
The Parliament of the Commonwealth of Australia

Review of the Defence Annual Report 2007-2008

Joint Standing Committee on Foreign Affairs, Defence and Trade

October 2009
Canberra

© Commonwealth of Australia 2009

ISBN 978-0-642-79194-8 (Printed version)

ISBN 978-0-642-79195-5 (HTML version)

Cover photographs captions

HMAS Kanimbla off the coast of Sydney

(Official Image No. 20071002ran8100087_080 – Department of Defence - Navy)

Joint Strike Fighter F-35 Lightning II

(Image courtesy of Google Images)

Abrams M1A1 tanks on parade

(Official Image No. Abrahms06 – Department of Defence - Army)

Bushmaster Infantry Mobility Vehicle

(Official Image No. 20060911adf8185016_0048 – Department of Defence – Army)



Contents

Foreword	ix
Membership of the Committee	xi
Membership of the Defence Sub-Committee.....	xii
Terms of reference	xiii
List of abbreviations	xv
List of recommendations	xix
1 Introduction	1
<i>Inquiry into the Defence Annual Report 2007-08</i>	1
Background	1
The Kinnaird Reforms.....	2
Unique or leading Edge Military Off-The-Shelf and Commercial Off-The-Shelf solutions..	2
Rapid Procurement	3
Committee comment	5
Scope Creep	5
2 Joint capability and procurement.....	7
HF Modernisation Project - JP 2043	7
Introduction	7
Current status.....	9
Committee comment	13
Airborne Surveillance for Land Operations - JP 129.....	13
Introduction	13
Current Status.....	14
Committee comment	16
Conclusion	17

3	Air capability and procurement	19
	Wedgetail AEW&C	19
	Introduction	19
	Current status.....	20
	Committee comment	25
	Tiger Armed Reconnaissance Helicopter - AIR 87	25
	Introduction	25
	Current status.....	27
	Committee comment	29
	Joint Strike Fighter	30
	Introduction	30
	Surrounding debates.....	31
	GAO report on scheduling and cost	33
	Current status.....	34
	Committee comment	35
	Hornet Upgrade	36
4	Maritime Capability and Procurement	39
	Introduction	39
	Seasprite - SEA 1411	40
	Introduction	40
	Public Hearings.....	41
	Committee comment	43
	Seahawk replacement	44
	Committee comment	45
	Operational readiness of the FFG fleet	45
5	Land capability and procurement	49
	Introduction	49
	Project LAND 121 - Overlander	50
	Introduction	50
	Public hearings.....	50
	Project Land 121 – Phase 4 - Joint Tactical Light Vehicle	53

Introduction	53
Public hearings.....	53
Committee comment	57
Bushranger – LAND 116	58
Introduction	58
Public hearings.....	58
M113 Upgrade – LAND 106.....	60
Committee Comment	60
6 Defence Personnel.....	63
Gender issues	63
Introduction	63
Public hearings.....	64
Culture and targets.....	66
Initiatives	68
Gap year	70
Other allied approaches to recruitment and retention	73
Committee Comment	76
7 Defence personnel – Niche skills and pay.....	79
Niche skill areas	80
Introduction	80
Public hearings.....	80
Services pay	83
Graded Other Ranks Pay Structure	83
Introduction	83
Public hearings.....	83
Special Operations pay anomalies	87
Introduction	87
Public hearings.....	88
Committee conclusion.....	89

8	Submarines	91
	Submarine rescue and rescue training	92
	Introduction	92
	Public hearings.....	93
	Committee comment	96
	Incentives for RAN submariners	97
	Committee comment	102
9	Constraints	103
	Climate change	103
	Carbon	103
	Ozone-depleting substances and synthetic greenhouse gases	105
	Preparation for oil depletion and oil shocks.....	107
	Alternatives to oil.....	109
	Committee comment	110
10	Challenges	113
	Defence's involvement in the Proliferation Security Initiative	113
	Introduction	113
	Anticipated threats	114
	Greater detail on PSI.....	114
	Support for PSI.....	115
	Radiological threats	116
	Relevant functions.....	117
	Training and preparedness	117
	Equipment, training and exercises	117
	Actual incidents.....	119
	Cyber warfare	119
	Introduction	119
	Level of involvement	119
	Defence network security.....	120
	Protection for Network-Centric Warfare capability.....	121
	Adequacy of resources	121

Appendix A – List of Submissions123

Appendix B – Witnesses appearing at public hearings125

 Canberra 125

 Canberra 126

 Canberra 126



Foreword

This review of the *Defence Annual Report 2007-2008* focuses on the activities, achievements and undertakings of the Australian Defence Force (ADF) and the Department of Defence during the period July 2007 to June 2008. During this period ADF personnel remained heavily engaged in a wide variety of operational deployments world-wide, with the withdrawal of troops from Iraq balanced by an increased commitment to Afghanistan marked by the tragic death of four ADF members and the wounding of a number of others.

During the 2007-2008 reporting period, in addition to the significant operational tempo, Defence also maintained a focus on reform following a number of recent reviews, inquiries and investigations, as well as the development of a new White Paper.

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

This year, the Defence Sub-Committee selected a broad range of issues for examination at public hearings held in Canberra on 16 April, 19 June, and 21 August 2009. This extended timeline for the hearings was required to accommodate commitments of relevant Department of Defence personnel.

The major topics included joint/air/land capability and procurement, personnel issues, energy and the environment, and several other issues of interest.

The Committee examined the High Frequency Modernisation Project noting that Defence will still need to demonstrate that the post-Kinnaird reforms are sufficient and have been well-implemented delivering projects on time, on budget, and with required levels of capability.

The Committee also examined the ADF's air capability and procurement and noted the unprecedented changeover of platforms that Defence is managing across its air capability and elsewhere, including the Wedgetail Airborne Early Warning and Control platform, the Tiger Armed Reconnaissance Helicopter, and the Joint Strike Fighter (JSF). The Committee notes that the JSF acquisition will be the most

expensive single acquisition in Defence's history. As our sole or principal air fighting platform it will be, arguably, our most important defence acquisition.

In addition, maritime assets will comprise a large part of the Defence procurement program for the next decade or more. The failure of the Seasprite project – a ship based helicopter capability for the Royal Australian Navy – is a powerful indicator of the importance of improved acquisition procedures. The true cost of the project's failure is not only to be counted in dollar terms; it is also to be counted in terms of lost capability where it may in fact be needed.

