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The Parliament of the Commonwealth of Australia

# Review of the Defence Annual Report 2005-2006

Joint Standing Committee on Foreign Affairs, Defence and Trade

June 2008  
Canberra

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### **Cover photo captions**

HMAS Warramunga, HMAS Stuart, HMAS Yarra, HMAS Gascoyne and HMAS Sydney during Officer Of The Watch manoeuvres during Exercise Ocean Protector 2006.

(Official No: 20050203ran8098978\_023)

Private Adam Marsh from the Brisbane-based 6th Battalion Royal Australian Regiment, as part of the 1st Reconstruction Task Force provides a security screen during a patrol to visit the nearby Tarin Kowt hospital and police station in southern Afghanistan. (Official No: 20061208adf8185016\_0008)

An Australian C-17 taxis down the Nackeroo airfield towards a turning apron at Bradshaw Field Training Area in the Northern Territory. (Official No: 20070629adf8243523\_050)



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## Foreword

This review of the Defence Annual Report 2005-06 was undertaken by the Defence Sub-Committee of the 41<sup>st</sup> Parliament. Due to the 2007 election, the Committee's deliberation of this report was interrupted and its finalisation has had to occur during this, the 42<sup>nd</sup> Parliament's tenure. The current Committee did not feel it was necessary to seek new evidence or conduct additional hearings prior to considering and tabling this review. The Committee of the 42<sup>nd</sup> Parliament is now focussed on the review of the Defence Annual Report 2006-07, which has been adopted as an inquiry and Public Hearings for this review will be conducted during June and July 2008.

This report focuses on the activities, achievements and undertakings of the Australian Defence Force (ADF) and the Department of Defence during the period July 2005 to June 2006. During this period, ADF personnel continued to serve in a wide variety of operational deployments world-wide, including new overseas operational deployments to Afghanistan, Pakistan and Timor-Leste. Despite the high operational tempo, the ADF was also heavily involved in providing humanitarian relief to the people of Pakistan, following the earthquake in October 2005 and to the people of North Queensland following Cyclone Harry.

During the 2005-06 reporting period, in addition to the focus on military operations, Defence continued to address its financial management and ADF recruitment and retention concerns. In June 2006, the Defence Capability Plan was released, providing the blueprint for capability investments over the next ten years.


The five major topics reviewed in this report provided an opportunity for the Committee to seek further information on how Defence is addressing current opportunities and challenges. The five focus areas were the Proliferation Security Initiative (PSI), the Navy's Patrol Boat Capability, the Remuneration Reform Project (RRP), Army's current and future projects and Army Aviation.

To conclude the review of the Defence Annual Report 2005-06, the Chief of the Defence Force and the Acting Secretary of Defence made themselves available at the end of the Public Hearing for wide-ranging discussions on current issues across the entire Defence Annual Report.

In conclusion, the Committee would like to express their appreciation for the outstanding work that continues to be done by the men and women of the ADF in support of operations in Australia and around the world.

The Hon Arch Bevis MP  
Chair - Defence Sub Committee  
42<sup>nd</sup> Parliament





# Membership of the Committee 41<sup>st</sup> Parliament

Chair            Senator M A Payne

Deputy Chair    The Hon G J Edwards

Members	Senator A Bartlett	Mr M Danby MP
	Senator P M Crossin	Mrs T Draper MP
	Senator A Eggleston	Mrs J Gash MP
	Senator M Fifield	MR S W Gibbons MP
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	Mr P A Barresi MP	Dr A J Southcott MP
	Mr C Thompson MP	Ms M Vamvakinou MP
	Mr B H Wakelin MP	Mr K W Wilkie MP

Secretary        Dr Margot Kerley





# Membership of the Defence Sub-Committee 41<sup>st</sup> Parliament


Chair           The Hon B Scott MP

Deputy Chair   Mr M J Hatton MP

Members	Senator A Bartlett	Mrs T Draper MP
	Senator P M Crossin	The Hon G J Edwards MP ( <i>ex officio</i> )
	Senator M Fifield	Mrs J Gash MP
	Senator S Hutchins	Mr S W Gibbons MP
	Senator the Hon S Macdonald	Mr B W Haase MP
	Senator M A Payne ( <i>ex officio</i> )	The Hon W E Snowden MP
	Senator R B Trood	Dr A J Southcott MP
		Mr C P Thompson MP
	Mr B Wakelin MP	
	Mr K W Wilkie MP	

## Committee Secretariat

Secretary	Dr Margot Kerley
Defence Adviser	Cmdr David Jones (RAN)
Research Officer	Mr Michael Crawford
Administrative Officer	Ms Emma Martin



## 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>

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1 See *Votes and Proceedings*.

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





## List of abbreviations

ADF	Australian Defence Force
ACPB	Armidale Class Patrol Boat
ARH	Armed Reconnaissance Helicopter
CDF	Chief of Defence Force
CIT	Common Induction Training
CO	Commanding Officer
DFAT	Department of Foreign Affairs and Trade
DFRT	Defence Force Remuneration Tribunal
DMO	Defence Material Organisation
DRSC	Defence Reserve Support Council
EEZ	Exclusive Economic Zone
ELF	Enhanced Land Force
FCPB	Fremantle Class Patrol Boats
HNA	Hardened and Networked Army
HRR	High Readiness Reserve
OEG	Operational Experts Group

Q&S	Qualifications and Skills
RAAF	Royal Australian Air Force
RAN	Royal Australian Navy
RAR	Royal Australian Regiment
RHIB	Rigid Hull Inflatable Boats
RRP	Remuneration Reform Project
PAES	Portfolio Additional Estimates Statements
PBS	Portfolio Budget Statements
PSI	Proliferation Security Initiative
WMD	Weapons of Mass Destruction
WO1	Warrant Officer Class 1





## List of recommendations

### 2 Proliferation Security Initiative (PSI)

#### Recommendation 1

The Committee recommends that an invitation be extended to Defence sub-committee members to observe and/or participate in the next Pacific Protector exercise hosted by Australia.

### 5 Army—Current and Future Projects

#### Recommendation 2

**The Committee recommends that Defence reports to the Defence Sub Committee on the implementation of the HNA and ELF programs, with a focus on the delivery schedule of the additional battalions.**



## Introduction

- 1.1 During the period July 2005 to June 2006, Defence maintained a continued focus on military operations, equipment acquisition and improvements in financial and accounting management.
- 1.2 The Australian Defence Force (ADF) was involved in 11 new overseas operational deployments during the year. This involved the deployment of some 5,200 personnel to areas such as Iraq, Afghanistan, Timor Leste, and the Solomon Islands. Despite the high operational tempo, the ADF also demonstrated its high level of professionalism and resourcefulness in providing humanitarian relief to the people of Pakistan who were affected by a devastating earthquake in October 2005. Closer to home, it supported the Queensland Government and the people of North Queensland following Cyclone Harry. In March 2006 in Melbourne, 2,600 ADF personnel provided security support to the Commonwealth Games.
- 1.3 An improvement in Defence's financial management during 2005-06, allowed the Secretary to sign the Department's financial statements, after two years of qualification. Remediation work has seen improvements in four key areas:
  - reporting of military and civilian leave liabilities;
  - the valuation and reporting of explosive ordnance;
  - a more rigorous approach to asset capitalisation; and
  - completion of asset valuation work in information technology and communications.

- 1.4 The Defence Capability Plan was released in June 2006 and provides the blueprint for capability investments over the next ten years. Government acquisition decisions in 2005-2006 included:
- acquiring up to four C-17 Heavy Airlift aircraft and associated support equipment;
  - acquiring an additional 34 MRH-90 helicopters to replace the current Black Hawk and Sea King helicopter fleets;
  - upgrading the Anzac-class frigate anti-ship missile defence system;
  - acquiring the AEGIS weapon systems for the Air Warfare Destroyer;
  - acquiring the Joint Air to Surface Stand-off Missile for the F/A-18; and
  - first pass approval for the Amphibious Ships project, and the provision of funding to conduct further design, technical and through-life support studies.<sup>1</sup>
- 1.5 The five topics selected for examination, as part of the review of the Defence Annual Report 2005-06, cover some of these issues. The first topic examines the ADF's contribution to the Proliferation Security Initiative (PSI). In particular, PSI exercises and its interaction with countries in the region that support the initiative.
- 1.6 The second area for examination is the Navy's patrol boat capability. Significant investment has been made in acquiring new platforms, such as the Armidale Class Patrol Boats (ACPBs). In parallel, the Navy is introducing an alternative crewing strategy to enable the Navy to more effectively meet its operational commitments.
- 1.7 Topic three examines the Remuneration Reform Project (RRP). The remuneration of ADF personnel has undergone a number of reviews over the years and the RRP is an evolutionary process which draws together past recommendations, whilst focussing on the recruitment and retention of ADF personnel.
- 1.8 The Army currently has a number of current and future projects designed to support its modernisation program and these are examined in topic four. These projects aim to improve the Army's capability to respond to an increasingly complex and demanding future. Significant funds have been allocated to harden and network

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1 Department of Defence, *Annual Report 2005-06*, pp. 7-8.

the Army over the next ten years to increase its flexibility, adaptability and agility. Also, the Enhanced Land Force program is discussed together with the new initiatives to better integrate the Army Reserve.

- 1.9 Topic five examines the future capability of Army Aviation. In what has been a significant operational tempo for army aviation operations, two major platforms will be introduced into service over the next few years: the Tiger Armed Reconnaissance Helicopters and the MRH90 Troop-Lift Helicopters.

