments.

---

55 Hon Arch Bevis MP, *Transcript 10 July 2008*, p. 89.

- The next three increases in 2007 were within the Defence Materiel Organisation: General Manager Corporate; General Manager Systems; and General Manager Programs.
- The next three additions are as a result of the Defence Management Review conducted in 2007: Policy and Coordination Deputy Secretary; a Strategic HR role; and a Chief Information Officer role. A temporary Deputy Secretary role for the White Paper was also established.<sup>56</sup>

4.44 Defence also noted:

[The APS] is an organisation, with DMO included, of 21,000 employees that represents a public service leadership group of about 11 people. That group, plus the seven band 3 members of the ADF, means that we have a leadership team looking after 70,000-plus permanent employees.<sup>57</sup>

4.45 The Committee acknowledged Defence's response, then further questioned the increases at middle management levels:

... the middle manager level, colonel/lieutenant colonel, has grown by 30 per cent, and civilian middle managers have grown by 59 per cent.<sup>58</sup>

4.46 Defence replied that the increase was due mainly to the ADF's high operational tempo:

The period that we are talking about is also that period where we have had a high operational rate overseas. To conduct those operations you are looking at a significant increase in the workload and tasking of the lieutenant colonel/colonel bracket.<sup>59</sup>

4.47 The Committee asked why there are 843 personnel on non-operational postings overseas. The Committee also enquired what tasks these personnel were undertaking.<sup>60</sup>

As at 1 July 2008, there were 842 Defence personnel (162 Navy, 225 Army, 317 Air Force and 138 Defence civilians) posted overseas in non-operational roles. These personnel are posted to 41 different countries. The United States (398) and

---

56 Mr Philip Minns, *Transcript 10 July 2008*, pp. 89-90.

57 Mr Philip Minns, *Transcript 10 July 2008*, p. 90.

58 Hon Arch Bevis MP, *Transcript 10 July 2008*, p. 90.

59 Major General Michael Slater, *Transcript 10 July 2008*, p. 90.

60 Hon Arch Bevis MP, *Transcript 10 July 2008*, pp. 90-91.



the United Kingdom (114) are the two main nations where Australian personnel are serving. The majority (775) of these people have been overseas for more than 12 months.

Personnel have been grouped into eight functions to provide an indication of their main work function:

- Training and instruction (267)
- Logistics and procurement (167)
- Defence international policy (98)
- Defence liaison (94)
- Defence cooperation (84)
- Butterworth detachment, Malaysia (53)
- Defence Security (44)
- Research and development (35).<sup>61</sup>

## Impacts of fringe benefits tax and reportable allowances

4.48 The Committee raised concerns that tax implications may be a disincentive for ADF families to utilise much needed travel entitlements. Remote Locality Leave Travel (RLLT) provides additional travel benefits for ADF personnel and their families to ensure that they can take a break from the additional challenges that remote locations can pose. The RLLT provides free flights and travel to an alternative destination. The value of which are reported on the person's payment summary as a fringe benefits taxable (FBT) allowance, increasing their assessable income. This can result in a reduction in, for example, Family Tax Benefit Part A or B, subject to their financial circumstances because of their increased assessable income according to the Income Tax Act.<sup>62</sup>

4.49 Indeed, during the Defence Sub-Committee's inspection of ADF bases in Darwin in May 2008, Committee members were advised by several women of a Robertson Barracks Spouse Group that they "couldn't afford" to take the RLLT entitlement because it reduced the amount of

---

61 Department of Defence, Submission No. 8, p. 10.

62 Mr Steve Grzeskowiak, *Transcript 29 August 2008*, p. 5.

the family payment they received, which they couldn't do without.

4.50 Defence advised that:

In 2006 we went to Treasury seeking exemptions from a range of benefits, one of which was remote locality leave travel. The Treasury would not give us exemptions ... We went again last year for further exemptions for a reduced number of items and again the Treasury were not inclined to give us further exemptions.<sup>63</sup>

4.51 As an employer, the ADF has the largest number of FBT exemptions in Australia. However, in its four attempts since 1999 they have failed to secure further exemptions and have been told that '...there will be no further exemptions granted for ADF benefits and conditions of service of reporting obligations'.<sup>64</sup>

4.52 The Committee raised the possibility of Defence introducing a web based calculator to enable families to ascertain their financial position before using travel entitlements which could adversely affect family tax benefits or child support arrangements. On this point, Defence commented:

We are always trying to enable the best availability of simple-to-understand information so people can make informed choices. But we do have to be a little cautious about being seen to be giving advice in a taxation sense and the liabilities that might flow from that, depending on decisions people might make on that advice.<sup>65</sup>

4.53 Defence acknowledged that work needed to be done on their remuneration and reward communication, particularly in respect to helping families to better understand FBT impacts.<sup>66</sup>

4.54 The following fringe benefits for ADF members have been granted a reporting exclusion on the basis of administrative simplicity and fairness, and recognition of the unique conditions of military service. These fringe benefits all correlate to the ADF maintaining a mobile workforce, thus maintaining the Government directed level of capability:

---

63 Mr Steve Grzeskowiak, *Transcript 29 August 2008*, p. 5.

64 Mr Steve Grzeskowiak, *Transcript 29 August 2008*, p. 6.

65 Mr Steve Grzeskowiak, *Transcript 29 August 2008*, p. 6.

66 Mr Steve Grzeskowiak, *Transcript 29 August 2008*, pp. 6-7.

- Provision of housing assistance;
- Payment or reimbursement of an accommodation expense in the form of rental assistance;
- Reunion travel provided to ADF members who are serving in Australia away from their dependants;
- Special needs assistance provided to ADF members and their families;
- Removal and travel expenses of the member's non-service spouse and any of his or her accompanying dependants in the event of a breakdown of marriage;
- Child tuition assistance for a child where the member is directed to change residence by Defence and the child must change schools as a result;
- Education assistance for children of ADF members who are in a 'critical school year (9, 10, 11 or 12)' and continue their education away from where the member is serving;
- Travel for the child to be reunited with the member, or other dependants of the member at the locality where the member is serving;
- Official hospitality; and
- Overseas living allowances.