Recruiting and maintaining personnel continue to be significant challenges for the ADF. The Committee recognises that Defence has taken considerable effort to develop a sufficient and sustainable cohort of skilled personnel, capable of satisfying the increasingly technical requirements of modern defence forces. In particular, the Committee welcomes the move by Defence to adopt a more flexible pay structure so that it is better placed to attract, develop and retain skilled personnel. However, there is emerging evidence of weakening in the current pay system and the Committee has therefore recommended that Defence place a high priority on developing a more agile and responsive solution.

The Committee has also inquired into external constraints facing Defence such as climate change and the steps Defence had taken to prepare for oil depletion and oil shocks. The Committee recommended that:

- Defence adopt a more assertive strategy with regard to oil shocks and alternative fuels, with the specific purpose of providing a capability to mitigate risk due to a dependence on oil-based fuels; and
- new fuels developed to mitigate risk to Australia's defence capability from oil shocks and oil scarcity be designed to reduce Defence's carbon footprint, where possible, in balance with energy yields and other practical considerations.

The Committee would like to thank all of the individuals and organisations that participated in this Review of the *Defence Annual Report 2007-2008*. We would also like to express our ongoing appreciation to the men and women of the ADF for the outstanding work that they continue to do in Australia and around the world. Finally, the Committee would also like to thank their families for the support they provide and the sacrifices they endure, to enable our Service men and women to contribute to Australia's security.

The Hon Arch Bevis MP
Chair Defence Sub-Committee

Membership of the Committee

Chair Senator M Forshaw

Deputy Chair The Hon D Hawker MP

Members

Senator M Arbib (from 01/07/08 till 11/09/09)	The Hon J Bishop MP (from 11/03/09)
Senator A Bartlett (till 30/06/08)	Mr M Danby MP
Senator M Bishop	The Hon J Fitzgibbon MP (from 15/06/09)
Senator M Cormann (till 23/09/08)	Ms A Ellis MP
Senator A Eggleston (till 19/03/08)	Mr S W Gibbons MP
Senator the Hon A Ferguson (from 01/07/08)	Ms S Grierson MP
Senator M Fifield	Mr D Hale MP
Senator M Furner (from 16/03/09)	The Hon I Macfarlane MP
Senator S Hanson-Young (from 04/12/08)	Mrs L Markus MP (from 25/09/08)
Senator the Hon D Johnston (from 23/09/08)	Ms S Mirabella MP (till 11/03/09)
Senator L J Kirk (till 30/06/08)	The Hon J Murphy MP (from 20/03/09)
Senator S Ludlum (from 26/11/08)	Mr R Oakeshott MP (from 20/03/09)
Senator the Hon J A L (Sandy) Macdonald (till 30/06/08)	Ms M Parke MP
Senator C M Moore	Ms K Rea MP
Senator K O'Brien (from 01/07/08)	Mr B Ripoll MP
Senator M Payne (from 19/03/08)	The Hon A Robb AO MP (till 25/09/08)
Senator N Stott Despoja (till 30/06/08)	Mr S Robert MP
Senator R Trood	The Hon P Ruddock MP
Senator R S Webber (till 30/06/08)	Ms J Saffin MP
The Hon B Baldwin MP	The Hon B Scott MP
The Hon A Bevis MP	Mr K Thomson MP (till 15/06/09)
	Ms M Vamvakinou MP

Secretary Dr M Kerley

Membership of the Defence Sub-Committee

Chair The Hon A Bevis MP

Deputy Chair The Hon B Baldwin MP

Members

Senator M Arbib (till 11/03/09)	The Hon J Fitzgibbon MP (from 15/06/09)
Senator M Bishop	Mr S W Gibbons MP
Senator the Hon A Ferguson	Ms S Grierson MP
Senator M Fifield	Mr D Hale MP
Senator M Forshaw (<i>ex officio</i>)	The Hon D Hawker MP (<i>ex officio</i>)
Senator M Furner (from 16/03/09)	The Hon I Macfarlane MP
Senator the Hon D Johnston	Mrs L Markus MP
Senator S Ludlum	Ms S Mirabella MP (till 11/03/09)
Senator K O'Brien	Mr S Robert MP
Senator M Payne	Ms J Saffin MP
Senator R Trood	The Hon B Scott MP
Mr M Danby MP	Mr K Thomson MP (till 15/06/09)

Committee Secretariat

Secretary Dr Margot Kerley

Defence Adviser WGCDR David Ashworth

Inquiry Secretary Mr Muzammil Ali (till 25 June 2009)
Dr Brian Lloyd (from 2 March 2009 till 11 June 2009)
Mr Paul Zinkel (from 1 September 2009)

Officer Manager Mrs Donna Quintus-Bosz

Administrative Officers Ms Sonya Gaspar

Ms Gillian Drew



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.¹

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

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
AEW&C	Airborne Early Warning and Control
ANAO	Australian National Audit Office
ANZAC	A Frigate Class of the Royal Australian Navy
ARH	Armed Reconnaissance Helicopters
ASC	Australian Submarine Corporation
ASRV	Australian Submarine Rescue Vehicle
ASW	Anti Submarine Warfare
AWD	Air Warfare Destroyer
BAMS	'Broad Areas Maritime Surveillance' program
BAE	British Aerospace
C17	Heavy airlift aircraft
CBRN	Chemical, Biological, Radiological and Nuclear
CDF	Chief of Defence Force
CIOG	Chief Information Officer Group
COTS	Commercial-Off-The-Shelf

CSIRO	Commonwealth Scientific and Industrial Research Organisation
DEWHA	Department of the Environment, Water, Heritage and the Arts
DFRT	Defence Force Remuneration Tribunal
DIO	Defence Intelligence Organisation
DMO	Defence Material Organisation
DSD	Defence Signals Directorate
DSTO	Defence Science and Technology Organisation
ELF	Enhanced Land Force
ESM	Electronic Support Measures
FMS	Foreign Military Sales
FFG	A Frigate Class of the Royal Australian Navy
FVM&T	Field Vehicles Modules and Trailers
GAO	Government Accounting Office (United States of America)
GFC	Global Financial Crisis
GJ	Gigajoule
GOPS	Graded Officers Pay Structure
GORPS	Graded Other Ranks Pay Structure
HF	High Frequency
HNA	Hardened Network Army
HR	Human Resources
IED	Improvised Explosive Device
IOC	Initial Operational Capability
ISR	Intelligence, Surveillance and Reconnaissance
JLTV	Joint Light Tactical Vehicle

JSF	Joint Strike Fighter
LHD	Landing Helicopter Dock
MEAO	Middle East Area of Operations
MESA	'Multi-Role Electronically Scanned Array' radar
MOTS	Military-Off-The-Shelf
NATO	North Atlantic Treaty Organisation
NCW	Network Centric Warfare
OEG	Operational Experts Group
PMV	Protected Mobility Vehicle
PMV-L	Protected Mobility Vehicle Light capability
PSI	Proliferation Security Initiative
RAAF	Royal Australian Air Force
RAN	Royal Australian Navy
RFT's	Request for Tender
RSL	Returned and Services League
SDD	System Design and Development
SIP	Statement of Interdiction Principles
UAV	Unmanned Aerial Vehicle
WMD	Weapons of Mass Destruction



List of recommendations

1 Introduction

Recommendation 1

The Committee recommends that, in the absence of a clear strategic case for high-risk first-of-type acquisitions, military off-the-shelf purchases should be the default option for procurement projects.