## **Defence objectives, personnel and 2005-06 Budget allocation**

- 1.10 The Portfolio Budget Statements (PBS) 2006–07, in conjunction with the Portfolio Additional Estimates Statements 2006–07 (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 (the Defence Update 2003), and Australia’s National Security: A Defence Update 2005 (Defence Update 2005). The underpinning principles of the White Paper remain valid, nevertheless, 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.
- 1.11 The ADF is maintaining a force structure that comprises the following combat elements:
- a surface combatant force of five Adelaide-class guided missile frigates (to be reduced to four by the end of January 2008) and seven Anzac-class frigates (increasing to a total of eight by September 2006);
  - a naval aviation force comprising 16 Seahawk naval combatant helicopters, six Sea King maritime support helicopters and 13 Squirrel naval training helicopters. The introduction of the Super Seasprite helicopter to operational service has been delayed by the

need to resolve a system problem identified during the flight test program;

- a mix of Fremantle-class and Armidale-class patrol boats to provide patrol, response and surveillance capability in Australia's maritime approaches. The existing Fremantle-class force has been progressively replaced and all were decommissioned by May 2007 at which time 10 Armidale-class patrol boats were in service;
- 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 (replaced in September 2006 with a more environmentally-compliant double-hulled 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 Forces Combat Service Support Company;
- an air combat force consisting of three front-line F/A-18 Hornet squadrons and one operational F-111 squadron (to be retired from service from 2010), supported by a training wing comprising four units, a wide-area surveillance system (Jindalee Operational Radar Network) monitoring Australia's northern approaches, and a range of ground radars and other support elements;

- an air lift and air-to-air refueling force that operates two C-130 Hercules airlift squadrons, one squadron each of DHC-4, B-707, and Special Purpose Aircraft (B-737 BBJ and CL-604 Challenger) supported by a training wing, and the Boeing C-17 Globemaster III heavy airlifter which entered service in late 2006;
- a combat support group consisting of three expeditionary combat support squadrons that provide the essential air base combat support required to conduct deployed air operations on bare bases and in low infrastructure conditions, an airfield defence wing and a health support wing;
- a maritime patrol force comprising two front line AP-3C Orion squadrons and one conversion unit, and the Wedgetail airborne early warning and control aircraft which will enter service in 2009-10; and
- diverse capabilities for intelligence collection and analysis.<sup>2</sup>

1.12 Defence commented that:

The major combat elements are being integrated through a robust communications network and the information systems required to support the ADF's mission command, intelligence, surveillance, reconnaissance, imagery and military geospatial information sharing requirements.<sup>3</sup>

1.13 For 2005-06, the most recent Budget estimates for Defence are shown in the PBS.

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2 Department of Defence, *Portfolio Budget Statements 2006-2007*, pp. 10-11.

3 Department of Defence, *Portfolio Budget Statements 2006-2007*, pp. 11.

1.14 The Defence budget for 2005-06 is summarised in Table 1.1 below.

Table 1.1 Defence Resourcing Summary 2005-06

	<b>2005-06 Budget Estimate \$000</b>	<b>2005-06 Additional Estimate \$000</b>	<b>Actual Result \$000</b>
Revenue from Government for outputs	17,098,869	17,105,621	17,224,021
Own source revenue <sup>1</sup>	371,341	621,752	635,393
Net Capital receipts	24,863	24,863	61,358
Administered appropriation <sup>2</sup>	2,539,350	2,602,100	2,754,208
<b>Total Defence resourcing</b>	<b>20,034,423</b>	<b>20,354,336</b>	<b>20,674,980</b>

Notes:

1. Own-source revenue includes sales of goods and services and other revenue. This excludes revenue from 'assets now recognised' revenue and 'other gains'.

2. The administered appropriation covers costs associated with the military superannuation schemes, and also covers the provision of housing subsidies to current and retired Defence personnel. The administered appropriation is managed by the Department of Finance and Administration (Commonwealth Superannuation) and the Defence Housing Authority (housing subsidies) on Defence's behalf.

Source *Defence Annual Report 2005-2006, p38*

1.15 The average funded strength of the three services for 2005-06 is shown in Table 1.2 below.

Table 1.2 ADF Permanent Force Average Funded Strength

	<b>2004-05 Actual</b>	<b>2005-06 Budget Estimate</b>	<b>2005-06 Revised Estimate</b>	<b>2005-06 Actual</b>
Navy	13,089	13,209	12,800	12,767
Army	25,356	25,484	25,171	25,241
Air Force	13,368	13,498	13,188	13,143
<b>Total Permanent Force</b>	<b>51,813</b>	<b>52,191</b>	<b>51,159</b>	<b>51,151</b>

Source *Defence Annual Report 2005-06, p218*

1.16 ADF Reserve and civilian staffing is shown in Table 1.3.

Table 1.3 2005-06 ADF Reserve and Civilian Staffing

	<b>2004-05 Actual</b>	<b>2005-06 Budget Estimate</b>	<b>2005-06 Revised Estimate</b>	<b>2005-06 Actual</b>
Navy	1,243	1,850	1,850	1,598
Army	15,845	16,000	16,000	15,579
Air Force	2,187	2,300	2,300	2,287
Civilian	13,390	13,370	13,421	13,577

Source *Defence Annual Report 2005-06, p219*



1.17 Table 1.4 shows the total Defence workforce comprising the military and civilian components.

Table 1.4 2004-05 Total Defence Workforce

<b>Workforce</b>	<b>2005-06 Budget Estimate</b>	<b>2005-06 Actual Result</b>
Military	72,341	70,615
Civilian	13,370	13,577
Professional service providers	1,341	1,319
Total Workforce	87,052	85,511

Source *Defence Annual Report 2005-06, p 221*

## Annual Report review objectives and scope

1.18 The review examined a combination of information from the Portfolio Budget Statements 2006-07 (including Portfolio Additional Estimates Statements 2006-07) and the Defence Annual Report 2005-06.

### Focus areas

1.19 The five focus areas selected for examination at the public hearing on 30 March 2007 provided an opportunity for the Committee to seek further information on how Defence is addressing current opportunities and challenges. The five focus areas were:

- Proliferation Security Initiative (PSI);
- Navy's Patrol Boat Capability;
- Remuneration Reform Project (RRP);
- Army – Current and Future Projects; and
- Army Aviation.

1.20 In addition, the Acting Secretary of Defence and the Chief of the Defence Force attended the hearing. This session provided an opportunity for the Committee to discuss a range of issues across the entire Defence Annual Report.



## Proliferation Security Initiative (PSI)

### Introduction

2.1 The Proliferation Security Initiative (PSI) was launched by President Bush in May 2003, in response to the growing challenges posed by the worldwide spread of weapons of mass destruction (WMD), their delivery systems and related materials. PSI is aimed at impeding illicit WMD related trade (to and from states and non-state actors of proliferation concern) by having nations commit to disrupting the illicit trade in WMD. In terms of achieving this objective, member nations commit in a consensual voluntary manner to:

take specific actions in support of interdiction efforts regarding cargoes of WMD...and their delivery systems or related materials to the extent that their national legal authorities permit and consistent with their obligations under international law and frameworks.<sup>1</sup>

2.2 PSI is a voluntary multilateral compact which adheres to the United Nations, its declarations and resolutions as well as the views of its member nations. It comprises approximately 80 countries, of which approximately 20 play a more active role in counter proliferation via participation in the Operational Experts Group (OEG).

2.3 According to Defence, the perception of PSI as an enforcement regime is inaccurate, as it is more of a capacity building tool that is designed

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<sup>1</sup> Mr Michael Pezzullo, *Transcript 30 March 2007*, p. 2.

to effectively facilitate member nations undertaking interdictions within the legal framework. Moreover, it was articulated to the Committee that PSI has helped to bridge a gap in the struggle to achieve WMD counter-proliferation as it has addressed the:

...lack of an operational mechanism on the ground to facilitate international cooperation on countering proliferation activities similar to those operational arrangements that exist...in relation to drugs or illegal migration.<sup>2</sup>

## **Operational Experts Group (OEG)**

- 2.4 The OEG comprises approximately 20 of the 80 states that have signed up to the principles of PSI. The purpose of this body is to drive PSI exercise schedules, develop procedures and protocols and provide a forum to share information and expertise. The OEG is also involved in organising PSI exercises in various theatres around the world including the Europe-Mediterranean area, Asia-Pacific and the Americas.
- 2.5 The OEG usually meets quarterly in various locations around the world. Discussion at these meetings encompasses a range of topics including exercise programs, practical lessons learned and procedural matters. These gatherings are crucial to PSI in that they provide a forum for exchanging information, especially in relation to the effectiveness and outcomes of the various PSI exercises conducted around the world.
- 2.6 In terms of structure and practice, the OEG is unique in many respects as it has no formal chairmanship (rotating or otherwise), is not an institution and does not have a secretariat. In relation to managing the meetings, this role is usually filled by the hosting nation. There are a limited number of countries involved in the OEG and Defence advised that 'we would like more active OEG members and more parties signed up to the overall principles'.<sup>3</sup>

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2 Mr Michael Pezzullo, *Transcript 30 March 2007*, p. 4.

3 Mr Michael Pezzullo, *Transcript 30 March 2007*, p. 9.

## Impact on Australian Law

- 2.7 The Statement of Interdiction Principles and the PSI principles themselves do not oblige Australia to adopt any specific legal or administrative measures to enable interdiction. However, signatory states of the PSI are expected to:
- ...consider what enhancements might be able to be made to their domestic jurisdictional arrangements...[in order to] increase their capacity to counter proliferation.<sup>4</sup>
- 2.8 The Committee raised the issue of making the PSI principles binding under international law, rather than relying on countries to participate on a voluntary basis. Defence was of the view that negotiating a treaty level agreement under the auspices of the United Nations would be extremely complex and may undermine confidence in the PSI. Further, Defence believed an agreed set of protocols without reference to particular countries or threats would be counterproductive in that:
- ...you would lose the momentum at the practical level and everything would then be diverted into a massive global debate.<sup>5</sup>
- 2.9 The Attorney-General's Department is currently involved in examining possible enhancements to domestic law which would improve the Australian Government's capacity to combat WMD proliferation. The Department has recently completed a review of legislation pursuant to the statement of principles and is preparing a list of legislation which could be strengthened to better reflect PSI principles. Subject to Government consideration and approval, there may be some minor amendments to relevant legislation to better implement the principles outlined in the PSI.
- 2.10 Regardless of the PSI principles, Australia has existing, comprehensive legislation to protect its sovereign territory and territorial seas based on current domestic and international law.

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4 Mr Michael Pezzullo, *Transcript 30 March 2007*, p. 4.

5 Mr Michael Pezzullo, *Transcript 30 March 2007*, p. 6.

## Australia's Involvement

### Meetings

- 2.11 Australia has been a key driver of the initiative since its inception and has actively participated in all PSI meetings. Australia's strong involvement has also been demonstrated by the fact that it has hosted a number of gatherings including:
- the second plenary meeting which was held in Brisbane in July 2003 for the purpose of advancing an operational framework called the Statement of Interdiction Principles; and
  - a major meeting of legal and operational experts which was held in Sydney in December 2004, where agreement was reached to begin exploring the steps involved in air interdiction exercises and operations, and to expand cooperation between government and key industry sectors.