4.55 ADF fringe benefits which are reported on members' Payment Summary are:

- Reunion travel for non-student dependants;
- Service Workforce Access Program for Partners (SWAPP);
- Emergency Support for Families Scheme (ESFS);
- Defence Home Owner Scheme;
- Defence Home Ownership Assistance Scheme;
- Department of Veterans' Affairs (DVA) Loans (Defence Service Homes Loan Scheme);
- Remote Locality Leave Travel (RLLT) from non-remote locations as defined by the ATO (e.g. Darwin, Cairns and Townsville);
- Recreation leave travel for members without dependants;

- Student reunion travel i.e. for dependant children studying elsewhere, during non-critical school years;
- Tertiary Education Assistance for dependant children;
- Higher Education Contribution Scheme (HECS) payment / reimbursement, replaced by Higher Education Loan Program (HELP);
- Car fringe benefits for Star ranked ADF officers;
- Career Transition Assistance Scheme;
- Miscellaneous work related items (of low taxable value);
- Other overseas allowances; and
- Property fringe benefits (i.e. prizes, awards).<sup>67</sup>

4.56 Subsequent to the public hearing on 29 August 2008, Defence provided further written advice regarding RLLT:

The vast majority of ADF members posted to ADF-recognised remote locations are posted to Darwin, Cairns and Townsville. Defence has not sought relief through exemption from the requirement for the Department to pay Fringe Benefits Tax (FBT) on RLLT. However, Defence has sought relief on behalf of ADF members by way of exclusion from the FBT Payment Summary reporting requirement for RLLT through three formal submissions by Defence to the Treasury in 1999, 2002 and 2006. The basis of Defence's submissions was:

- RLLT is intended to support a small, highly deployable and well-trained Defence Force which has contemporary needs and aspirations for partners and families. There is evidence that a number of ADF members do not access their full entitlement to RLLT due to the potential impact that Payment Summary reporting would have on their government benefits or liabilities. This has the unfortunate result that members and their families become unhappy with their ADF conditions of service, particularly when they are required to move to areas where they are remote from extended family and where employment opportunities for partners are limited.
- The impact of FBT reporting of RLLT is seen by ADF members in the north of Australia as an unfair

---

67 Department of Defence, Defence Fringe Benefits Tax Manual, July 2006 Edition

consequence of a condition of service that is necessitated by the Government's requirement to have an ADF presence in northern Australia.

- Members serving in Darwin, Cairns and Townsville do not understand why their RLLT is reportable on payment summaries while the travel for members in Tindal, just three hours away from Darwin and with a similar level of climatic discomfort, is excluded.
- Attraction, retention and morale of members posted to northern Australia are issues of utmost concern to the ADF. These issues have the capacity to affect operational efficiency in the medium to long term.
- Retention of ADF members rather than their replacement constitutes a major cost benefit to the Commonwealth.<sup>68</sup>

4.57 Given the unique conditions of military service and the requirement for ADF members to be deployed or posted at Defence's behest, generally irrespective of their current personal circumstances, to locations where they and their families would normally not choose to live, the Committee is of the belief that benefits and entitlements that provide relief from this aspect of military service should be exempt from FBT reporting.

4.58 The RLLT scheme provides members and their families relief from remote locality postings and is designed to reduce the impact of living large distances from their extended families. The inability of families to undertake this entitlement due to the financial hardship that it could cause through reduced Centrelink payments has a tangible negative affect on morale and, as a consequence, on retention.

---

68 Department of Defence, Submission No. 10, p. 3.

**Recommendation 3**

**The Committee recommends that the Government exempts the Remote Locality Leave Travel entitlement from fringe benefits reporting.**

## Department of Defence – Other issues

### **ADF's preparedness to conduct peacekeeping operations**

#### Introduction

- 5.1 The ADF has been engaged in several demanding and complex peacekeeping missions in recent decades. Australia's involvement in these types of missions will continue in the future and the ADF, in conjunction with other federal agencies and non-government organisations, will be at the forefront of Australia's commitment.
- 5.2 The ADF is well-prepared to conduct and participate effectively in peace keeping operations, and the ADF contributions to peace keeping operations are well sought after. There are a number of reasons for this. The ADF's core warfighting capabilities provide forces that are adaptable to peace operations. Peace operations beyond Australia's region often centre on professional military expertise [for example health, communications and logistics functions], which Australia is well-positioned to provide, rather than formed units. The capabilities and personnel of the ADF are well maintained and well prepared, and therefore, when deployed, are effective. Specific peace keeping training is routinely conducted for individual members and as part of pre-deployment training.<sup>1</sup> Also,

---

<sup>1</sup> Defence submission to the Senate Standing Committee on Foreign Affairs, Defence and Trade *Inquiry into Australia's involvement in peacekeeping operations*, key issues paragraph.

the ADF's reputation for professionalism, reliability and resourcefulness, and value on expertise rather than personnel numbers, means that the ADF's contribution is consistently well-regarded.<sup>2</sup>