This recommendation does not necessarily relate to any particular acquisitions currently under consideration but rather represents a broader statement of policy reflecting on issues relating to past acquisition programs.

Recommendation 2

The Committee recommends that the Department of Defence review its current procedures for rapid acquisition to ensure that it is meeting the ADF's needs, particularly where they are linked directly to overseas operational commitments.

7 Defence personnel – Niche skills and pay

Recommendation 3

The Committee recommends that Defence places a high priority on developing a solution to the difficulties that it, and KPMG, has identified with the current pay systems.

8 Submarines

Recommendation 4

The Committee recommends that Defence ensure the provision of submarine escape training at HMAS Stirling be re-established.

Recommendation 5

The Committee recommends that the deployability issues governing the Australian Submarine Rescue Vehicle Remora be resolved without delay.

9 Constraints

Recommendation 6

The Committee recommends that Defence adopt a more assertive strategy with regard to oil shocks and alternative fuels, with the specific purpose of providing a capability to mitigate risk due to a dependence on oil-based fuels. Defence should provide such a capability, sufficient to maintain an identified core capability, within a timeframe of 10 years.

Recommendation 7

The Committee recommends that new fuels developed to mitigate risk to Australia's defence capability from oil shocks and oil scarcity be designed to reduce Defence's carbon footprint, where possible, in balance with energy yields and other practical considerations.

Introduction

Inquiry into the *Defence Annual Report 2007-08*

Background

- 1.1 The Defence Sub-Committee of the Joint Standing Committee on Foreign Affairs, Defence and Trade held public hearings into the *Defence Annual Report 2007-08* in Canberra on Thursday 16 April, Friday 19 June, and Friday 21 August, 2009.
- 1.2 Witnesses from various parts of Defence, including uniform and civilian personnel, appeared before the Sub-Committee. Four submissions were received.
- 1.3 This Report reflects the Committee's key areas of interest, which are:
 - the ADF's ability to encompass its current range of tasks, including its current force structure in Afghanistan, and the influence of new factors on Defence, in particular the Global Economic Crisis and the release of the 2009 White Paper;
 - progress on major Defence procurement projects.
 - the management, recruiting, development and retention of Defence personnel, including pay systems;
 - constraints on Defence's ability to deliver on the ADF's capacity to fulfil its role, such as questions over oil security and climate change; and

- new and emerging areas of attention for the ADF, including the Proliferation Security Initiative and management of cyber warfare threats.

The Kinnaird Reforms

- 1.4 With regard to the procurement projects, the Committee notes the representations made to it, across a range of Defence's submissions that, under the Kinnaird process, future projects will not suffer the same fate. It is also noted that, at such an early stage in this reform process, Defence have not yet concluded a complex project under the new arrangements.
- 1.5 Throughout the committee hearings a number of major projects were characterised by delay and failure to provide contracted capability. It was common for Defence to state that these problems were in part, or in large measure, the result of pre-Kinnaird procedures.
- 1.6 These reforms should provide Defence with a more agile stance on procurement, allowing both rapid acquisitions and termination of arrangements where performance is considered unacceptable. These, in effect, increase Defence's power to manage relationships with contractors, and augur well for the future capacity of projects to be delivered within projected timelines.
- 1.7 However, the Committee is mindful these reforms will require continued follow-through, and championing from management in Defence, if they are to achieve their stated objectives. Cultural change in Defence requires effort over a sustained period, otherwise changes will be cosmetic.
- 1.8 The extent to which the Kinnaird reforms fully address these problems will be subject to close scrutiny by future Committee reviews.

Unique or leading Edge Military Off-The-Shelf and Commercial Off-The-Shelf solutions

- 1.9 The Committee is mindful of common factors that have led to delays or cancellations in the projects considered within this review. One is the tendency to adopt relatively unique or leading edge systems. This is at odds with current initiatives for Defence to adopt Military Off-The-Shelf (MOTS) and Commercial Off-The-Shelf (COTS) solutions where possible.

- 1.10 The unique nature of Australia's security environment sometimes requires tailored or special design assets and solutions. That said, many Australian defence needs can be properly met with appropriate MOTS acquisitions. The adoption of high-risk first-of-type acquisitions should only be entered into where it is clear that such an outlay, in terms of time and money, can be clearly justified by Australia's defence requirements. In the absence of a clear strategic case for such purchases, MOTS should be the default option.
- 1.11 A second common factor is a high level of technical complexity, involving a requirement to generate significant amounts of new software code. In the Committee's view, while this may be necessary in some instances, it would be reduced the more Defence adopts off-the-shelf solutions.

Recommendation 1

The Committee recommends that, in the absence of a clear strategic case for high-risk first-of-type acquisitions, military off-the-shelf purchases should be the default option for procurement projects.

This recommendation does not necessarily relate to any particular acquisitions currently under consideration but rather represents a broader statement of policy reflecting on issues relating to past acquisition programs.