### Expansion of PSI Signatories

- 2.12 In addition to attending meetings, Australia has also supported the PSI by encouraging several regional neighbours to join the initiative including Cambodia, Brunei, the Philippines, Papua New Guinea and Sri Lanka. The Department of Foreign Affairs and Trade has been instrumental in this outcome.
- 2.13 Despite the fact that Australia has helped to encourage a number of regional neighbours to join the initiative, there are still a large number of other nations in the Asian region who are yet to become members to the PSI, including China and India.<sup>6</sup>

### PSI Exercises

- 2.14 On behalf of the Government, Defence has hosted two major PSI exercises, Pacific Protector 2003, in the Coral Sea in September 2003 and the air/ground interdiction exercise Pacific Protector 2006 which was held in Darwin in April 2006. This later exercise was especially successful as it was the first PSI air interdiction exercise to be held in

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<sup>6</sup> *Proliferation Security Initiative Participants*, <<http://www.state.gov/t/isn/c19310.htm>> (Accessed on 25 July 2007).

the Asia Pacific region, with representatives from 32 countries in attendance.<sup>7</sup>

- 2.15 Both exercises featured a strong whole-of-government approach with operational elements and policy staff participating from a number of departments and government agencies including Defence, Foreign Affairs, Attorney-General's, Customs, Australian Quarantine Inspection Service and the Australian Federal Police. In addition to federal agencies, Defence also engaged very closely with state and territory agencies.
- 2.16 The depth of the relationship was highlighted following Pacific Protector 2006, when the Minister of Defence wrote to the Chief Minister of the Northern Territory to express his 'appreciation for the involvement of the Northern Territory government and the various jurisdictional agencies'.<sup>8</sup>

## Recommendation 1

**The Committee recommends that an invitation be extended to Defence sub-committee members to observe and/or participate in the next Pacific Protector exercise hosted by Australia.**

- 2.17 In August 2005, Defence also participated in operation Deep Sabre 05 – Proliferation Security Initiative 05-1 which involved a maritime WMD interdiction exercise. This operation was conducted in Singapore with participation from Canada, France, Germany, Holland, Japan, New Zealand, Russia, Singapore, United Kingdom and the United States.<sup>9</sup>
- 2.18 Although only PSI signatories may participate in PSI exercises, non-signatory countries may observe such exercises. This initiative is extremely valuable in promoting PSI principles and complements DFAT's extensive outreach program with countries in the Asia Pacific region.

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7 Department of Defence, *Annual Report 2005–06*, p. 143.

8 Mr Michael Pezzullo, *Transcript 30 March 2007*, p. 7.

9 *Australia's Commitment to the Proliferation Security Initiative*, <<http://www.minister.defence.gov.au/2005/160805.doc>> (Accessed on 22 March 2007).

## Improving Capabilities

- 2.19 A priority for Australia, and all other PSI participants, is to maintain and refine capabilities for interdicting WMD-related trade. In the past two years, countries participating in PSI activities have developed their maritime, air and ground interdiction capabilities through a program of joint training exercises in Europe, Asia and North America. These exercises have achieved the following outcomes:
- enhanced operational responsiveness by testing national interdiction capacity;
  - improved mechanisms for conducting joint interdiction operations with other countries;
  - bridged differences in training and operational systems; and
  - allowed operational crews and policy experts to work together in a cooperative and collaborative manner.<sup>10</sup>

## Conclusion

- 2.20 The PSI is an international framework introduced to counter the spread of WMD. Although participation is voluntary, over 80 countries are signatories to the initiative, with 20 countries members of the OEG. A continued leadership role within the region will assist Australia in convincing more countries to become signatories to the PSI.
- 2.21 The Committee commends Defence's role in hosting the PSI exercise Pacific Protector and in leading a whole-of-government-approach to the PSI within the Asia Pacific region. Through regular dialogue and exercises, common policies and procedures can be developed, consistent with domestic and international law, for participating nations to have the necessary tools to counter the proliferation of WMD.

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<sup>10</sup> *Proliferation Security Initiative*, <<http://www.dfat.gov.au/globalissues/psi/>> (Accessed on 25 July 2007).



## Navy's Patrol Boat Capability

### Introduction

- 3.1 During peacetime, patrol boats primarily contribute to Australia's domestic civil surveillance, interdiction and legislative enforcement operations. These operations occur within Australian maritime zones adjacent to the Australian mainland, and around Australia's island territories.
- 3.2 Most incursions into Australia's exclusive economic zone (EEZ) occur in the north, but there are also incursions by larger fishing vessels into the Southern Ocean fishing zones around Heard and McDonald Islands. While the patrol boats are theoretically required to patrol the entire Australian coast and EEZ, the practical limitations on their range, crew size, living conditions and seakeeping abilities makes them best suited to northern operations.
- 3.3 Although the Fremantle Class Patrol Boats (FCPBs) did in the past conduct patrols of the Bass Strait and the southeast and southwest coasts, they are not capable of transiting to patrol the EEZ surrounding Heard, McDonald or Macquarie Islands.<sup>1</sup> In recognition of this fact, and in response to increased illegal activity within the

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<sup>1</sup> If required, these regions can be patrolled by major surface combatants (frigates), large amphibious support ships and tankers. However, the norm is to utilise a suitable vessel under a commercial charter arrangement. This cost effective alternative allows the Navy to employ its major assets in more complex warfighting roles, as opposed to lengthy, routine operations in the Southern Ocean.

northern area of operations, the patrol boats based in Sydney and HMAS *Stirling* were moved to Darwin in 2002. All patrol boats have since been based in Darwin and Cairns, close to their main operational areas. Any incursions into the EEZ are assigned to the nearest patrol boat base, unless a surface combatant happens to be within closer range.

- 3.4 Patrol boats also train to operate within a larger force, alongside major surface combatants and to provide a self-contained maritime interception, intelligence and warning capability. Their size and draught provide a capability without the higher cost of a major surface combatant. Patrol boats train at regular intervals with regional and allied navies, and may be easily deployed for overseas operational duties as part of a larger conventional task force.
- 3.5 Patrol boats participate in a number of regional, bilateral and multilateral exercises primarily within South East Asia and the South West Pacific. During these deployments patrol boats conduct port visits in support of diplomatic and defence ties. Of particular note is the participation of Fremantle Class Patrol Boats (FCPBs) in Operation Anode in the Solomon Islands. Australia also committed personnel to assist with the training of Iraqi Navy personnel in patrol boat operations as part of Operation Catalyst.
- 3.6 During 2005–06, the patrol boat force was made up of both FCPBs and the new Armidale Class Patrol Boats (ACPBs). The patrol boat force continues to make a large and effective contribution to a number of areas including:
  - the Civil Surveillance Program (managed by the Border Protection Command) for the protection of Australia’s sovereignty which covers fisheries, quarantine, immigration and customs duties;
  - North West Shelf security patrols with emphasis on the protection of offshore oil and gas platforms; and
  - international engagement and national security through the conduct of operations, port visits and exercises with regional nations.

## **Transition to the Armidale Class Patrol Boats**

- 3.7 With the FCPBs reaching their end of life, a request for tender to replace the class was released in 2001. Following the tender

- evaluation process, a contract was signed in December 2003 with Defence Maritime Services to supply and support 12 ACPBs.
- 3.8 In the 2005-06 Budget, it was announced a further two ACPBs and an associated support package would be funded to undertake North West Shelf surveillance operations.
- 3.9 HMAS Armidale, the first ship in this new class was commissioned into the RAN on 24 June 2005. By the end of 2005-06 three ACPBs were conducting operations in Australia's northern approaches, with a further 11 vessels being prepared for operations or being built.<sup>2</sup> Of these 11, two were undergoing operational work-up prior to being commissioned in July 2006; whilst the remaining nine vessels are due to be progressively brought into service by January 2008. The last two FCPBs were decommissioned in May 2007.<sup>3</sup>
- 3.10 In relation to when the ACPB fleet will be fully operational, Defence advised the Committee that:
- The last boat, to be named Glenelg, will be accepted by DMO in November [2007]. She will then undergo the normal Navy crew work-up related activities before being appointed to service, commissioning.<sup>4</sup>
- 3.11 Of the 14 ACPBs, 10 vessels will be stationed in Darwin and 4 vessels will be based out of Cairns. Moreover, Navy advised the Committee that with the size of the ACPB fleet, it will now have the flexibility to 'maintain at least one boat on station in the North West Shelf at all times'.<sup>5</sup>

## ACPB Capabilities

### Range

- 3.12 The ACPB has a 90-day operational cycle with a requirement to replenish every 21 days. As a result, the ACPBs have a significantly greater operational range compared to the FCPBs given that they:

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2 Department of Defence, *Annual Report 2005-06*, p. 116.

3 Commodore Trevor Jones, *Transcript 30 March 2007*, p. 14.

4 Rear Admiral Trevor Ruting, *Transcript 30 March 2007*, p. 14.

5 Commodore Trevor Jones, *Transcript 30 March 2007*, p. 16.

...are designed to have a 3,000 nautical mile range [whereas the FCPB] only had a 2,300 nautical mile range.<sup>6</sup>

- 3.13 This increased capacity will provide the RAN with improved tasking flexibility as it will enable these new vessels to remain on operations for longer periods in more areas than the FCPB. The superior range and greater sea-keeping ability of this new class in comparison to that of the FCPB was clearly highlighted by Commodore Jones RAN who commented to the Committee that:

The most demonstrable improvement in the Armidale over the Fremantle is the fact that Armidales have deployed to Christmas Island, a deployment hitherto not thought of for the Fremantle class.<sup>7</sup>

## Sea State

- 3.14 The new Armidale Class Boats also have the ability to maintain operations in Sea State 5 up to 1000 nautical miles offshore. Moreover, they are designed to be capable of surviving cyclonic conditions up to Sea State 9.<sup>8</sup>

## Boardings

- 3.15 The ACPBs are each equipped with two diesel jet propelled 7.2m Rigid Hull Inflatable Boats (RHIB). The RHIBs are able to be rapidly deployed and recovered using the Vest Davit System. Moreover, they are over the horizon capable and fitted with stand alone communications and safety systems that enable these boats to be a significant force multiplier for the ACPB.<sup>9</sup>
- 3.16 This new feature of the ACPB has provided a major improvement to Navy's patrol boat boarding and response capability as the FCPBs were only equipped with one 4.7m RHIB.
- 3.17 The new RHIBs are also an improvement on what was available under the old Fremantle class given that they provide the Armidale's with:

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6 Rear Admiral Trevor Ruting, *Transcript 30 March 2007*, p. 11.