- 5.3 A coordinated whole-of-government approach to peace operations has greater potential to address the root causes of conflict, rather than solely relying on a military approach. Defence will often find itself engaged in consultation and planning with a variety of agencies including Department of Foreign Affairs and Trade, the Attorney General's Department, the Australian Agency for International Development, the Australian Electoral Commission and the Australian Federal Police. Engagement with International Organisations and NGOs (Non-Government Organisations) is also increasing, to allow coordination of effort.<sup>3</sup>
- 5.4 The ADF's peace operations training organisations are the ADF Peacekeeping Centre (ADFPKC) and 39th Personnel Support Battalion (39 PSB) - Sydney. They are complemented by the Asia Pacific Centre for Military Law (APCML).<sup>4</sup>
- The function of the ADFPKC is to develop and manage peace operations doctrine and training. The centre is a repository for peace operations expertise and experience, monitors international peace operations issues, assists in ADF peace operations training, develops doctrine and procedure, and represents the ADF at seminars and conferences where appropriate.<sup>5</sup>
  - 39 PSB is primarily an ADF training facility, which provides personnel with training specific to the mission and area of operations. However, it has trained representatives from the Australian Federal Police, the Department of Foreign Affairs and Trade, Customs, the Quarantine Service, and the then-Department of Immigration and Multicultural Affairs.<sup>6</sup>

---

2 Defence submission to the Senate Standing Committee on Foreign Affairs, Defence and Trade *Inquiry into Australia's involvement in peacekeeping operations* para. 9.

3 Defence submission to the Senate Standing Committee on Foreign Affairs, Defence and Trade *Inquiry into Australia's involvement in peacekeeping operations* para. 26.

4 Defence submission to the Senate Standing Committee on Foreign Affairs, Defence and Trade *Inquiry into Australia's involvement in peacekeeping operations* para. 17.

5 Defence submission to the Senate Standing Committee on Foreign Affairs, Defence and Trade *Inquiry into Australia's involvement in peacekeeping operations* para. 19.

6 Defence submission to the Senate Standing Committee on Foreign Affairs, Defence and Trade *Inquiry into Australia's involvement in peacekeeping operations* para. 22.



- The APCML is a collaborative initiative of Defence Legal Division and the Melbourne University Law School. The centre aims to promote greater understanding of, and increased respect for, the rule of law aspects of military affairs within the ADF and the region.<sup>7</sup>
- 5.5 The ADF has a strong record of participation in peace keeping operations: since World War Two, the ADF has participated in 39 peace operations under UN command, and 16 non-UN peacekeeping operations (many of which were sanctioned by the UN).
- 5.6 In the Defence Annual Report 2006-2007, the following peace keeping activities were detailed. In Thailand, the peacekeeping exercise Pirap Jabiru was expanded for the first time in August 2006 to include participation by other regional countries. Furthermore, Australia continued to provide peacekeeping assistance to Cambodia. Also, the ADF's cooperation with India included staff college exchanges to develop cooperation in maritime security, counter-terrorism and peacekeeping. Furthermore, steps were made to finalise an Information Sharing Arrangement with India, which was expected to be signed in July 2007.<sup>8</sup>

## Review of ADF peacekeeping

- 5.7 The Committee sought an overview of the ADF's current and prospective peacekeeping commitments.

... we identify four elements that make up the category of peace operations. Those are peacemaking activities, peace enforcement activities, peacekeeping activities and peace-building activities ... at the moment [there are] nine operations which fall into one of those four categories of peace operations.<sup>9</sup>

## Sudan

- 5.8 The most recent operation that has been declared is Operation Hedgerow in the Darfur region of Sudan. We are about to deploy nine staff officers into Darfur. The committee was advised that as at 10 July 2008 Australia had been asked by the UN to defer that briefly, but at

---

7 Defence submission to the Senate Standing Committee on Foreign Affairs, Defence and Trade *Inquiry into Australia's involvement in peacekeeping operations* para. 18.

8 Defence Annual Report 2006-2007 Volume 1 pp. 108-109.

9 Commodore Trevor Jones, *Transcript 10 July 2008*, p. 64.

this stage we are still preparing to deploy nine staff officers. One of those staff officers is in fact a colonel under contract to the United Nations. He is going into the position of Deputy Chief Integrated Services Support Logistics, working for the senior representative in that area. We also have another operation in the Sudan, Operation Azure; that is 15 ADF personnel based in Khartoum. Because of the new Hedgerow operation, we are about to increase the Azure commitment by two.<sup>10</sup>

## Middle East

5.9 The ADF has several 'peacekeeping' commitments across the Middle East. There are 25 personnel committed to Operation Mazurka, which is the ADF contribution to the peacekeeping activity in the Sinai. Similarly, moving further east, we have Operation Paladin, which is in the Middle East and Israel, with the Israel, Lebanon and Syria peacekeeping activity. General Gordon, a two-star Army officer, is also on contract with the United Nations in a leadership capacity. Operation Riverbank, the contribution to the UN mission in Iraq, has two ADF members and Operation Palate in Afghanistan supports the senior UN representative and is based in Kabul.<sup>11</sup>

5.10 Regarding operations in Afghanistan, the CDF advised:

We have a full suite of available vehicles, and the tactical commanders on the ground obviously have a large number of Bushmasters and ASLAVs available, and a number of other special forces vehicles that are preferred by our special forces. The sort of concept we have got at the moment is to do construction and reconstruction using our Reconstruction Task Force. Very shortly we will be going into an additional mentoring and training role with an Afghan Kandak, an Afghan battalion. Fundamentally, it is all going well.<sup>12</sup>

## East Timor

5.11 The ADF has two operations associated with the United Nations in East Timor. Operation Tower has four personnel directly supporting the UN mission, and also the larger ADF International Security Force under Operation Astute, which is part of a technical agreement with

---

10 Commodore Trevor Jones, *Transcript 10 July 2008*, p. 64.

11 Commodore Trevor Jones, *Transcript 10 July 2008*, pp. 64-65.

12 Air Chief Marshal Angus Houston, *Transcript 29 August 2008*, p. 45.

the United Nations to provide security for the mission and other contributing nations to achieve the outcomes they seek.<sup>13</sup>

## Solomon Islands

- 5.12 Operation Anode is the ADF contribution to the Regional Assistance Mission for the Solomon Islands. It is not a UN mission, but it is a peacekeeping mission nonetheless.<sup>14</sup>