Rapid Procurement

- 1.12 The Committee recognises the need for a rapid acquisition process capable of responding to emerging operational needs. This issue was raised during the public hearings by the Deputy Chair:

I would like to ask you about the rapid acquisition program. Can you tell me a little bit about it: how it operates; how requests go up through line; how they are determined; how they come back for approval; and what the time frames normally are for rapid acquisition programs?¹

1 The Hon. Bob Baldwin MP, *Transcript*, Friday 19 June 2009, p.14.

1.13 In response Defence stated:

Generally speaking, what will happen is, first of all, there will be a given set of circumstances on the ground in one of the operations we are conducting. The one at the moment that probably creates the circumstances for rapid acquisition potential is Afghanistan. So, if something happens in Afghanistan, we get into the rapid acquisition process. A classic case occurred when the government recently announced a fairly large expenditure on counter-improvised-explosive-device equipment. Fundamentally, what happens? Something happens on the ground which indicates a change in the circumstances. We make an assessment. We say, 'We need this to counter that.'²

1.14 At the public hearing on 21 August 2009 the Chair raised the following question:

I want to ask questions on a different topic: the rapid acquisition program, particularly for TAG-East and TAG-West. The committee has had the benefit of visiting those units over the course of the last year or so. Whilst there are examples of that rapid acquisition program working well, there were certainly examples drawn to our attention where it does not seem to work very well at all. I am not sure where in the chain of events these things break down. Examples include the provision of the night-vision goggles that TAG-East people use and interchangeable short barrels for weapons. These things seem to be comparatively low cost and straightforward but are nonetheless essential for the sorts of operations engaged in. However, the rapid acquisition program does not seem to produce an outcome. Can you tell us anything about that?³

1.15 Defence replied:

I would not categorise the night-vision goggles as an easy thing to procure. First of all, there are very strong release-ability issues with the US as to what technology we have access to. Secondly, some of the delivery periods out of the manufacturers are very long. We are hearing figures like one, two and three years for certain components of some of the most modern night-vision goggles. So I do not think it is some form of bureaucratic delay. I

2 Air Chief Marshal Houston, *Transcript*, Friday 19 June 2009, p.15.

3 The Hon Arch Bevis MP, *Transcript*, Friday 21 August 2009, p.18.

think it is just a delay related to how long it takes to get things from the manufacturers.⁴

Committee comment

- 1.16 Rapid acquisitions are highly specialised and not straightforward and may be beyond the control of the Department of Defence. Nevertheless, there will be occasions where operational requirements drive the need for rapid acquisition and it is important that Defence has a processes capable of responding.

Recommendation 2

The Committee recommends that the Department of Defence review its current procedures for rapid acquisition to ensure that it is meeting the ADF's needs, particularly where they are linked directly to overseas operational commitments.

Scope Creep

- 1.17 The issue of scope creep is covered in Chapter 2 with regards to the High Frequency Modernisation Project. This aspect of the Kinnaird review is an important part of the procurement process. The Committee notes that this issue was raised in last years report and the Committee will continue to scrutinise the effectiveness of specification scoping in the first phase of each project.⁵

4 Mr King, *Transcript*, Friday 21 August 2009, p.18.

5 Joint Standing Committee on Foreign Affairs, *Defence and Trade, Review of the Defence Annual Report 2006-07*, pp. 41-44.

Joint capability and procurement

- 2.1 The Committee is aware that current conditions are challenging for Defence procurement. On one hand, the Australian Defence Force (ADF) is engaged in a higher tempo of operations than has been the case for some considerable time. On the other, significant elements of capability are due for renewal and replacement in the near and mid-term. In addition, the Global Financial Crisis will place pressure on all government expenditure. This *Review of the Defence Annual Report 2007-08* represents an important opportunity to reflect on key areas of Defence procurement.
- 2.2 The 'joint' projects considered here are those areas of procurement intended to link different arms of the services, leading to higher capability. The High Frequency (HF) Modernisation and Airborne Surveillance for Land Operations projects reflect this, influencing force effectiveness across the ADF by increasing the information available to them. Increasing cooperation between elements of the ADF makes this type of capability especially important.

HF Modernisation Project - JP 2043

Introduction

- 2.3 This project, JP 2043, 'provides for the procurement of a Modernised HF Communications System for Defence long-range communications'.¹ The role of the system is to provide a further element of communications capability across the ADF, supplementing the main satellite communications system with an alternative HF network for 'Satellite

1 ANAO, *DMO Major Projects Report 2007-08*, p.136.

communications fitted platforms' and a 'primary long-range communication capability for platforms not Satellite communications fitted'.²

- 2.4 The initial phase of the project, completed in 2004, encompassed five main fixed sites in: the Riverina, Townsville, Darwin, North West Cape, and a primary Canberra site with backup facilities.³
- 2.5 The current, second, phase of the project has two components. The first is intended to provide enhancements to the system already installed: for 'increased levels of automation, improved capability, enhanced security and survivability, [and] reduced reliance on staff'.⁴
- 2.6 The second is to upgrade communications for selected mobile platforms across Defence.⁵ This includes Chinook and Black Hawk helicopters, Coastal Mine Hunters, Armidale Class Patrol Boats, Hydrographic Ships, Army Land Strategic HF communications facilities, and facilities at RAAF No. 1 Combat Communications Squadron, and Defence Force School of Signals Watsonia (Simpson Barracks).⁶
- 2.7 The project has been subject to significant delays. The ASPI 2008-09 *mid-year Defence budget update* quotes a delay of 57 months for this project.⁷ The Australian National Audit Office (ANAO) *Major Projects* report shows higher variations for some project milestones, including a projected 127 month variation for 'Final Operational Capability-Mobiles'.⁸
- 2.8 The ANAO *Major Projects report* attributes delays to 'requirements instability': that Defence continued to change specifications well into the project time-line.⁹ They are also attributed to 'contractor delays with software development and system instability'.¹⁰

2 ANAO, *DMO Major Projects Report 2007-08*, p.135.

3 ANAO, *DMO Major Projects Report 2007-08*, p.134.

4 *Defence Annual Report 2007-08*, Vol 2, p.30.

5 ANAO, *DMO Major Projects Report 2007-08*, p.134.

6 ANAO, *DMO Major Projects Report 2007-08*, p.135.

7 Thomson, Mark 2009, *2008-09 mid-year Defence budget update*, ASPI, viewed 23/02/09 http://www.aspi.org.au/publications/publication_details.aspx?ContentID=199&pubtype=-1, p.8.