7 Commodore Trevor Jones, *Transcript 30 March 2007*, p. 19.

8 Sea Power Centre – Australia, *Semaphore Issue 4, Welcome to the Armidale Class*, February 2006, p. 2.

9 Sea Power Centre – Australia, *Semaphore Issue 4, Welcome to the Armidale Class*, February 2006, p. 2.

...increased boarding team capacity as well as a concurrent boarding capability. That means that...boarding teams can operate with greater effect at greater range from the [ACPB], and more importantly, in much greater safety...than was previously the case with the Fremantle's 4.7-metre RHIB.<sup>10</sup>

## Weapon Systems

- 3.18 The Armidale class are armed with a Raphael Typhoon 25mm automated cannon, in addition to two 12.7mm machine guns. The cannon, which has a rate of fire of 200 rounds per minute, is 'interfaced with [an] Electro optics Surveillance System and is controlled from the bridge'.<sup>11</sup>
- 3.19 The Typhoon cannon is the same as that fitted to the Army's Bushmaster APC and as such provides an advantage to Defence given that it offers 'value for money maintenance benefits to the Australian Defence Force'.<sup>12</sup>
- 3.20 The weapons system aboard the ACPB is a marked improvement on that of the FCPB, as the previous class' main armament was a manually aimed World War II Bofors gun.<sup>13</sup>

## Surveillance and Communications

The ACPBs are equipped with an onboard surveillance and communications suite, which comprises the following features:

- twin radars;
- radar warning system (PRISM III)
- electro optical detection system (TOPLITE) for short range detection;
- a fully calibrated and integrated Direction Finding System (WARRLOCK); and

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10 Commodore Trevor Jones, *Transcript 30 March 2007*, p. 20.

11 Sea Power Centre - Australia, *Semaphore Issue 4, Welcome to the Armidale Class*, February 2006, p. 2.

12 Sea Power Centre - Australia, *Semaphore Issue 4, Welcome to the Armidale Class*, February 2006, p. 2.

13 Commodore Trevor Jones, *Transcript 30 March 2007*, p. 20.

- a state of the art communications system which provides both strategic and tactical communications capabilities in the HF, VHF and UHF bands.

3.21 The Armidale Class will also have access to networked satellites which will enable the vessels to access the wider defence common operating picture. This new feature will provide ACPB crews with far greater operational awareness than was available to crews of the FCPBs.<sup>14</sup>

## Crew Accommodation

3.22 Accommodation aboard the new ACPBs consists of modern two, three and four berth ensuite cabins which provide crews with more comfortable and spacious living quarters. This new berthing configuration is a significant improvement on the mess deck style of the FCPB. Moreover, the ACPBs are also capable of embarking an additional 20 personnel for specific missions. This additional capability vastly increases the flexibility and range of tasks that the ACPBs can undertake.<sup>15</sup>

3.23 Another improvement in berthing which the ACPBs have incorporated is the provision of facilities for crew of both genders. Whereas the Fremantle Class was not equipped to have any female junior sailors, the Armidale class by comparison has been 'specifically designed to provide appropriate facilities for mixed gender crewing'.<sup>16</sup>

## Onboard Fuel System

3.24 During late 2006, Navy encountered a problem with the ACPBs in relation to the fuel system supplying the two main engines. Specifically, HMAS Armidale developed a crack in a very high pressure fuel pump on one of its engines.

3.25 In resolving this problem Navy has worked in an integrated project team arrangement comprising the prime contractor, shipbuilder,

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14 Sea Power Centre – Australia, Semaphore Issue 4, *Welcome to the Armidale Class*, February 2006, p. 2.

15 Sea Power Centre – Australia, Semaphore Issue 4, *Welcome to the Armidale Class*, February 2006, p. 2.

16 Rear Admiral Trevor Ruting, *Transcript 30 March 2007*, p. 22.

engine manufacturer and a team from Navy. This group has developed two solutions to address this technical issue:

- The first solution provides an interim repair that allows the ACPBs to return to operational service quickly. This fix does however limit the performance of the vessels.
- The second solution involves a fuller configuration change package:

...which adds new filtration arrangements to the fuel system between the storage tanks and the engines themselves via a day tank or ready use tank.<sup>17</sup>

3.26 In terms of progress in implementing the above solutions to the ACPB fleet, Defence informed the Committee that:

We are progressively installing those changes. The interim change has been implemented on seven boats to date, and five of those boats are back in operation. We have completed the first full configuration change on an in-service boat ... we are progressively rolling that change [full configuration change package] to the boats as they become available.<sup>18</sup>

## Crewing Arrangements

3.27 The mature ACPB fleet will be split into four divisions, named Attack, Assail, Ardent and Aware. Attack, Assail and Ardent divisions will each comprise four vessels supported by six crews, whereas Aware division will consist of two boats with three crews.

3.28 These divisions will form the basis of a crew rotation model that will allow:

...greater availability of the boats (250 days per boat per year) while providing greater opportunities for leave, training and administration of personnel.<sup>19</sup>

3.29 Importantly, if an operational requirement presents itself at short notice, this model will allow Defence the flexibility to rotate crews away from their home port utilising a fly-in, fly-out concept.

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17 Rear Admiral Trevor Ruting, *Transcript 30 March 2007*, p. 14.

18 Rear Admiral Trevor Ruting, *Transcript 30 March 2007*, p. 14.

19 Department of Defence, *Annual Report 2005-06*, p. 116.

- 3.30 In terms of the status of these grouping arrangements, the Defence Annual Report 2005-06 states that 'Attack division has been formed and reached its mature state in August 2006'.<sup>20</sup>

## Multicrewing System

- 3.31 The ACPBs will be multi-crewed with 21 crews, each of 21 personnel rotating through the 14 vessels in the class. The crews will be divided into the four abovementioned divisions. Crews will remain together and will not be rotated through divisions other than the one to which they are assigned.
- 3.32 At any given time, one to two crews in a division will not be serving aboard a vessel. During this non-operational time, crews will either be on leave; undergoing training or standing by to act as operational relief for another crew.<sup>21</sup>
- 3.33 Once the ACPB fleet is fully operational, it is envisaged that the multicrewing system will facilitate:
- ...both maximum use of the ACPB in line with the 3000 sea day (plus surge) capability, while providing for adequate crew rest and balanced work/life commitments.<sup>22</sup>
- 3.34 Although the multicrewing system is yet to reach its mature state, it has already allowed personnel not required on operations to plan their leave and future career development courses with more certainty than has occurred in the past. Encouragingly, Defence advised that:
- The feedback from personnel who are now on the Armidale class boats and enjoying the benefits of multicrewing has been very positive.<sup>23</sup>

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20 Department of Defence, *Annual Report 2005-06*, p. 116.

21 Sea Power Centre – Australia, *Semaphore Issue 4, Welcome to the Armidale Class*, February 2006, p. 2.

22 Sea Power Centre – Australia, *Semaphore Issue 4, Welcome to the Armidale Class*, February 2006, p. 2.

23 Commodore Trevor Jones, *Transcript 30 March 2007*, p. 13.



## Support Arrangements

### Karratha Forward Operating Base

- 3.35 To maximise the amount of time ACPBs can spend on station, Karratha/Dampier will be utilised as a forward operating base for the ACPBs patrolling off Western Australia's North West Shelf. This base will offer a major advantage to patrol boat operations in this area given that:
- ...rather than have [the boats] return all the way to Darwin to replenish, the benefit ... is that it minimises the length of time that [they are] in port replenishing before [they] then go back on station to the North West Shelf. <sup>24</sup>
- 3.36 The ACPBs will not be permanently deployed to the region and for depot-level maintenance activities, the ACPBs will return to their home port. This will reduce the logistical support required and therefore the number of personnel permanently based at Karratha. Importantly, this minimal disruption to personnel movements outside their home locality is expected to aid in the retention of ACPB crews.
- 3.37 The concept of a forward operating base is vital in maintaining the required military effect within the North West Shelf. Defence will have the flexibility to force assign vessels from their respective home port(s) to the region and thereby 'achieve the military effect of 24/7 surveillance within the North West Shelf'.<sup>25</sup>
- 3.38 The forward operating base will not be fully operational until all 14 ACPBs have been delivered and accepted by Navy.

### Facilities

- 3.39 A logistical support element facility was opened in August 2007 at Taylor Barracks in Karratha in support of the forward operating base. Infrastructure upgrades include the installation of:
- a cyclone-rated mooring buoy within nearby Dampier Harbour to secure the vessels during weather conditions in which the boats cannot berth alongside the Dampier cargo wharf; and

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24 Commodore Trevor Jones, *Transcript 30 March 2007*, p. 15.

25 Commodore Trevor Jones, *Transcript 30 March 2007*, p. 16.

- a stairwell on the Dampier cargo wharf so that the crew can disembark safely during the various tidal ranges.<sup>26</sup>

## Personnel

- 3.40 Two logistical support staff will be permanently based in Karratha. Should additional personnel be required to support vessels operating out of this forward operating base, Defence advised that they 'will be flown in from Darwin or Cairns, depending on where they are likely to be sourced'.<sup>27</sup>

## Larrakeyah Barracks

- 3.41 To support the 10 ACPBs home ported in Darwin, base modifications are being undertaken at Larrakeyah Barracks. These include the construction of additional wharf areas and crew facilities, and changes to the port services building. These modifications are scheduled to be completed by the end of 2007.

## Personnel

- 3.42 The total number of Navy personnel attached to Larrakeyah Barracks is approximately 400, of which 365 are specifically attached to the ACPBs.
- 3.43 Commodore Jones informed the Committee that the remaining 35 Navy personnel stationed at the base are performing administrative backup and related support. This breakdown of personnel between operational and support functions is an integral part of the multicrewing concept and therefore:

...you have a larger footprint on the actual capability and a smaller one in the logistic support element.<sup>28</sup>

## Conclusion

- 3.44 The ACPB is a fundamental improvement in capability over the FCPB. Their increased range, better sea-keeping ability, and improved weapons and communications systems provide an effective platform
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26 Commodore Trevor Jones, *Transcript 30 March 2007*, p. 16.

27 Commodore Trevor Jones, *Transcript 30 March 2007*, p. 15.

28 Commodore Trevor Jones, *Transcript 30 March 2007*, p. 22.

to fulfil their primary roles of surveillance, interdiction and enforcement operations.

- 3.45 The introduction of multicrewing system is an important initiative which will provide Defence with the flexibility to meet operational targets set by the Government with minimal disruption to personnel. Further, with maintenance activities ashore primarily undertaken by contractor personnel, crews not deployed on operations will have the benefit of taking leave to spend time with their families and to undertake career progression training.
- 3.46 Defence advised that Navy's remediation program will satisfactorily resolve the fuel system problem and ensure all 14 APCBs can be fully delivered and accepted by Navy.



## Remuneration Reform Project

### Background

- 4.1 The Remuneration Reform Project (RRP) represents a key Defence initiative in ensuring that military rates of pay remain competitive and contemporary in the current labour market. RRP is aimed at assisting the ADF to meet its retention objectives and helping it to meet its new expansion targets which aim to increase the permanent force from 52,000 to 57,000 personnel.