## United Nations Headquarters in New York

- 5.13 There are also two defence attachés supporting Ambassador Hill in New York and three other officers working under direct contract to the UN.<sup>15</sup>

## Australia's capacity to conduct peacekeeping

- 5.14 The Committee was concerned whether the increased rate of operations [particularly in the Middle East] in recent years had presented difficulties in maintaining our peacekeeping role.<sup>16</sup> Defence replied:

No. In fact, because the ADF is force structured around high-end war fighting, the skills that are generated as a consequence of that structure and the preparedness regime that goes around maintaining that force structure mean that we are well prepared to meet the lower order peace operation type activities. The unique thing about most UN requests is that they want niche skills from the ADF, not necessarily those skills that require large numbers such as infantry. They are more concerned about getting the high levels of skills that we have resident in medical staff, engineers, logisticians, military leaders at the mid- to high-seniority levels, campaign planning, mission planning, et cetera.<sup>17</sup>

- 5.15 The Committee enquired whether there was any special equipment required for peace-keeping.<sup>18</sup>

---

13 Commodore Trevor Jones, *Transcript 10 July 2008*, p. 65.

14 Commodore Trevor Jones, *Transcript 10 July 2008*, p. 65.

15 Commodore Trevor Jones, *Transcript 10 July 2008*, p. 65.

16 Hon Arch Bevis MP, *Transcript 10 July 2008*, p. 66.

17 Commodore Trevor Jones, *Transcript 10 July 2008*, p. 66.

18 Hon Arch Bevis MP, *Transcript 10 July 2008*, p. 66.

No.... because we are structured for high-end war fighting, most of the equipment we have can be adapted to peace-keeping operations.<sup>19</sup>

- 5.16 The Committee inquired into the ADF's capacity to integrate with nations whose forces are largely oriented more around conventional combat rather than peacekeeping. Whether our skillset effectively meshes with theirs and whether we do training exercises with our allies in peacekeeping exercises, like we do in conventional combat exercises.<sup>20</sup> Defence replied:

Whilst [the ADF's] force structure [is] shaped around high-end warfighting ... the personnel that man that force still go through the full range of training activities. The ADF continually looks at opportunities to improve its training across the full spectrum of operations, including peace-keeping. There is an arrangement in place, for example, in military and legal circles [with the University of Melbourne's Asia Pacific Centre for Military Law] for us to obtain a better understanding of some of the dimensions of operating in an environment less than a conflict environment.<sup>21</sup>

... [there is also a] a new Asia Pacific Centre for Civil Military Cooperation which is focused upon bringing together ADF elements, government and non-government organisations, so that we improve our ability to manage particularly those transitional phases of operations where you are moving from a security based condition to a nation-building condition where NGOs and government agencies, other than Defence, have a very strong role to play to build good governance, infrastructure, law and order and the like. We [also] have the Australian Defence Warfare Centre near Newcastle at RAAF Williamstown. It not only continues to refine our doctrine on peace operations, but also looks at training opportunities in the joint arena for us to improve those processes.<sup>22</sup>

- 5.17 The Committee inquired whether the ADF conducts peacekeeping training exercises with other countries; in particular New Zealand, Britain or America. <sup>23</sup>
- 

19 Commodore Trevor Jones, *Transcript 10 July 2008*, p. 66.

20 Hon Arch Bevis MP, *Transcript 10 July 2008*, p. 67.

21 Commodore Trevor Jones, *Transcript 10 July 2008*, p. 66.

22 Commodore Trevor Jones, *Transcript 10 July 2008*, p. 67.

23 Hon Arch Bevis MP, *Transcript 10 July 2008*, p. 67.

I do not think we have exercises that we characterise purely as peacekeeping training exercises.....that is invariably because of the nature of the way we exercise our forces in those major exercises. Some of the skill sets we learn in that process are immediately applicable to those peacekeeping scenarios.<sup>24</sup>

- 5.18 The Committee also asked the ADF to comment on the effectiveness of the ADF Peacekeeping Centre and the 39<sup>th</sup> Personnel Support Battalion and whether there has been any evaluation work done on ADF members going over and returning from overseas to measure the effectiveness of the training provided.<sup>25</sup> Defence replied:

The ability for us to capture lessons learnt is something that we can continually refine. We certainly have a system whereby when personnel return from operations we look at the post-activity reports. They get incorporated into a lessons learnt database and that lessons learnt database is drawn upon not only by military planners in Joint Operations Command, but also by the doctrinal development centres at ADFWC, and they will continually provide that feedback to the Peace Centre in terms of modifying their training.<sup>26</sup>

- 5.19 The Committee was also concerned that the training given to the ADF, in relation to peacekeeping operations, takes into account the diverse nature of operation partners, such as the African Union and Pakistan or India and the fact that they may not like each other or cooperate well or may have certain cultural differences or sensitivities.<sup>27</sup> Defence replied:

We rely heavily, I think, on the feedback we get from our Defence Attaché in the United Nations, firstly to get a sense of what the UN's assessment is of the ADF contribution, as much as our own internal review of our processes ... The beauty of having the Defence Attaché in the UN is that he provides an independent perspective on how the UN and the other contributing members of the UN value the ADF contribution to that.<sup>28</sup>

---

24 Commodore Trevor Jones, *Transcript 10 July 2008*, p. 67.

25 Mr Stuart Robert MP, *Transcript 10 July 2008*, p. 67.

26 Commodore Trevor Jones, *Transcript 10 July 2008*, p. 67.

27 Mr Stuart Robert MP, *Transcript 10 July 2008*, p. 68.

28 Commodore Trevor Jones, *Transcript 10 July 2008*, p. 68.

- 5.20 Before forces are deployed overseas they go through what is called a mission readiness evaluation, which includes cultural training, irrespective of whether it is preparation for a peace operation or high-end conflict, such as we have at the moment in Afghanistan or Iraq. That is a fundamental element of the preparation the ADF gives its forces. It has to be, because those very sensitivities, if ignored or not attended to, have a flow-on effect for the force protection of those ADF elements deployed.<sup>29</sup>
- 5.21 Australia's involvement in peacekeeping operations was studied in detail by the Senate Committee for Foreign Affairs, Defence and Trade. Their report was released in August 2008.<sup>30</sup>