8 ANAO, *Defence Materiel Organisation Major Projects Report 2007-08*, p.142.

9 ANAO, *Defence Materiel Organisation Major Projects Report 2007-08*, p.141.

10 ANAO, *Defence Materiel Organisation Major Projects Report 2007-08*, pp.141-142.

2.9 The ANAO *Major Projects* report observes that this project is:

...a complex software intensive and high risk project involving geographically diverse sites at five major locations across Australia. Implementation of the Fixed Network has involved civil infrastructure development, electrical power generation and transmission, telecommunications infrastructure extension, communications system hardware and antenna installation. It has involved the engineering disciplines of systems engineering, software development, system design and integration, system test and evaluation.¹¹

2.10 In addition, the ANAO *Major Projects* report notes specific risks for the upgrade of mobile platforms, which is yet to be delivered:

Platform availability will be an issue for all Mobiles upgrades. The upgrade schedules need to be coordinated with the maintenance schedules and operational requirements of the platforms. Other risk factors related to Mobiles upgrades include the complex task of integrating High Frequency upgrade equipment with existing communications systems of varying levels of maturity and sophistication, and of accommodating the new equipment within the spaces available.¹²

Current status

2.11 Defence advised the Committee of the project's current status. The Core System, completed in 2004, 'provides the fundamental heart of the overall HF communication network' providing the 'ability to send HF signals out to ships and aircraft as well as vehicles'.¹³

2.12 Defence advised the Committee that 'the final capability', which is 'currently in delay', will:

...deliver additional functionality to the standard capability that we have at the moment. It will provide automatic link establishment and those sorts of facilities that will reduce the level of operator input required to establish and maintain calls.¹⁴

11 ANAO, *DMO Major Projects Report 2007-08*, p.136.

12 ANAO, *DMO Major Projects Report 2007-08*, p.136.

13 Ms McKinnie, *Transcript*, Thursday 16 April 2009, p.38.

14 Ms McKinnie, *Transcript*, Thursday 16 April 2009, p.38.

Causes of delay

2.13 Defence told the Committee that project delays were due to a:

...process of refining the requirements and ensuring that as they were decomposed into lower level requirements and they were understood by Boeing that raised some issues with definition of requirements. There were some delays as a result of that.¹⁵

2.14 Some delays were directly attributable to the prime contractor:

Boeing admits that it underestimated the time it would take in terms of the amount of software that was to be developed and also the time it would take to develop that software. They indicated that their metrics of how long it took versus what they initially estimated were about two to two and a half times out early in the piece.¹⁶

2.15 In Defence's view, the contractor's response to these time over-runs compounded problems:

As a part of the program to try to catch up time, they cut corners on their systems engineering process. The cutting of corners and then led to rework. It takes you longer to rework stuff than it does to do it right in the first place.¹⁷

2.16 As a result of these difficulties, Defence told the Committee, Boeing had given for this final component of the project:

... a commitment date to deliver final system capability by December 2009. Currently their schedule indicates that final systems acceptance would be March 2011 with contract completion around May 2012.¹⁸

Responses to delay

2.17 In the face of these problems, Defence told the Committee that it had recourse to two avenues through which to engage the contractor and restore progress. One was 'rebaselining', in which client and contractor negotiated new time-lines they considered achievable. This was seen as an alternative to persisting with schedules no longer considered practicable.¹⁹

15 Ms McKinnie, *Transcript*, Thursday 16 April 2009, p.40.

16 Ms McKinnie, *Transcript*, Thursday 16 April 2009, p.40.

17 Ms McKinnie, *Transcript*, Thursday 16 April 2009, pp.40-41.

18 Ms McKinnie, *Transcript*, Thursday 16 April 2009, p.38.

19 Ms McKinnie, *Transcript*, Thursday 16 April 2009, p.39.

- 2.18 A second avenue lay in 'adjustments to capability', where elements of contractual requirement were lessened or removed. Defence told the Committee that these negotiations allowed Boeing 'some waivers from requirements'. For 'requirements that are on contract' but not provided, Defence would otherwise have sought compensation.²⁰
- 2.19 Defence told the Committee that it was most likely to provide waivers to the contractor for the elements of capability which now proved to be unnecessary:
- Some of the requirements when they were initially specified were required and highly desirable. They are no longer as essential as what was originally thought because there are other systems being introduced that provide that capability in a better way. For example, email over HF was a requirement, but it is no longer a key requirement for the ADF.²¹
- 2.20 Defence told the Committee that these were effective ways to re-start stalled procurement projects, and that the HF Modernisation Project was in better shape due to these measures having been taken.

Lessons learned

- 2.21 Defence told the Committee that the HF Modernisation Project was an example of how Defence procurement was done prior to the 2003 *Defence Procurement Review*, known as the 'Kinnaird report'.²²
- 2.22 In Defence's view, the fortunes of JP 2043 – a project started well before the implementation of the Kinnaird report's recommendations – show why change in procurement was necessary. They also show the usefulness of subsequent reforms: in particular the move to assign greater resources to earlier stages of projects so that their practicability can be more thoroughly tested:
- ... while this was going on of course Malcolm Kinnaird was doing his pivotal Kinnaird study. It really has reinforced the things that Kinnaird identified. That is, before you go to government on the eve of a contract you should truly understand what the specifications are and how you should express them, truly engage much more deeply with industry and, as he said, pay for it between the first and second parts to get the quality of information

20 Ms McKinnie, *Transcript*, Thursday 16 April 2009, p.39.

21 Ms McKinnie, *Transcript*, Thursda, 16 April 2009, p.39.

22 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.41.

you need. I think we are much wiser now about finding out what are the drivers of cost schedule and capability in that first and second part. When we enter into a contract we have a much better understanding of those and therefore a contract has sufficient provision for cost schedule and capability risks. I think that is the big lesson.²³

- 2.23 Defence also told the Committee that post-Kinnaird reforms gave Defence a greater flexibility to alter project deliverables, along the lines described above, where it proved necessary:

This is a good example of as time goes by, where it is sensible and pragmatic to do so, we should shift the goal posts ... [f]or example, if we do not need to pursue that anymore because there are other means of delivering capability we would be wasting money, effort and time if we persisted. Similarly, as we said before, where threats change it is very appropriate that we shift the goal posts before we sign a contract. That is what the Kinnaird process allows us to do.²⁴

- 2.24 Further, Defence told the Committee that hardware procurement was just one part of the capability equation. Post-Kinnaird, Defence was in a better position to respond to eventualities over the life of contracts:

Where we do need to change the capability, we go through the process to say how will we fulfil capability requirement? Sometimes it is done by altering our tactics and procedures to deal with a shortfall. Where perhaps we buy a thing that does not go as fast or as far we change our tactics and procedures. The combination of all of the fundamental inputs to capability, as we call them, which includes the training we give people, the quality of our people, the way we fight the battle, that gives the whole capability. The hardware is just one part of it. It is an important part, but just one part.²⁵

- 2.25 Defence told the Committee, JP 2043 demonstrated: that there had been a need for change; that change had occurred; and that it had been effective. Although this project continued to suffer problems as a legacy of earlier procurement practices, the adoption of Kinnaird reforms made similar problems less likely in the future.²⁶

23 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.41.