### Defence Force Remuneration Tribunal

- 4.2 One of the key bodies associated with the RRP has been the Defence Force Remuneration Tribunal (DFRT). It was established in 1984 to determine the pay and allowances of ADF personnel taking into account the unique nature of military service.
- 4.3 The functions of the Tribunal are set out in section 58H of the *Defence Act 1903* as follows:
- to inquire into and determine the salaries and relevant allowances to be paid to members of the ADF; and
  - to inquire into and make determinations in respect of prescribed matters that have been referred to the Tribunal.<sup>1</sup>

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<sup>1</sup> *Defence Force Remuneration Tribunal Twenty-first Report 2005 – 2006*, p. 1.

- 4.4 The ADF is the major party which refers matters to the Tribunal, however, the Minister for Employment and Workplace Relations may also request the DFRT to inquire into and report on relevant matters. Further, section 58B of the *Defence Act 1903* allows the Minister for Defence to make determinations on a range of allowances and bonuses. This ministerial power is usually utilised in relation to such matters as retention bonuses.<sup>2</sup>

## Previous remuneration system

- 4.5 Prior to the implementation of the RRP, the remuneration system was characterised by the following features:
- Officers and Warrant Officers Class 1 (WO1) were remunerated on a common salary scale which did not:
    - ... pay sufficient attention to the need to remunerate on the basis of the work value of different employment groups.<sup>3</sup>
  - other ranks were paid on a differential salary structure that recognised rank and occupational skills;
  - salary related allowances were paid to specified employment groups to recognise additional qualifications and skills (Q&S) required to undertake that work. Examples include the flying allowance and special forces allowance; and
  - disability allowances were paid to compensate personnel for disabilities associated with particular jobs and tasks.<sup>4</sup>

## Remuneration reviews

- 4.6 Three remuneration reviews have been conducted over the past decade. These reviews identified a range of problems and deficiencies, including:

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2 Major General Mark Evans, *Transcript 30 March 2007*, p. 24.

3 Department of Defence, *Defence Annual Report 2005-06*, p. 217.

4 Major General Mark Evans, *Transcript 30 March 2007*, p. 24-5.

- a general agreement that the all of one company approach which remunerated all jobs at the same rank equally was inapplicable and inequitable;
- an inability to respond to labour market forces, which in turn undermined the ADF's ability to attract and retain personnel with skills critical to its capability; and
- an inability to provide sufficient incentives for ADF members to undertake more demanding jobs and pursue promotion.<sup>5</sup>

4.7 The most recent review, the Nunn review, was completed in 2001. This review made 60 recommendations covering: pay-fixing arrangements for the ADF; Reserve remuneration; changes to salary and allowance structures and conditions of service, including housing, leave and superannuation.<sup>6</sup> The key proposals which were agreed to by Government included:

- that the qualification and skill elements of major ADF salary related allowances be made superannuable;
- that a new flexible salary structure for ADF officers should be adopted, which encompasses rolling in the continuous qualification and skills elements of the major environmental allowances; and that
- the ADF salary structure for ranks other than officers be consolidated by rolling in the existing qualification and skill elements of the salary related allowances once pay structure reform is achieved.<sup>7</sup>

## RRP

4.8 The RRP commenced in 2002 with its key aim to '...[ensure] that military remuneration remains competitive and contemporary'.<sup>8</sup> It is an internal defence process that took an evolutionary and transitional approach to the traditional reform processes outlined in previous reviews. It was decided to make the Q&S elements and allowances

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5 Major General Mark Evans, *Transcript 30 March 2007*, p. 25.

6 Department of Defence, *Review of Australian Defence Force Remuneration 2001*, August 2001.

7 Major General Mark Evans, *Transcript 30 March 2007*, p. 25.

8 Major General Mark Evans, *Transcript 30 March 2007*, p. 24.

superannuable in the early stages of the RRP, and allow sufficient time for the more complex pay issues to be resolved and transitioned into a new structure for officers and warrant officers. This structural reform would allow:

...the ADF to provide a differential salary outcome for officers and warrant officers on the basis of different work value and appropriately used remuneration measures to respond to the attraction and retention needs of the ADF other than by using allowances.<sup>9</sup>

## Phases of the RRP

4.9 The RRP comprises four phases:

- Phase 1 quantified the qualification, skill and disability components of major environmental allowances. This stage was concluded in mid 2003.
- Phase 2 made the qualification and skill elements of major environmental allowances superannuable. This outcome was achieved in August 2004.
- Phase 3 entailed the development of a graded pay structure for officers by incorporating the qualification and skill elements of flying, submarine service, special force and special operations allowances into salaries for all officers and WO1s. The DFRT's decision was handed down in February 2006 and the new pay structure was implemented on 5 October 2006.
- Phase 4 has involved a restructure of other ranks' pay by rolling into salary, the qualification and skill elements of allowances, in a manner similar to that of officers. On 13 December 2006 the DFRT agreed to:

... the ADF proposal to create a 16 pay group structure that facilitates the incorporation of qualification and skill allowances.<sup>10</sup>

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9 Major General Mark Evans, *Transcript 30 March 2007*, p. 25.

10 Major General Mark Evans, *Transcript 30 March 2007*, p. 26.



## Objectives Achieved under the RRP

- 4.10 To date, the RRP has achieved a number of positive outcomes including:
- providing a competency based salary structure introduced over 2000 to 2004 for ADF specialists;
  - amending four major qualification and skills allowances so that they are now considered as salary for superannuation purposes;
  - remuneration changes for reserve personnel:
    - ⇒ salary increases for deployable reserve members and the establishment of a reserve service allowance of \$10 per day;
    - ⇒ completion bonuses of \$10,000 per annum and a \$2,500 health allowance for members of the high readiness reserve, in conjunction with a \$600 health allowance for active and specialist reserves;
  - a 10-grade differential pay structure for officers and WO1s; and
  - a flexible senior officers banded pay structure, with the CDF now able to seek individual salary determinations from the DFRT for senior officers.<sup>11</sup>

## Effectiveness of the RRP

- 4.11 In response to Committee questioning as to the effectiveness of remuneration reforms in improving personnel recruitment and retention, Defence advised that:
- ... it might take a little while before we will have the data from this reform process to see what impact [it] is [having] on recruitment.<sup>12</sup>
- 4.12 In acknowledging that there will be cultural aspects to address in such a large and diverse organisation, Defence advised the Committee that they are dealing with the issues by moving towards a more 'joint approach in the personnel space.'<sup>13</sup>

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11 Major General Mark Evans, *Transcript 30 March 2007*, p. 26.

12 Major General Mark Evans, *Transcript 30 March 2007*, p. 27.

13 Major General Mark Evans, *Transcript 30 March 2007*, p. 27.

- 4.13 In gauging the effectiveness of this new approach in addressing ADF staffing challenges, Major General Evans informed the Committee that:

...we have a number of ways of monitoring this. We are just about to have a Defence census. We do an annual survey and we do exit surveys.<sup>14</sup>

- 4.14 Defence articulated to the Committee that it will monitor the success of the project over the next two or three years. If it is found that this new approach is ineffective in meeting the desired outcomes, then changes will be implemented and other options examined – '[Defence] will not reinforce failure.'<sup>15</sup>

## Bonuses

- 4.15 In parallel with the RRP, bonuses continue to be utilised in the short-term to retain key personnel. This is particularly important in enabling the ADF to grow from 52,000 to 57,000. Whilst the bonuses use a targeted approach, once the new structural reforms have matured, Defence advised 'we will not be using them to any degree like we are now.'<sup>16</sup>
- 4.16 When questioned by the Committee on how long it would take for the system to reach steady-state, Defence advised that it would be about four years and in the interim, bonuses would be focused on the retention of those people required to maintain Defence's war fighting capability.<sup>17</sup>

## Reaction from ADF Personnel

- 4.17 Feedback from ADF personnel in relation to the RRP has thus far been generally positive. Members of the special forces, submariners and aviation communities have endorsed these changes as their Q&S elements are now superannuable. Air traffic controller and engineers are similarly pleased with amendments to their superannuable pay.
- 4.18 One of the main reasons behind this positive reaction is that Defence has spent a considerable amount of time briefing the ADF community of the new changes, through road shows and other forms of media.

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14 Major General Mark Evans, *Transcript 30 March 2007*, p. 28.

15 Major General Mark Evans, *Transcript 30 March 2007*, p. 29.

16 Major General Mark Evans, *Transcript 30 March 2007*, p. 28.

17 Major General Mark Evans, *Transcript 30 March 2007*, p. 31.

## Retention

- 4.19 In terms of whether there is an increase in the number of personnel leaving the ADF, Major General Evans noted that 'the proportion of members looking to leave Defence has remained stable'.<sup>18</sup>
- 4.20 In response to the Committee's questions about retention rates and whether salary levels are a key factor behind personnel leaving the ADF, Defence responded that:
- ...it has not been one of the key reasons. The key reasons rest upon tempo, being able to have more time with family and making an early career change.<sup>19</sup>
- 4.21 Importantly, Defence believes it will observe positive results in the near future as a greater emphasis has been placed on retention. In particular, 'making allowances superannuable is a very positive thing for people.'<sup>20</sup>
- 4.22 Notwithstanding the introduction of the RRP and the uses of bonuses, Defence advised the Committee that 'in straight salary we cannot compete'<sup>21</sup> with outside industry in certain areas of employment. However, remuneration reform is an important factor in enabling Defence to:
- ...[develop] recruitment and retention strategies ... to meet the needs of people at different parts in their journey in their career.<sup>22</sup>

## Conclusion

- 4.23 The implementation of the RRP is a quantum leap forward in how Defence personnel will be remunerated in the future. Moving away from the 'one-company fits all' approach should assist Defence in recruiting and retaining its personnel.
- 4.24 In ensuring a successful transition under the RRP, Defence must actively monitor the effectiveness of the RRP and make any necessary changes to improve the program and its processes.

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18 Major General Mark Evans, *Transcript 30 March 2007*, p. 29.

19 Major General Mark Evans, *Transcript 30 March 2007*, p. 29.

20 Major General Mark Evans, *Transcript 30 March 2007*, p. 27.

21 Major General Mark Evans, *Transcript 30 March 2007*, p. 30.

22 Major General Mark Evans, *Transcript 30 March 2007*, p. 30.



## Army—Current and Future Projects

### Hardened and Networked Army

- 5.1 The Hardened and Networked Army (HNA) project was announced in December 2005 with an increase in nearly 1500 soldiers. It is aimed at providing the Army with greater flexibility, adaptability and agility given that the Army must, in the current environment, be highly proficient at:
- ...operating in rapidly changing structures, where joint, coalition and multi-agency operations are a matter of course.<sup>1</sup>
- 5.2 The HNA is based on the philosophy of the combined-arms approach to combat, whereby infantry, armour, artillery, aviation and engineers work together to support and protect each other.<sup>2</sup> The structural changes and personnel increases which are part of the HNA will optimise the capabilities to be delivered from the *Defence White Paper* (and subsequent updates) and the *Defence Capability Plan*.
- 5.3 The effectiveness of this new combined arms approach is evidenced in current Army operations in Afghanistan and Iraq as they have enabled Australia's forces to:

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1 Department of Defence, *Annual Report 2005–06*, p. 119.