## **Abrams Tank – Current and future role of armour**

### **Background**

- 5.22 The Abrams tank has replaced the Leopard tank in the Australian Defence Force, as part of the LAND 907 Tank Replacement project. The Abrams tank will provide modern, survivable and interoperable tank capability that will be supportable until at least 2020. The project includes the acquisition and through-life support of 59 M1A1 Abrams main battle tanks, seven M88A2 Hercules recovery vehicles, simulators, tank transporters and fuel trucks.<sup>31</sup>
- 5.23 The first 18 M1A1 Abrams tanks and five M88A2 armoured recovery vehicles were delivered on 21 September 2006. The delivery of the remaining 41 tanks and two armoured recovery vehicles was completed in March 2007.<sup>32</sup> Deliveries of gunnery and driver simulators, tank transporters, fuel trucks and the ammunition types required to support the M1A1 Abrams battle tank were also transitioned into service in 2006-2007.<sup>33</sup>
- 5.24 The Abrams tanks and Hercules recovery vehicles will be operated by the 1st Armoured Regiment (Darwin, Northern Territory), the School

---

29 Commodore Trevor Jones, *Transcript 10 July 2008*, p. 68.

30 Senate Committee for Foreign Affairs, Defence and Trade Report "*Australia's involvement in peacekeeping operations*" dated August 2008

31 Defence Annual Report 2006-2007 Volume 2 p. 42.

32 Defence Annual Report 2006-2007 Volume 2 p. 7.

33 Defence Annual Report 2006-2007 Volume 2 p. 42.

of Armour (Puckapunyal, Victoria) and the Army Logistics Training Centre (Bandiana, Victoria).<sup>34</sup>

## Progress of the Abrams tank project

- 5.25 The Committee sought and received confirmation that the Army has taken delivery of the full complement of Abrams tanks, including heavy lift transporters and recovery vehicles.<sup>35</sup>
- 5.26 Defence advised that the Abrams tanks have been progressively coming into service for the last couple of years. For example, the tank transporters came in prior to the arrival of the first tank. Some of the tank transporters have arrived but are not necessarily synchronised with the arrival of the tanks. However, currently Defence have the tanks, have the Hercules armoured recovery vehicles, and have transportation for those vehicles.<sup>36</sup>
- 5.27 The Committee also sought information on ancillary equipment, such as camouflage skirts. In response, Defence discussed the "TUSK" program:

TUSK is a survivability kit with a number of enhancements and is part of an ongoing program between DMO and Army to continually improve the survivability and situational awareness of the tank and its crew. The areas that are being acquired progressively from now include the loader's armoured gun shield, the loader's safety shields, the 50 cal remote thermal site and the Abrams reactive armour tile. Then there are a number of developmental parts to this that we also hope will come in under this program in the future.<sup>37</sup>

- 5.28 The Committee expressed concern that the Abrams did not match the capability of its predecessor the Leopard tank, particularly in terms of bridge-laying capability.<sup>38</sup>

That is correct ...the Leopard tank had a bridge-laying capability which served us very well for many years, but it is

---

34 Defence Annual Report 2006-2007 Volume 2 p. 42.

35 Mr Stuart Robert MP, Hansard, *Transcript 10 July 2008*, p. 42.

36 Brigadier Symon, *Transcript 10 July 2008*, p. 42.

37 Brigadier Symon, *Transcript 10 July 2008*, p. 43.

38 Hon Arch Bevis MP, *Transcript 10 July 2008*, p. 47.

unable to be used for the Abrams tank. It is an area that Army is looking [at].<sup>39</sup>

#### **Recommendation 4**

**The Committee recommends that the Government consider the acquisition of battlefield mobility assets for the Abrams tank, such as a bridge-laying capability.**

### **Interoperability of the Abrams tank**

5.29 Some concerns surrounding the compatibility of the Abrams Tank with existing communications platforms were also expressed by the Committee.<sup>40</sup> The Committee sought confirmation that the Abrams Tank was not actually compatible with the wider communications architecture between sub-units and their commander on the battlefield.

That is correct. The complexity of communications is hard to deal with. You have actually got to break it down to all of the component parts, but to keep it as strategic as your discussion with Commander 1 Brigade, under a number of projects, but primarily JP2072, we are seeking to resolve that particular issue as quickly as possible. I think you would appreciate that the level of situational awareness and the bandwidth in communications that goes into an Abrams tank today is considerably more than anything we had on the old Leopard tank. It is not totally surprising with the complexity of the communications suites and the situational awareness that you have on board, it was not possible to synchronise completely the communications and situation awareness to give it its full capability. It is a very high [priority] project for DMO and for the Chief of Army right now.<sup>41</sup>

---

39 Brigadier Paul Symon, *Transcript 10 July 2008*, p. 47.

40 Mr Stuart Robert MP, *Transcript 10 July 2008*, p. 43.

41 Brigadier Paul Symon, *Transcript 10 July 2008*, p. 43-44.



- 5.30 Providing additional comment, the ADF's Chief Information Officer stated:

The SINGARS radio used in [the Abrams] tank ... can still talk to the existing communications equipment. The real issue with the tank is not actually the communications bit; it is the interface between the FBCB2 Blue Force Tracker (the battle management system) and BCSS (the battlefield command support system) and the ability to pass data across there.<sup>42</sup>

- 5.31 The Committee notes the advice provided by Defence that the communications project to integrate the ADF's communications and battle management systems is a high priority.