24 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.40.

25 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.40.

26 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.41.

Committee comment

- 2.26 The Committee takes a keen interest in the ability of Defence to meet time-lines and complete this project.
- 2.27 Defence will still need to demonstrate that the post-Kinnaird reforms are sufficient and have been well-implemented delivering projects on time, on budget, and with required levels of capability.

Airborne Surveillance for Land Operations - JP 129

Introduction

- 2.28 This project is to acquire an Unmanned Aerial Vehicle (UAV) capability for the ADF.
- 2.29 Current military UAVs are most often fixed-wing pilot-less aircraft used for Intelligence, Surveillance, and Reconnaissance (ISR) tasks, although some are rotary aircraft,²⁷ and increasingly UAVs are being used as weapons platforms.²⁸ UAVs vary in size and mission, ranging from small battle-field UAVs that carry a payload of less than 1 Kg to long-range, high altitude reconnaissance craft.²⁹
- 2.30 Interest in and use of UAVs has increased as a result of 'asymmetric' campaigns currently underway. Israel has used UAVs extensively in recent campaigns in Gaza,³⁰ and the US employs a considerable number its current campaigns: in 2006 it was using 1500 UAVs in Iraq alone.³¹

27 David, Alon Ben, Robert Hewson, Damian Kemp & Stephen Trimble 2006, 'Special Report: UAVs - Frontline Flyers', *Janes Defence Weekly* - May 10, 2006, viewed 23/03/09 http://search.janes.com/Search/documentView.do?docId=/content1/janesdata/mags/jdw/history/jdw2006/jdw14152.htm@current&pageSelected=allJanes&keyword=UAV&backPath=http://search.janes.com/Search&Prod_Name=JDW&.

28 'UAVs hit Gaza-bound weapons convoys', 2009, *Jerusalem Post*, Mar 29, 2009, viewed 31/03/09 <http://www.jpost.com/servlet/Satellite?cid=1237727564938&pagename=JPost%2FJP%2FShowFull>.

29 David et al, 2006, 'Special Report UAVs';

30 David et al, 2006, 'Special Report UAVs';

31 David et al, 2006, 'Special Report UAVs';

- 2.31 Australian Defence personnel currently operate leased ScanEagle UAVs in Afghanistan as part of Operation Slipper.³² They also operate Skylark UAVs.³³
- 2.32 The ADF had planned to acquire other UAVs under project JP 129 - Airborne Surveillance for Land Operations, signed with Boeing in 2006 and based on an Israeli aircraft, but this was cancelled in late 2008.³⁴ Another UAV project (Australia's involvement in the US Broad Areas Maritime Surveillance, or 'BAMS' program) which entailed acquisition of the Global Hawk, was until recently being considered by the ADF, but was cancelled early this year.³⁵ Currently, Defence is considering 'alternative capabilities' for future UAV acquisitions.³⁶
- 2.33 As for a number of Defence acquisitions projects, plans to acquire UAVs are integral to aspirations to enhance capacity for Network Centric Warfare (NCW). The 'technical difficulties' cited by the Defence Material Organisation (DMO) as the cause of the cancellation of JP 129 reflect the challenges experienced in other projects pertinent to NCW. Such projects entail considerable levels of software development and system integration, both of which increase risk for project outcomes.

Current Status

- 2.34 Defence informed the Committee about current operations in which the ADF was employing leased UAVs, and progress on the procurement of a UAV capability on behalf of the ADF itself.
- 2.35 In relation to current operations in Afghanistan, Defence told the Committee that:

The UAV is applying a very important role at the moment and we are operating with and using and accessing some ally resources in

32 Department of Defence 2009, *Operation SLIPPER*, viewed 31/03/09 <http://www.defence.gov.au/opEx/global/opslipper/index.htm>.

33 Khosa, Raspal 2008, *Australian defence almanac 2008-2009*, ASPI, viewed 23/02/09 http://www.aspi.org.au/publications/publication_details.aspx?ContentID=196&pubtype=-1, p.39.

34 Defence Material Organisation 2009, *JP 129 - Airborne Surveillance for Land Operations*, viewed 31/03/09 <http://www.defence.gov.au/dmo/asd/jp129/jp129.cfm>.

35 David et al, 2006, '*Special Report UAVs*'; AAP 2009, 'Opposition slams drones cancellation', *Sydney Morning Herald*, March 3, 2009, viewed 11/03/09 <http://news.smh.com.au/breaking-news-national/opposition-slams-drones-cancellation-20090303-8n44.html>.

36 Defence Material Organisation 2009, *JP 129 - Airborne Surveillance for Land Operations*, viewed 31/03/09 <http://www.defence.gov.au/dmo/asd/jp129/jp129.cfm>.

the UAV. They provide intelligence surveillance and reconnaissance in the battlefield.³⁷

- 2.36 In relation to procurement and contractual matters for UAV capability for the ADF, Defence told the Committee that:

The reason for contract termination really had to do with lack of performance on the part of the contractor and the subcontractor. We have not terminated the project; we have just terminated the contract. At the moment we are attempting to restart that contract. We are looking at what our contemporary requirements are for that project and whether there is any adjustment needed. Fundamentally, we were reaching a point where the company, Boeing Australia Ltd at the time, and its subcontractor IAI MALAT of Israel were not converging to a solution and we were falling behind at a rate greater than we were progressing.³⁸

- 2.37 Defence assured the Committee:

...we are taking a very pragmatic approach to our requirements now, having learned a lot through that first contract. We have agreed the requirements now and are working closely with the DMO to be able to get a request to tender out to the industry again, to start the process. I might say that we are working at an accelerated process so that we can get quickly back into contract with the appropriate solution and getting into service.³⁹

- 2.38 This represented progress on previous procurement projects where contractors had failed to perform to Defence's requirements. Defence also assured the Committee that:

In the meantime we have UAVs in service but on lease and those that we own in the field and so there is no loss of capability, if you like, for current operations.⁴⁰

- 2.39 In effect, Defence told the Committee, management of JP 129 was a confirmation of the principles of the post-Kinnaird procurement process, which provides greater flexibility for Defence to respond when procurement projects are not running to plan:

Government has given a second pass for a particular solution at a particular cost. That solution was not successful, so we will have

37 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.7.

38 Air Vice-Marshal Thorne, *Transcript*, Thursday 16 April 2009, p.7.

39 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.7.