2 Department of Defence, *Annual Report 2005–06*, p. 119.

... provide the right level of protection and firepower to support the functions of a team and sustain and rotate those capabilities appropriately over an extended period of time.<sup>3</sup>

## Key outcomes of the HNA

5.4 To realise a hardened and networked Army, the key outcomes of HNA are to:

- increase the survivability of a deployed land force by increasing combat weight, protected mobility and firepower;
- increase the sustainability of a deployed land force by increasing the size of deployable forces;
- optimise the capabilities generated by the Defence Capability Plan by modifying unit structures and adjusting the current plans for some of Army's new vehicles and equipment;
- prepare Army's people for combat in increasingly complex environments through enhanced training, education and doctrine;
- increase land force, joint and coalition interoperability through enhanced networking;
- increase preparedness and utility of the Army Reserve through new roles and tasks;
- enhance readiness by increasing the size of Army and rebalancing capabilities;
- make Army more capable and adaptable over a wider range of likely tasks by moving from battalion groups to combined arms battle groups;
- provide additional organisational depth to Army by enhancing Combat Support and Logistic capabilities;
- optimise Army's base disposition through a long term disposition plan; and
- minimise the long term cost of ownership for Army through disposition changes and a reduction in singular capabilities.<sup>4</sup>

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3 Lieutenant General Peter Leahy, *Transcript 30 March 2007*, p. 35.

4 *The Hardened and Networked Army*,  
<<http://www.defence.gov.au/army/hna/default2.htm>> (Accessed 22 March 2007).

## HNA objectives achieved in 2005–06

- 5.5 To assist the Army in achieving its HNA objectives, the following was achieved during 2005–06:
- procurement of the M1A1 Abrams tank through a Foreign Military Sales arrangement with the United States. Initial deliveries occurred in September 2006, with formal introduction into service occurring in 2007;
  - acceptance of Bushmaster infantry mobility vehicles into the Army, and their successful deployment to support a variety of overseas operations;
  - upgrade of the M113 armoured personnel carrier fleet, planned for introduction into service in 2007;
  - introduction into Army service of the fixed modular bridge system;
  - delivery and acceptance of additional Javelin direct fire guided weapons for the infantry and cavalry force;
  - commencement of operational test and evaluation of simulation enhancements to support the Army's combat training centre;
  - delivery and deployment on operations of land force combat identification equipment; and
  - enhancement of Army's maritime capability by acceptance of the last of six Army Watercraft.<sup>5</sup>

## Enhanced Land Force

- 5.6 The Enhanced Land Force (ELF), which was announced in August 2006, is a major Defence initiative which is aimed at building upon the capabilities being introduced under the HNA. This program will expand the capacity of all three services in the Defence Force; however, as Lieutenant General Leahy advised, the Army stands to gain the largest increases:

There are increases to both the Navy and the Air Force but the Army has the substantial increase, in the order of about 2500.<sup>6</sup>

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5 Department of Defence, *Annual Report 2005-06*, p. 119.

6 Lieutenant General Peter Leahy, *Transcript 30 March 2007*, p. 35.

- 5.7 The enhancement of the land force will involve the formation of two additional infantry battalions. This increase, coupled with the 1500 additional personnel proposed under the HNA will increase the size of the Army by roughly 5,000 over the next decade. This growth is significant given that at present the Army's numbers stand at approximately 25,000.

## Recruitment and Retention

- 5.8 The Committee was informed at the public hearing by the Chief of Army that:

...for the first time in a while, the overall strength, the average funded strength of the Army is increasing. It is modest at this stage but it is increasing. For the first time in quite a while we are seeing increases in the Army reserve in particular.<sup>7</sup>

- 5.9 One of the most significant challenges standing in the way of the creation of the two new battalions is the need for experienced officers and men to staff them. This issue was clearly elucidated by Chief of Army who commented:

I need corporals, sergeants, captains and majors to make two new infantry battalions. I cannot recruit them; I can only make them and they take between six and 10 or 12 years to make.<sup>8</sup>

- 5.10 In relation to recruitment for infantry soldiers, Army advised that it was exceeding its targets. However, a key weakness was identified in the number of tradesmen within the Army. In addressing this shortage Army has undertaken a number of steps including skills retention bonuses in conjunction with bonuses to attract soldiers into this field at the completion of their service (see Chapter 4 for more detail on the bonuses scheme).

## ELF implementation

- 5.11 The ELF is being implemented over two stages. Stage 1 which involved raising the first of the new battalions was approved in December 2006. This step involved de-linking the 5/7RAR Mechanised Battalion into two battalions – the 5RAR Mechanised and

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7 Lieutenant General Peter Leahy, *Transcript 30 March 2007*, p. 38.

8 Lieutenant General Peter Leahy, *Transcript 30 March 2007*, p. 38.



the 7RAR Mechanised. Both battalions will primarily build up to full strength in Darwin prior to 7RAR's move to Adelaide. 5RAR will remain in Darwin.

5.12 Prior to 7RAR shifting to Adelaide, a range of facilities will be built in Edinburgh such as additional married quarters and barracks. The Chief of Army is hopeful 7RAR will commence moving to Adelaide in 2010 or 2011.<sup>9</sup>

5.13 Stage 2 of the process which involves raising the second additional battalion is at present the subject of further Government decision. Chief of Army noted that before this stage can be implemented, certain triggers relating to 5RAR and 7RAR must be met:

If we had achieved certain stages of development of 5 and 7RAR, we would be given authority to raise 8/9RAR, which is the second of the two infantry battalions. We are moving ahead towards these triggers, and I have a degree of confidence that we might be able to achieve the triggers this year, in which case we would be going back to government for further approval.<sup>10</sup>

## Recommendation 2

**The Committee recommends that Defence reports to the Defence Sub Committee on the implementation of the HNA and ELF programs, with a focus on the delivery schedule of the additional battalions.**

## Incorporating lessons learned and new equipment

5.14 The Committee inquired if any lessons had been learned from current operations which will complement the implementation of the HNA. Lieutenant General Leahy responded that the Army is continually reviewing its doctrine, training, and procedures from operational deployments, particularly since March 2003.

5.15 An important, formal process used by Army is operational analysis whereby outcomes have informed the HNA concept. Further, the

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9 Lieutenant General Peter Leahy, *Transcript 30 March 2007*, p. 45.

10 Lieutenant General Peter Leahy, *Transcript 30 March 2007*, p. 36.

Army observes other armies in the field to further improve its conduct of operations – it is a continual cycle.<sup>11</sup>

## Battle grouping

- 5.16 During the 1990's and early 2000's Army conducted significant experimentation at the Land Warfare Development Centre and the Defence Science and Technology Organisation. This process involved 'an enormous amount of experimentation using computers – war gaming and simulations.'<sup>12</sup>
- 5.17 One of the key outcomes which resulted from this period of trialling and research was the importance of battle grouping, which refers to combining various military elements to create more suitable units that are better able to achieve objectives.
- 5.18 In terms of implementing the battle group doctrine, common standard operating procedures have been implemented across the entire Army. Moreover, Army is also supporting this approach by conducting more combined arms training in addition to more joint operation exercises with Navy and Air Force. This also equally applies to coalition operations.

## New Technology

- 5.19 Apart from implementing new tactics and training, the introduction of new equipment has meant soldiers have had to learn to operate devices such as night vision equipment and personal radios. Although not technically difficult to use, the plus side is the soldiers understand it makes 'their job easier and thus they are much more effective.'<sup>13</sup>

## Bushmaster upgrade

- 5.20 One of the major improvements to equipment that Army has made is the introduction of a new remote weapons station to the Bushmaster troop carrier. This new approach incorporates:
- ...a gun on a stick, which sits on top of the vehicle [with an] optical system...that allows it to move in two axes...[whilst] down inside the vehicle, under armoured protection, the

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11 Lieutenant General Peter Leahy, *Transcript 30 March 2007*, p. 37.

12 Lieutenant General Peter Leahy, *Transcript 30 March 2007*, p. 37.

13 Lieutenant General Peter Leahy, *Transcript 30 March 2007*, p. 37.

soldier can sit [in front of a] screen...and he has a computer joystick...[which enables him to] engage with the weapon.<sup>14</sup>

- 5.21 Army advised that at present it has fitted 43 of the Bushmasters deployed in Iraq and Afghanistan with the new remote weapons station. This new weapons system will provide a distinct battlefield advantage in that:

...instead of having to stand up like you used to do on a truck, you can now sit down inside and fire under cover.<sup>15</sup>

- 5.22 Another upgrade which is currently being examined by Army is armour enhancement. Army advised that it is carefully considering this matter as it is concerned with the impact additional weight could have upon the Bushmaster's performance:

We are concerned with the additional weight. There are two effects. Firstly, it alters the centre of gravity and it might tip over [and] secondly, to put additional weight on it, you have to reduce the payload.<sup>16</sup>

## Army Reserve

- 5.23 Reserve personnel will play an important role in increasing the number of Army personnel available for operations over the coming decade. Ensuring trained reservists can be retained long-term is a challenge the Army is addressing through a number of initiatives.
- 5.24 Under the new HNA Reserve model, the Army Reserve will be provided with clear tasks. These tasks will be directly linked to generating capability for the HNA and also will formalise Peacetime National Tasks and Defence of Australia contributions. In addition, full-time and Army Reserve units will develop habitual relationships to foster, sustain and deploy capabilities.<sup>17</sup>
- 5.25 At present, the Army Reserve is heavily involved in Australia's overseas deployments with 1,000 reservists on continuous full-time

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14 Lieutenant General Peter Leahy, *Transcript 30 March 2007*, p. 43.

15 Lieutenant General Peter Leahy, *Transcript 30 March 2007*, p. 44.

16 Lieutenant General Peter Leahy, *Transcript 30 March 2007*, p. 44.

17 *The Hardened and Networked Army*,  
<<http://www.defence.gov.au/army/hna/default2.htm>> (Accessed 22 March 2007).

service. In relation to current deployments involving reserves, Army advised that:

The second reserve division has full responsibility for the Solomon Islands ... [and a] company each year [is sent] on a rotation to Butterworth.<sup>18</sup>

## Common Induction Training

5.26 Previously, common induction training (CIT) entailed roughly six weeks or 40 days training; however, this approach was beset with a range of problems, namely:

- it was difficult for reservists to receive adequate time off to complete the course;
- it was focused over the Christmas period when people were available;
- six weeks was found to be an inadequate amount of time to properly train a soldier; and
- it posed a number of organisational challenges for the reserves and the regular Army.