## Recommendation 5

**The Committee recommends that the Government expedite a solution to upgrade communications suites to ensure integration of all battle management systems to create a modern and effective Network Centric Warfare capability.**

## Deployability of the Abrams tank

- 5.32 With regard to questioning by the Committee on the deployability of the new tank capability, Defence advised that they could meet their obligation of providing a tank squadron and that the Abrams tank can be deployed by airlift (on the C17 aircraft) or by sea.

The Australian Army is very, very proud and pleased to be operating the Abrams tank. It is the world's best and that is the view of the Australian Army.<sup>43</sup>

- 5.33 At the time of the public hearing, the airportability of the Abrams tank on an Australian C-17 aircraft had yet to be trialled. The Committee is aware that trial loading exercises were carried out in October 2008 and the ability to deploy the Abrams on an Australian C-17 aircraft has now been confirmed and approved.

---

42 Rear Admiral Peter Jones, *Transcript 10 July 2008*, p. 52.

43 Brigadier Paul Symon, *Transcript 10 July 2008*, p. 45.

- 5.34 The Committee was also concerned about skills shortages within the Army to service Abrams tanks.<sup>44</sup>

The challenge..... is that we have had the win with the easier part of being ahead of schedule in the personnel area. Army is very, very conscious that the harder part, which is the specialist trades, is ahead of us. In terms of our plan, the rubber starts to hit the road on that next year.<sup>45</sup>

In relation specifically to the Abrams tank and the serviceability issue, we have surged tradesmen up to Darwin.... to assist with some serviceability issues.<sup>46</sup>

- 5.35 DMO has contracted with civilian tradespeople to address the serviceability issue associated with the Abrams tank. In addition the Army has commenced some trade transfer initiatives; for example, to better utilise those people previously in the infantry who want to take on new specialist trades in the Army. The Army is also moving experienced warrant officers into the regions; this is aimed at encouraging them to learn a new specialist trade rather than leave the Army altogether.<sup>47</sup>

## **Communications – lack of interoperability of new and legacy communications equipment**

### **Summary of current interoperability challenges**

- 5.36 Industry and commercial pressures have impacted on interoperability over a period of time in Australia and particularly overseas. Another key influence on interoperability has been the technological advances of coalition partners and traditional allies and the rapid increase in the frequency and scale of combined or joint coalition exercises.<sup>48</sup>

### **Network centric warfare capability**

- 5.37 Defence highlighted network centric warfare as an interoperability issue. This is because network centric warfare requires data
- 

44 Mr Damian Hale MP, *Transcript 10 July 2008*, p. 47.

45 Brigadier Paul Symon, *Transcript 10 July 2008*, p. 46.

46 Brigadier Paul Symon, *Transcript 10 July 2008*, p. 47-48.

47 Brigadier Paul Symon, *Transcript 10 July 2008*, p. 48.

48 Rear Admiral Peter Jones, *Transcript 10 July 2008*, p. 51.

movement rather than traditional voice in communications equipment. Due to this, it was identified that it is a challenge for some of the older systems to be able to host the data. This has necessitated a move to more modern equipment. As already mentioned in relation to the Abrams tank, Defence stated:

The real issue with the tank is not actually the communications bit; it is the interface between the FBCB2 Blue Force Tracker, the battle management system, the BCSS, the battlefield command support system, and the ability to pass data across there....slightly different issue but it has an interoperability component.<sup>49</sup>

5.38 In terms of delivering network centric warfare capability, Defence indicated that in the maritime environment this capability is most advanced and has been for some time. The Hardened Network Army initiative has also seen more networked capability coming into place. However, Defence indicated that integration of this networked capability was still quite limited.<sup>50</sup>

5.39 Defence stated that in 2005, to address this integration issue, it created the Network Centric Warfare Program Office to develop the battlespace architecture to ensure that any new projects have the requisite interoperability already in place. This Program Office has since developed an interim architecture to enable any new projects to have the requisite interoperability. The interoperability of projects that pre-date the establishment of the Program Office have been subject to some time delays.<sup>51</sup>

5.40 To enhance its interoperability capability, Defence also stated that it had paved the way for the appointment of a Chief Technical Officer within the Chief Information Officer Group:

One of the key deliverables that the Chief Technical Officer will have to deliver is a coherent architecture for the Defence network—a comprehensive suite of technical standards.<sup>52</sup>

---

49 Rear Admiral Peter Jones, *Transcript 10 July 2008*, p. 52.

50 Rear Admiral Peter Jones, *Transcript 10 July 2008*, p. 52.

51 Rear Admiral Peter Jones, *Transcript 10 July 2008*, p. 52.

52 Rear Admiral Peter Jones, *Transcript 10 July 2008*, pp. 52–53.

## Coalition interoperability challenges

- 5.41 The Committee indicated its concerns with regard to interoperability between battlefield systems. The Committee heard evidence that a key aspect of enhancing interoperability is managing and integrating any advances or changes in technology of Australia's traditional and non-traditional international partners.<sup>53</sup> An example of how this has been managed is through Australia's representation on the Communications Electronic Board of Five Nations:

Its key role is ensuring that we have interoperability standards between the five nations and that we feed those back into our national armed force. That is, if you like, trying to make sure that we are in lockstep with our traditional partners.<sup>54</sup>

- 5.42 In the deployment of forces to Iraq and Afghanistan, interoperability was found to be generally satisfactory. However, Defence stated that there were incidents in which interoperability were an issue:

A case in point is the invasion of Iraq in 2003 and the Australian led coalition maritime interception force. That force was looking to have a common secure radio for all boarding parties, for helicopters, ships and boats to use. When you looked across the armed forces of Poland, Britain, the US, the UK and ourselves there was not one common radio. The ADF in fact resolved that interoperability issue by sending 40 Wagtail radios and issuing them to the forces of the four countries.<sup>55</sup>