40 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.7.

to come back to government with a new solution and a new cost to get them to give us a new second pass approval, if you like, then go on to contract for a new UAV.⁴¹

2.40 Defence suggested to the Committee that the way that JP 129 had progressed was a sign of Defence 'having learned lessons' on procurement. Defence's present approach to procurement involves 'doing internal reviews to make sure programs are keeping track'. In this case, such reviews

... highlighted that there were difficulties early. In fact, when we looked deeply they would not have been overcome. So, instead of inheriting a program that may be around three, four or five years and then find we had troubles and leave the ADF short of capability, our new processes actually found that there were difficulties. We took proactive action with capability development, the Chief of Army, terminated the contract early and are now moving outside. I think we would like to use that to highlight the fact that we are learning lessons and we are addressing programs' difficulties early.⁴²

Committee comment

2.41 In the Committee's view it is encouraging to hear that Defence have been able to terminate relationships with contractors where there is a lack of performance. The Committee is mindful of other projects, and other times, when earlier decisions such as this would have been desirable.

2.42 However, the Committee is also concerned about the effects on the ADF of an absence of capability. In view of the steep rise in the use of UAVs by coalition partners in theatres in which the ADF now operates, notably Afghanistan, this could amount to a significant shortfall in capability. Whilst noting the leasing and other arrangements in place the Committee is concerned that delays in the program could have the effect of increasing risk to Australian military personnel.

2.43 In the Committee's view, there is a balance to be achieved between Defence as a critical consumer and its ability to field appropriate capability. The history of JP 129 reflects Defence's increasing ability to respond where contracts are not progressing according to plan. It also

41 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.7.

42 Mr King, *Transcript*, Thursday 16 April 2009, p.7.

exemplifies the challenges Defence faces in getting the right equipment to Australia's armed forces, on time.

- 2.44 In the Committee's view, the question of whether the adoption of the Kinnaird process for JP129 has been beneficial for national security is yet to be answered. The success of the project hinges, as for all other procurement projects, on the ability to deliver the materiel with full capability, on time and within budget. There is some further effort needed before Defence and major contractors can say they do this reliably.

Conclusion

- 2.45 A factor increasing risk in procurement is the increasing complexity of military equipment overall. This is part of the developing Defence landscape, which no single country can influence in any other direction. The inevitable imperative is to seek to adopt military technologies at a commensurate level of sophistication, in order to provide superior military capabilities, deterrents and war-fighting ability.

Air capability and procurement

- 3.1 The Committee is cognisant of the position air capability holds within the larger context of ADF force readiness. We also acknowledge the unprecedented changeover of platforms that Defence is managing across its air capability and elsewhere. Successive White Papers have flagged air superiority as a key element in Australia's strategic doctrine and there has been lively debate on how to achieve this objective.
- 3.2 At the same time, there has been concern over particular projects such as replacement of the Navy's Sea Hawk helicopters, as discussed in Chapter 4. This has helped to highlight the importance of rotary aircraft in the ADF, including Tiger helicopters considered later in this chapter.

Wedgetail AEW&C

Introduction

- 3.3 Wedgetail (Project AIR 5077) is an Airborne Early Warning and Control (AEW&C) platform based on the Boeing 737-700 airframe. It is intended to provide situational awareness and targeting information for all ADF elements, and as a result commentators have characterised Wedgetail as 'a crucial force multiplier for the Australian Defence Force as a whole'.¹

¹ Thomson, Mark, *Cost of Defence 2008-09*, p.185.

- 3.4 Meeting timeliness has been a problem for the project. According to the *Defence Annual Report 2007-08*, Defence placed its initial order for four Wedgetails with prime contractor Boeing in December of 2000. In April 2004 the order was expanded to include a further two aircraft.²
- 3.5 In early 2007 Boeing advised of a 'two-year slip in the program', and subsequently presented a 'schedule replan' to the Commonwealth.³ In June 2008 Boeing advised Defence of a 'further schedule delay of 10 months to the delivery of the first fully mission capable aircraft', and undertook to deliver the first aircraft in January 2010.
- 3.6 The *Defence Annual Report 2007-08* notes that delivery on this date would represent 'a total delay of 38 months against the contract baseline.'⁴ To off-set this, Boeing have undertaken to 'deliver two aircraft in July 2009 with sufficient capability to enable the ADF to commence training and bed-down its logistics support systems'.⁵

Current status

- 3.7 In public hearings, Defence told the Committee that while time-lines continued to be a central concern for the project, there was also significant concern over whether the project was likely to deliver contracted capability.
- 3.8 Defence informed the Committee of two 'fundamental areas' that were considered problematic: 'the radar performance in particular modes' and 'the electronic surveillance measure system'.⁶
- 3.9 Defence advised the Committee that these difficulties stemmed from decisions made early in the project. Wedgetail was intended to supply the ADF with an AEW&C capability with reduced operating costs compared with similar platforms then available. This led to a requirement for a smaller, lighter radar capability for the aircraft, and the adoption of the novel design MESA (Multi-Role Electronically Scanned Array) radar, a 'new L-band radar capable of being carried on ... the 737'.⁷

2 ANAO, *DMO Major Projects Report 2007-08*, p.110.

3 ANAO, *DMO Major Projects Report 2007-08*, p.110.

4 *Defence Annual Report 2007-08*, Vol 2, pp. 26-27.

5 *Defence Annual Report 2007-08*, Vol 2, p. 27.

6 Mr King, *Transcript*, Thursday 16 April 2009, p.32.

7 Mr King, *Transcript*, Thursday 16 April 2009, p.32.

- 3.10 These decisions increased the level of the risk for the project. Defence told the Committee that the combination of an 'aerospace project with a new developmental radar' resulted in the project having 'all the hallmarks of a technically challenging project'.⁸ A key aspect of this was that, as a 'developmental radar', the MESA package could not be tested until the project had advanced sufficiently to produce a working system.⁹
- 3.11 At the public hearing on 16 April 2009, Defence advised the Committee that although the project had been running for some time, these risks were still outstanding. Important questions about its effectiveness of the MESA radar had not yet been fully resolved. These included questions over whether the MESA radar was a 'fundamentally sound radar', and if 'it does not work to full specification at the moment will it over time grow into being everything we expected?'¹⁰
- 3.12 A key concern was the capacity of the MESA radar to reject clutter and represent objects clearly as it scanned terrestrial environments:
- Radar like this looks down on the ground and everything that is on the ground and is a legitimate target for a radar like that. It comes down to the software to be able to sort real targets or air targets above the ground from the ground behind it. That is fundamentally the issue with the radar.¹¹
- 3.13 Defence told the Committee that measures had been taken to manage risk. Defence had initiated a review of the MESA radar's capability with a reputable independent assessor, the MIT Lincoln Laboratory.¹² The results of this review should lead, Defence told the Committee, to a resolution of outstanding questions over the MESA radar. Defence also initiated a test program, discussed below, that had allowed the project to regain momentum.
- 3.14 At the public hearing on 21 August 2009, the Chair asked Defence for an update on progress with the Airborne Early Warning and Control System:
- The current contract was based on the fact that the aircraft would perform in all areas to the contracted level at delivery. Boeing and we agree now that there are some aspects of the aircraft performance that will not meet the contracted level at initial delivery, in particular some elements of the radar performance