5.27 Although the six weeks training could impart many of the technical skills and knowledge required by a soldier, there was insufficient time to instil the Army's ethos, behaviour and values that 'we are demanding of our people operating overseas, particularly working among communities.'<sup>19</sup>

5.28 In light of these problems, CIT has been replaced with a different approach whereby:

- Training for a regular soldier now consists of the original course in addition to an advanced soldier course, which in total comprises roughly 80 days; whilst
- Reservists complete an initial 40 day course, which in conjunction with sufficient additional training as an active reservist, will enable them to qualify for the High Readiness Reserve (discussed in detail in the next section).

5.29 This approach is the preferred training continuum for Army whereby both regular soldiers and reservists graduate from either Kapooka or

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18 Lieutenant General Peter Leahy, *Transcript 30 March 2007*, p. 38.

19 Lieutenant General Peter Leahy, *Transcript 30 March 2007*, p. 42.

Duntroon. This promotes a single sense of identity rather than an “us versus them” environment. As Chief of Army informed the Committee, ‘I can clearly say that CIT has gone, and we are very glad to see the end of it’.<sup>20</sup>

## High Readiness Reserve (HRR)

- 5.30 The High Readiness Reserve (HRR) is a new category of service for members of the Army Reserve. Members of the HRR are trained to the same standard as the regular Army and are eligible for the same sorts of deployments, either as individuals or as collective bodies.
- 5.31 HRR personnel are managed and administered on a routine basis by their regional Army Reserve unit, and are substantively posted to an establishment position within a Regular Army unit.<sup>21</sup>

## HRR Training

- 5.32 Members of the HRR are trained to Regular Army standard and will remain on the same Readiness Notice as their supported Regular Army unit. HRR members undertake one continuous exercise annually with their Regular Army unit (of between 14 and 40 days duration), while also undertaking other ongoing training activities with their Army Reserve unit. Each HRR member undertakes a minimum of 32 and maximum of 50 days of mandated training per annum. This does not preclude members doing more than 50 days per year, however, all training beyond 50 days is undertaken on a voluntary basis.<sup>22</sup>

## HRR Recruitment and Retention

- 5.33 All members of the HRR are required to undertake a two year contract, agreeing to meet all HRR requirements, which includes an

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20 Lieutenant General Peter Leahy, *Transcript 30 March 2007*, p. 42.

21 *Key HNA Reserve Initiatives*,  
<<http://www.defence.gov.au/army/HNA/docs/Key%20Initiative%20Descriptions.pdf>  
> (Accessed 4 May 2007).

22 *Key HNA Reserve Initiatives*,  
<<http://www.defence.gov.au/army/HNA/docs/Key%20Initiative%20Descriptions.pdf>  
> (Accessed 4 May 2007).

undertaking that they will volunteer to undertake continuous full time service should they be required to deploy on operations.<sup>23</sup>

- 5.34 In terms of numbers, Chief of Army advised the Committee that the current year target for the HRR of 400 reservists was close to being achieved:

The Army has recently...put into our records – the positions that we want for the High Readiness reserve. For this year our target is 400. I was told yesterday that it looks like we will achieve 396 of those 400.<sup>24</sup>

- 5.35 The Committee was informed by the Chief of Army that some reservists are hesitant to join the HRR as they are concerned that their employers may consider that this will make them unreliable given that they may be called up for service.

- 5.36 In terms of resolving this issue, it was noted that employer support payments for reservists are helping to some degree. However, anecdotal evidence was presented which suggested that more needs to be done to publicise and encourage employer support:

The CO from 41 Battalion in Lismore said, 'We tell the soldiers that all these bonuses are available and they say. "Bugger the boss. Why would I give him anything? I don't want him to know I am in the reserves."' <sup>25</sup>

## Employer Support for Army Reserve

- 5.37 In terms of support, larger employers such as banks, large corporations and governments have been quite accommodating of the Army Reserve. Support from smaller employers, however, requires greater attention as many young reservists are reluctant to declare their status as a reservist. The reason behind this reluctance was addressed by Chief of Army who commented that:

...we are seeing it in changes in job patterns as well, in that young people are moving on very quickly. They are not making careers. They might be with one bloke for one, two or three years. In that short period of time they have not

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23 *Key HNA Reserve Initiatives*,  
<<http://www.defence.gov.au/army/HNA/docs/Key%20Initiative%20Descriptions.pdf>  
> (Accessed 4 May 2007).

24 Lieutenant General Peter Leahy, *Transcript 30 March 2007*, p. 39.

25 Lieutenant General Peter Leahy, *Transcript 30 March 2007*, p. 40.

developed a sense of confidence and trust with each other and they are reluctant to declare.<sup>26</sup>

- 5.38 In addressing the issue of employer support for the reserves, Army advised that financial assistance is provided to employers who have staff absent from work for periods of two or more weeks. It was noted that this payment, which requires the completion of an application, is designed to enable employers to replace Army Reserve staff during the period of their service. In terms of publicity, Army informed the Committee that it is attempting to advertise this support system for business in a number of ways, including:
- publishing and distributing flyers and pamphlets;
  - informing Army Reservists; and
  - using the Defence Reserve Support Council (DRSC) as an information conduit.

### Reserve remuneration incentive initiatives

- 5.39 In addressing the challenges of recruiting and retaining HRR personnel, the Government announced on 9 May 2006 the following Reserve remuneration incentive initiatives as part of the Federal Budget:
- Revised pay scales to align with work value. This will result in a pay rise for nominated Reservists who possess the full suite of Regular Army competencies;
  - Payment of a Reserve service allowance of up to \$10 per day for all Active Reservists and High Readiness Reservists;
  - \$600 annual health support allowance for all Active Reservists;
  - \$10,000 bonus for personnel who successfully complete two years of High Readiness Reserve service; and
  - \$2500 annual health support allowance for all High Readiness Reservists.<sup>27</sup>

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26 Lieutenant General Peter Leahy, *Transcript 30 March 2007*, p. 40.

27 Minister for Defence Budget 2006–07 Media Release 060/2006, *\$181.6 Million for a More Capable Reserve*, 9 May 2006.

## HRR Deployment

5.40 When asked by the Committee if there was an expectation for HRR personnel to deploy as a standalone formed unit, Chief of Army replied that with a target of only 400 personnel this year, this was not a short-term option. However, with the changing nature of the infantry battalions there is:

...the potential for a High Readiness Reserve company from a battalion to be the fourth rifle company for a battalion ... so that...after a period of work-up training, the reserve rifle company could deploy.<sup>28</sup>

5.41 Chief of Army informed the Committee that there were still a lot of issues to work through and whilst not a short-term objective:

I think we are probably five to 10 years from that sort of thing, but if things keep going the way they are going I think it is very achievable.<sup>29</sup>

## Conclusion

5.42 Current Government planning will see a 20 per cent increase in Army's funded strength over the coming decade. The recruitment and retention of sufficient personnel is not without it challenges. However, Army's leadership are aware of the issues and are taking proactive steps to ensure the HNA and ELF programs can be implemented.

5.43 The Committee is acutely aware of the high operational tempo experienced by the Army over recent years and is heartened by the significant effort being undertaken to make our soldiers more effective when on deployment. Whether it be improvements to equipment or tactics, it is essential lessons learned are fed back into the system to make our soldiers as safe as possible – this was certainly the impression the Committee observed during the public hearing.

5.44 The remuneration initiatives announced by Government and the standing up of the High Readiness Reserve offers much potential. The changes to the training continuum and the employer support

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28 Lieutenant General Peter Leahy, *Transcript 30 March 2007*, p. 45.

29 Lieutenant General Peter Leahy, *Transcript 30 March 2007*, p. 46.



program will hopefully allow Army to have highly trained – and available – reservists to support regular soldiers on operations.



## Army Aviation

### **Tiger Armed Reconnaissance Helicopter (ARH) Project**

- 6.1 The Tiger Armed Reconnaissance Helicopter (ARH) Project was approved to provide for a new and significant all-weather reconnaissance and fire support capability for the Australian Defence Force. The project has contracted for delivery of 22 aircraft, together with supporting stores, facilities, ammunition and training equipment. The first four aircraft are being manufactured in and delivered from France; whilst the remaining 18 aircraft are being manufactured in France and assembled in Brisbane.<sup>1</sup>
- 6.2 The project includes a suite of sophisticated training devices, advanced mission planning systems as well as logistics and maintenance management systems; all of which involve cutting edge digital technology that will assist Army in achieving its Hardened and Networked Army initiatives.<sup>2</sup>
- 6.3 The weapons and communications systems are a differentiating characteristic of the Australian Tiger ARH, compared to the French Tiger variant. The United States designed Hellfire missile system is being integrated with the Australian Tiger fleet. This process of

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1 *Management of the Tiger Armed Reconnaissance Helicopter Project Air-87*, <[http://www.anao.gov.au/director/publications/auditreports/2005-2006.cfm?item\\_id=1EB3A32B07BA5F78BC06A8A52A12D968](http://www.anao.gov.au/director/publications/auditreports/2005-2006.cfm?item_id=1EB3A32B07BA5F78BC06A8A52A12D968)> (Accessed on 7 May 2007).

2 Major General Tony Fraser, *Transcript 30 March 2007*, p. 50.

integration has thus far been very successful as eight missiles have been fired (including one at night) at ranges out to eight kilometres, with all striking their targets with lethal precision.<sup>3</sup>

## Current status

- 6.4 At present six of the helicopters have been accepted and nearly 1,400 hours have been flown in the aircraft. Moreover, nine Australian pilots have gained limited pilot qualifications, with three of those pilots having also qualified as flying instructors for the Tiger.<sup>4</sup>
- 6.5 In terms of progress, 70 per cent of the contractual milestones (103 out of 148) have been attained. Moreover, this progress has been achieved with an expenditure of only 60 per cent of the budget or \$1.171 billion out of an authorised budget of \$1.962 billion.<sup>5</sup>
- 6.6 However, due to a range of challenges, Defence has advised that the Tiger ARH project is running behind schedule. The key reasons behind this delay are:
- low aircraft serviceability rates within Australia;
  - insufficient test crews for both development testing as well as acceptance flight testing;
  - detailed documentation requirements; and
  - delays in the Franco-German program, which meant that initial instructors did not complete their training in France.<sup>6</sup>
- 6.7 On these project delays Defence advised that:
- Australian Aerospace and their parent company Eurocopter ...have invested additional resources to prevent further slippage...[Moreover] the contractor and the Commonwealth have collaboratively instigated a number of initiatives to address the scheduled slippage.<sup>7</sup>
- 6.8 Notwithstanding these delays, Defence stated that a troop capability will be achieved by December 2008 and that the full squadron capability will be realised some time after that. In the interim, the

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3 Major General Tony Fraser, *Transcript 30 March 2007*, p. 50.