- 5.43 Indicating that interoperability is an issue that extends beyond the ADF to all coalition forces involved in combined or joint exercises, Defence stated:

Twenty years ago it was not uncommon for individual services to be able to conduct an operation without a large amount of interaction with the other services, and that was particularly the case in the large armed forces like the United States ... but of course times have changed dramatically and it is a much more joint and combined environment.<sup>56</sup>

---

53 Hon Arch Bevis MP, *Transcript 10 July 2008*, p. 52.

54 Rear Admiral Peter Jones, *Transcript 10 July 2008*, p 53.

55 Rear Admiral Peter Jones, *Transcript 10 Jul 2008*, p. 53.

56 Rear Admiral Peter Jones, *Transcript 10 Jul 2008*, p. 53.

- 5.44 The importance of effective interoperability amongst coalition forces has led to the ADF representing Australia on:

the steering board of an international body that looks at communication standards and tries to promote standards across the board in the ICT environment, so that when it comes to newer platforms, there is much more chance of having, at the very inception, some common standards.<sup>57</sup>

## Other technical issues

### Cryptographic equipment

- 5.45 Technological changes associated with cryptographic equipment have also been an issue contributing to the maintenance of interoperability. The relationship with Coalition partners has required a shift to newer crypto technologies.<sup>58</sup>

### Backward capability

- 5.46 The ADF has attempted to ensure that any new equipment purchased has backward capability so it can be used with older communications equipment.

The SINGARS radio used in [the Abrams] tank does have backward capability; it can still talk with existing communications equipment.<sup>59</sup>

## High Frequency Communications System

- 5.47 Whilst examining interoperability, the Committee also noted the contractual delays associated with the delivery of a High Frequency (HF) communications system from Boeing. Referencing a recent ANAO Report<sup>60</sup>, the Committee made it clear that the delays, contractual alterations, expenditure levels and unforeseen technical difficulties associated with the Boeing contract for providing the HF capability was of concern. It also expressed concern that whilst the original contract with Boeing had been to provide a multi-platform

---

57 Rear Admiral Peter Jones, *Transcript 10 Jul 2008*, p. 53.

58 Rear Admiral Peter Jones, *Transcript 10 Jul 2008*, pp. 51-52.

59 Rear Admiral Peter Jones, *Transcript 10 Jul 2008*, p. 52.

60 Australian National Audit Office, *Audit Report No. 34 2006-2007, High Frequency Communication System Modernisation Project*, dated May 2007.

HF communications system, which had not been delivered.<sup>61</sup> Defence updated the Committee:

The core system that basically establishes the HF communications network was introduced into service in 2004. It is now operational and it is providing communications links to platforms with HF radios in them. The next part of the project is to move from the core system to a final system. We are enhancing the core system to provide improved automatic link establishment and other enhancements, including email over HF and the like. That was due to be completed by November last year. Boeing were unable to achieve that date and has now sought for a schedule extension to deliver the final capability incrementally.<sup>62</sup>

The project still includes the platforms as approved by government, and they are still part of the scope of the project. In order to demonstrate the terminal equipment, if you like, that will work in the platforms, we agreed with Boeing to develop a generic mobile system and we were going to demonstrate that on Chinooks. Once we had proven the design of that generic mobile system we were then going to move to integrating it into the platforms that are within the scope of the project. [The generic mobile system] is due for delivery from Boeing between now and 2011.<sup>63</sup>

Looking at Boeing's reluctance to contractually commit to earlier dates, we asked: do we have a fundamental problem here and why is it taking so long to get through integration and test? Hence, we agreed to a technical review to determine whether there is a problem that they are not aware of.<sup>64</sup>

The schedule for final delivery that Boeing offered us and was prepared to sign up to was March 2011. We were negotiating a commercial settlement with them but decided that that length of time, given the compensation they were offering, probably did not represent value for money. We have now instructed Boeing to work to the contract [that] was rebaselined in 2004.<sup>65</sup>

---

61 Senator Mark Bishop, *Transcript 10 Jul 2008*, pp. 54-55.

62 Mrs Shireane McKinnie, *Transcript 10 Jul 2008*, p. 54.

63 Mrs Shireane McKinnie, *Transcript 10 Jul 2008*, p. 54-55.

64 Mrs Shireane McKinnie, *Transcript 10 Jul 2008*, p. 54.

65 Mrs Shireane McKinnie, *Transcript 10 Jul 2008*, pp. 54-55

Although there is still some way to go and probably around half of the total project funds are yet to be committed, we have delivered the core system, which is providing essential capability to the ADF.<sup>66</sup>

- 5.48 The Committee expressed concern that once this generic mobilisation system is in place by 2011, there is still the issue of transferring it from single platform to multi-platform usage, as by this point Boeing will no longer be contracted to provide this.

But half the funds have been expended, the implementation date for one platform is now suggested to be March of 2011 ... and then we have to do all the work to make it multi.<sup>67</sup>

## The Hardened and Networked Army

- 5.49 The Committee sought an update on the Hardened and Networked Army (HNA) and the Enhanced Land Force (ELF) initiatives.<sup>68</sup> Defence stated:

... it is easier [to discuss both initiatives] together, because the two programs, whilst they are discrete decisions of government, all speak to one issue, which is that Army is growing by over 20 per cent over a ten-year period and clearly bringing in a number of capabilities. Firstly, inside Army we have been doing a lot of work over the 12 months building an Army plan that synchronises the key ingredients to this growth and synchronising it over the next ten years. You would be aware that 7 RAR and 8/9 RAR are key elements to the growth of Army. Currently, 7 RAR is ahead of its scheduled path for growth and for development. 8/9 RAR is [also] on schedule. The real challenge lies ahead next year and the years after. The early growth that we had planned with the battalions was very much in the infantrymen, which are the easier-to-get trades. Army is very conscious that from next year onwards, some of those more difficult trades and specialists need to start coming on board into both the battalions, as well as some of the other elements that we are gaining through HNA and ELF. There are a number of

---

66 Mrs Shireane McKinnie, *Transcript 10 Jul 2008*, p. 56.

67 Senator Mark Bishop, *Transcript 10 Jul 2008*, p. 56.

68 Hon Arch Bevis MP, *Transcript 10 Jul 2008*, p. 45.

initiatives underway to try and help us with those specialist trades in order to get better balance across the Army. That will be a real challenge for the HNA and ELF programs next year and beyond.

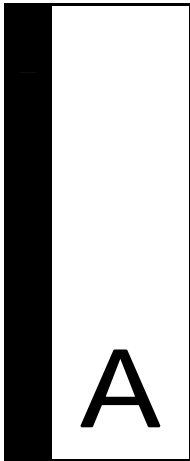
A big component of the resourcing for HNA and ELF is for the equipment that goes with both the battalions, but also other elements that are growing under HNA and ELF. Obviously we have a support agreement with DMO on the provision of those equipments and we are now about 90 per cent of our way through actually articulating, spanner by spanner and hammer by hammer, exactly what is required. This has been a big body of work in its own right over the last 12 months. Finally, with regard to facilities, the interim facilities are in the process of being delivered for 7 RAR now. There are four training command facilities that are being enhanced: Kapooka, Singleton, Liverpool and Puckapunyal. Most of that work is already complete. It will be completed by the end of next month [August]. As to HNA facilities in Adelaide, the permanent facilities for 7 RAR in Adelaide have now been endorsed through the Parliamentary Standing Committee on Public Works. The PW submission for 8/9 RAR's facilities in south-east Queensland will be taken to the PWC in 2009.<sup>69</sup>

- 5.50 The Committee is pleased with the progress of both initiatives to date; however, notes that the future success of HNA and ELF will depend upon the more difficult task of recruiting personnel for specialist trades and the finalisation of facilities development and equipment acquisition. The Committee will continue to monitor the progress of HNA and ELF in 2009.

---

<sup>69</sup> Brigadier Paul Symon, *Transcript 10 Jul 2008*, pp. 45-46.

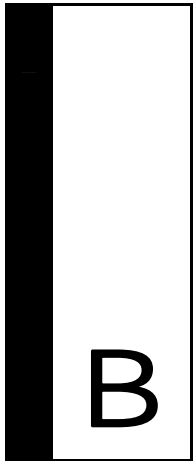




## Appendix A – List of Submissions

1. Defence Force Welfare Association
2. Air Power Australia
3. AVM (Retd) P J Criss
4. Air Power Australia
5. Australian Defence Headquarters
6. Department of Defence – Defence Material Organisation
7. Mr E J Bushell (Air Cdre, RAAF, Retd)
8. Department of Defence – Strategy, Coordination and Governance
9. Mr E J Bushell (Air Cdre, RAAF, Retd)
10. Department of Defence – Answers to Questions on Notice

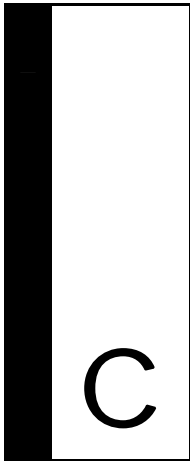




## Appendix B – List of Exhibits

1. AVM (Retd) P J Criss
2. Air Power Australia
3. Mr E J Bushell, (Air Cdre, RAAF, Retd)





## Appendix C – Witnesses appearing at public hearings

### Canberra

Thursday, 10 July 2008

#### **Defence Materiel Organisation**

Air Vice Marshal Christopher Deeble - Program Manager, Airborne Early Warning and Control

Major General Anthony Fraser – Head, Helicopter Systems Division

Mr Kim Gillis – General Manager, Systems

Dr Stephen Gumley – Chief Executive Officer

Commodore Drew McKinnie – Director-General, Major Surface Ships, Maritime Systems Division

Mrs Shireane McKinnie – Acting General Manager, Programs

Ms Jane Wolfe – General Manager, Corporate

#### **Inspector General, Australian Defence Force, Department of Defence**

Mr Geoff Earley AM

**Royal Australian Air Force**

Air Commodore Ian Smith – Director-General, Logistics – Air Force

Group Captain Donald Thornton – Director, Operational Requirements, Air 6000, New Air Combat Capability

**Office of the Chief of Army**

Brigadier Paul Symon – Director-General, Preparedness and Plans - Army

**Department of Defence**

Ms Diane Harris – Director-General, Fairness and Resolution

Commodore Trevor Jones – Director-General, Military Strategic Commitments, Vice Chief of the Defence Force Group

Rear Admiral Peter Jones – Head, Information Technology Operations Division, Chief Information Officer Group

Commodore Peter Lockwood – Director-General, Navy Capability Performance and Plans

Mr Philip Minns – Deputy Secretary, People Strategies and Policy

Mr William Nagy – Director, United Nations Commitments and Support, Military Strategic Commitments Branch

Major General Michael Slater – Head, Personnel Executive, People Strategies and Policy

**Canberra**

**Friday, 29 August 2008**

**Department of Defence**

Air Marshal Mark Binskin – Chief of Air Force

Mr Steve Grzeskowiak – Acting First Assistant Secretary, Personnel

Air Vice Marshal John Harvey – Program Manager, New Air Combat Capability

Air Chief Marshal Angus Houston – Chief of Defence Force

Mr Philip Minns – Deputy Secretary, People Strategies and Policy

**Defence Materiel Organisation**

Mr Kerry Clarke - Head, Industry Division

Air Vice Marshal Christopher Deeble - Program Manager, Airborne Early Warning and Control

Mr Kim Gillis - General Manager Systems

Dr Stephen Gumley - Chief Executive Officer

Air Vice Marshal Clive Rossiter - Head, Aerospace Systems Division