4 Major General Tony Fraser, *Transcript 30 March 2007*, p. 50.

5 Major General Tony Fraser, *Transcript 30 March 2007*, p. 50.

6 Major General Tony Fraser, *Transcript 30 March 2007*, p. 50.

7 Major General Tony Fraser, *Transcript 30 March 2007*, p. 50.

Army will extend the operational service life of the Kiowa helicopter fleet, which is presently being utilised in a reconnaissance role in East Timor.<sup>8</sup>

## Future acceptance schedule

6.9 The first six aircraft of the Tiger ARH fleet have already been accepted by Defence. However since July 2006 no additional aircraft have been accepted, as Defence has:

...made a conscious decision to bring [aircraft seven] to eleven all to exactly the same configuration as one to six so we would have one aeroplane type here.<sup>9</sup>

6.10 Three more Tiger ARH aircraft are to be accepted by Defence in the near future. Shortly thereafter, two more Tigers will then be accepted. In relation to aircraft twelve through fourteen, test flights are now being conducted by Australian Aerospace in Brisbane.

6.11 Although the acceptance of aircraft represents a contractual milestone – it is not the limiting factor in delivering capability to Chief of Army. Defence has focused on ensuring its instructors gain the necessary qualifications to operate the Tiger as they have had limited training due to delays in the French program.<sup>10</sup>

## Technical issues

### Crew evacuation

6.12 Crew evacuation from the Tiger in case of a water ditching has posed a particular engineering challenge to the project. In the event the crew has to evacuate, the Tiger is equipped with a ballistic jettison system which blows the windows out. However, this system is unsuitable in cases where the helicopter is submerged, and therefore the design must incorporate:

...a manual break out system...[so] that either pilot, front or rear, can [manually] jettison the windows.<sup>11</sup>

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8 Major General Tony Fraser, *Joint Committee of Public Accounts and Audit Transcript 1 March 2007*, p. 3.

9 Brigadier Andrew Dudgeon, *Transcript 30 March 2007*, p. 53.

10 Major General Tony Fraser, *Transcript 30 March 2007*, p. 51.

11 Major General Tony Fraser, *Transcript 30 March 2007*, p. 52.

- 6.13 Although it is important work, the required engineering effort is not a high priority at present as the Tiger is not yet in operational service. Defence also advised that both the US and UK have similar concerns regarding crew evacuation in a tandem seat helicopter.<sup>12</sup>

### Computer systems

- 6.14 The Tiger is a very software-intensive helicopter and although all the computer systems have been delivered, there are a number of different loads of software. At present the project has seen stage 2, baseline 2 software successfully installed. Stage 3 is scheduled to be introduced shortly. However, before this step is implemented it must first undergo the necessary acceptance testing before it can be installed.
- 6.15 In light of the fact that the Tiger fleet will require ongoing software upgrades, and importantly for Australia, a software support facility is being established as part of the contract. This facility will cater for both the Tiger ARH and the MRH-90. As part of the contract, Eurocopter will also send a base element of software to Australia. Although Eurocopter will configuration manage<sup>13</sup> the generic software baseline across the fleet, 'where it is Australian specific, we have the capacity in-country [to make modifications].'<sup>14</sup>
- 6.16 When queried by the Committee on whether the Army would receive a fully mature and capable system, Defence replied:
- We have full confidence we will reach full capability. The software caused some concerns but we have been able to work through that with the company and we are continuing to address those software issues.<sup>15</sup>

### Engine performance

- 6.17 The purchase contract for the Tiger ARH stipulates a requirement for a higher level of engine performance, whereby a 10 per cent margin is

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12 Major General Tony Fraser, *Transcript 30 March 2007*, pp. 51–2.

13 This is a term used commonly in airworthiness regulations and has several connotations. In the case of software, it relates to data integrity and the control of changes to the base element, such that the airworthiness accreditation is maintained and changes made conform to the regulatory framework. Eurocopter maintains responsibility for the software configuration; therefore, Australia is assured that the software support centre is always using approved and correct software.

14 Major General Tony Fraser, *Transcript 30 March 2007*, p. 52.

15 Major General Tony Fraser, *Transcript 30 March 2007*, p. 53.

mandated.<sup>16</sup> At present only 7 ½ per cent has been achieved, however, the company has made further technical modifications to the aircraft to address this issue. The effectiveness of these adjustments is yet to be ascertained as Defence is yet to test and verify the engine model. Testing is expected to be undertaken when the fully instrumented Tiger is provided to Army.<sup>17</sup>

### Serviceability rates

- 6.18 As mentioned previously, aircraft serviceability rates have been a key factor behind the delays in the program. The reasons behind this setback are a shortage of qualified aeronautical engineers in addition to a lack of familiarity and confidence in the aircraft and engineering support.
- 6.19 In tackling this hurdle, the contractor has taken steps to bring experienced personnel from France to train additional engineering staff in Australia. Moreover, Defence advised that it is training fifteen personnel to help alleviate the serviceability deficiency.<sup>18</sup>

## MRH-90 Troop Lift Helicopters Project

- 6.20 The Government's \$2 billion acquisition of thirty-four MRH-90 helicopters complements its earlier decision in 2004 to acquire an initial twelve. The decision to make this additional acquisition has been based upon the need to replace Army's Black Hawk helicopters which will be progressively replaced between 2011 and 2015 as well as Navy's Sea King Helicopters which will be retired in 2010.<sup>19</sup>
- 6.21 The MRH-90 is an extremely capable helicopter featuring a modern damage tolerant design, large cabin volume with ramp and enhanced levels of marinisation.
- 6.22 The benefits associated with the purchase of the MRH-90 for both Army and Navy include greater operational flexibility and efficiency through common operational, training and logistic systems as well as

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16 Major General Tony Fraser, *Transcript 30 March 2007*, p. 53.

17 Major General Tony Fraser, *Transcript 30 March 2007*, p. 53.

18 Major General Tony Fraser, *Transcript 30 March 2007*, p. 54.

19 *MRH 90 to Replace Sea King and Black Hawk Helicopters*, <<http://www.defence.gov.au/media/download/2006/jun/20060619.cfm>> (Accessed on 7 May 2007).

a capability to rotate personnel, aircraft, spare parts and role-specific equipment between troop lift, special operations and maritime support commitments.

- 6.23 Once delivered, the MRH-90s will be based at RAAF Base Townsville, Holsworthy Barracks in Sydney and HMAS *Albatross* in Nowra. A contingent will also be based at a joint training facility at Oakey in Queensland.<sup>20</sup>

## Current status

- 6.24 At present the MRH-90 project is on schedule for delivery of the first two aircraft in December 2007. These two aircraft are part of an initial four which will be assembled in France. The remaining forty two aircraft will be assembled in Australia. Importantly, lessons learnt from the Tiger project have been transitioned to the MRH-90 project. Defence also advised the Committee that:

...the very first flight for the Australian MRH-90 was conducted yesterday morning...this was a significant project achievement.<sup>21</sup>

- 6.25 To facilitate achieving this project on time, Chief of Army has established an aviation capability implementation team at Army Headquarters. This team has developed plans which will ensure that the helicopters will be airworthy and capability ready as quickly as possible.<sup>22</sup>

## Training

- 6.26 Defence is focusing on training a mix of instructors before they transition to the new aircraft. These instructors will have had twin-engine experience on either Black Hawk and/or Kiowa aircraft.

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20 *MRH 90 to Replace Sea King and Black Hawk Helicopters*, <<http://www.defence.gov.au/media/download/2006/jun/20060619.cfm>> (Accessed on 7 May 2007).

21 Major General Tony Fraser, *Transcript 30 March 2007*, p. 50.

22 Lieutenant General Peter Leahy, *Transcript 30 March 2007*, p. 51.



## ARH

6.27 At present, training is 24 months behind schedule due to the delays outlined earlier in this chapter.<sup>23</sup> In addressing this setback Army has sent a number of aircrew to training courses in the United States and the United Kingdom as well as to hire/lease local glass cockpit helicopters from different manufacturers in order to bring in a lead-in skills program. It is hoped that this alternative training program will:

...build up those skills to enable the aircrew when they get the Tiger to, hopefully, be used to like technology. They will be used to a glass cockpit and pushing buttons – unlike the old analogue instruments...It is all part of this lead-in skills program to hopefully reduce the length of time needed to train when they eventually get on it.<sup>24</sup>

## Conversion training

6.28 In terms of converting pilots to the new helicopter models, Defence advised that it takes approximately six months for a pilot to complete initial conversion training. Following this, pilots are then posted to a regiment in order to gain further flying experience in the aircraft. Subsequently, an additional six month course is then conducted which trains pilots to be a battle captain of the aircraft.

6.29 Conversion training for the MRH-90 has proved to be slightly less challenging than that for the Tiger ARH as its seating arrangement is more familiar given that MRH-90 pilots sit next to each other rather than in a tandem seating arrangement, which is the case with the Tiger. In overcoming the hurdle posed by the tandem seating arrangement, Defence advised that it has:

...set up a test bed where the 1<sup>st</sup> Aviation Regiment have gone and rehearsed, practised and developed this tandem seat procedure, which has now been exported to every other Army aeroplane.<sup>25</sup>

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23 Major General Tony Fraser, *Transcript 30 March 2007*, p. 50.

24 Brigadier Andrew Dudgeon, *Transcript 30 March 2007*, p. 55.

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## Conversion training

6.28 In terms of converting pilots to the new helicopter models, Defence advised that it takes approximately six months for a pilot to complete initial conversion training. Following this, pilots are then posted to a regiment in order to gain further flying experience in the aircraft. Subsequently, an additional six month course is then conducted which trains pilots to be a battle captain of the aircraft.

6.29 Conversion training for the MRH-90 has proved to be slightly less challenging than that for the Tiger ARH as its seating arrangement is more familiar given that MRH-90 pilots sit next to each other rather than in a tandem seating arrangement, which is the case with the Tiger. In overcoming the hurdle posed by the tandem seating arrangement, Defence advised that it has:

...set up a test bed where the 1<sup>st</sup> Aviation Regiment have gone and rehearsed, practised and developed this tandem seat procedure, which has now been exported to every other Army aeroplane.<sup>25</sup>

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23 Major General Tony Fraser, *Transcript 30 March 2007*, p. 50.

24 Brigadier Andrew Dudgeon, *Transcript 30 March 2007*, p. 55.

25 Brigadier Andrew Dudgeon, *Transcript 30 March 2007*, p. 55.