8 Mr King, *Transcript*, Thursday 16 April 2009, p.32.

9 Mr King, *Transcript*, Thursday 16 April 2009, p.36.

10 Mr King, *Transcript*, Thursday 16 April 2009, p.32.

11 Air Vice-Marshal Thorne, *Transcript*, Thursday 16 April 2009, p.32.

12 Mr King, *Transcript*, Thursday 16 April 2009, p.32.

and some subsystems. We are going through that standstill deed period at the moment, which included an in country demonstration, which was conducted a few months ago in Australia with, I might add, satisfactory results, and a bridge test and trials program at the moment. On satisfactory completion that will allow us to take initial delivery of the aircraft at initial capability, which is not the final capability. That capability has been determined by the Air Force that will allow them to start operating the aircraft in Australia and commence training aircraft crews in the use of this aircraft. Of course, it is a brand-new capability for the Air Force and it takes quite some time to learn to use all of its features.

The current plan is that this trial period will complete in November of this year and soon after the first two aircraft will transition back to Australia. It is certainly my belief that it is unlikely that we will meet that November date – it will not be missed by much, maybe by a few months. On completion of that program those first two aircraft will come back to Australia and then in the following period the additional aircraft will return to Australia.¹³

3.15 Defence went on to update the Committee on the difficulties being experienced with the radar:

...the radar will not meet its full contracted capability. There are about 10,000 requirements on this aircraft. That some standards are not met is probably rational given that there are 10,000 specifications. However, this area of radar performance is important to us. We engaged the Massachusetts Institute of Technology to look at this issue for us. Their conclusions were very similar to ours, which is that there will be this shortfall in this aspect of the radar performance. We are now doing studies to determine operationally what that means. It is one thing to have a technical limitation, but what does it mean operationally in reality?

The conclusion is that there is no technically viable solution for that element of performance to date, so we have to recognise that. Part of our negotiations with Boeing at the moment is to determine a settlement for the delivery of the aircraft in relation to the

13 Mr King, *Transcript*, Thursday 21 August 2009, p.2-3.

lateness of the delivery and this performance shortfall and what plan we will put in place to incrementally improve that performance when the technology to solve that becomes available.¹⁴

3.16 The Chair summarised his understanding of the Project's position – 'So we are going to get (the aircraft) three years later than we thought and it is going to (do) less than we thought.'

3.17 In response to a further question from the Committee, Defence summed up the current situation as follows:

The current planning is that IOC and initial operational release of the full capability would be in 2011. That is highly dependent on, in particular, recognising that there is this area of the radar shortfall that will not be fixed in that time frame. We are still assessing what the full operational impact of that is. But all other aspects of the aircraft should be ready: the picture compilation, the system stability so that it does not crash, data links and radios. In particular, the one area that is causing us trouble and is needed for the complete capability is the ESM system, the electronic surveillance system. That work is being undertaken in Australia by BAE, and it is behind – obviously the whole program is. But it is probably, after this radar performance, our most worrying area. So, from the point of view of having a fully capable system that will be able to make sure we have really competent Air Force crews, that can be achieved.

Where the ESM becomes most critical, of course, is when you want to put these aircraft in an absolute battle environment. I think that, in terms of getting fully competent and trained Air Force crew, we will be right for that 2011 time frame. The exception, the worrying bit and the bit that we are putting a lot of focus on is: will we have all the electronic protection that we need so that these aircraft could at that time be deployed into an absolute hostile environment?¹⁵

Contract style and administration

3.18 Defence told the Committee that the 'second thing that is causing us a lot of difficulty is the contract': that is, that some difficulties stemmed from the style of contract employed for the project. This contract is a fixed-price

14 Mr King, *Transcript*, Thursday 21 August 2009, p.3.

15 Mr King, *Transcript*, Thursday 21 August 2009, p.7.

contract with milestone payments and provision for penalties if the contractor should fail to deliver on scheduled items over the term of the project.

3.19 Defence described resulting difficulties in this way:

Clearly, we know that this program has cost Boeing a lot of money. I want to stress that we will ultimately pay the contracted fee less any adjustments, and no more. The real issue for us in the military sense is that we do not have the capability that we expected. One of the problems with the way in which the contract was structured-it is a legitimate way for the contract to be structured-is that once the company acknowledged that the system would not meet all the requirements, basically we had a problem.¹⁶

3.20 Defence told the Committee that the implications of this form of contract were that:

Because of the way in which the contract was structured we would not go into acceptance testing unless we had completed development testing. But once we had a statement that only confirmed our belief that the system would not meet all the requirements at delivery we could not go into acceptance testing. We were caught in a stand off, if you like. If we had gone into acceptance testing we would have been tacitly accepting that it had met all requirements so there was a catch. We implemented a standstill deed. Boeing is saying, 'We cannot progress if you do not let us progress' and so on.¹⁷

3.21 Defence advised the Committee that its response, ultimately, had been to 'step aside' from 'the contracts with all contract rights retained' and to institute a test program, in Australia for some partially-completed aircraft 'without accepting on our behalf that it meets all requirements'. The object of testing was 'to see what it could do'. Once in place, the program had 'reinvigorated' prime contractor Boeing, and the project regained momentum.¹⁸

3.22 At the end of the test program, Defence told the Committee, it would make decisions not only about the future of the project, but about avenues for remediation under the contract:

16 Mr King, *Transcript*, Thursday 16 April 2009, p.33.

17 Mr King, *Transcript*, Thursday 16 April 2009, p.33.

18 Mr King, *Transcript*, Thursday 16 April 2009, p.33.

One is the avenue of liquidated damages, which is for a pre-agreed amount of money for a delayed arrival of a capability, and the other is the normal compensatory claims for failure to deliver full capability.¹⁹

Committee comment

- 3.23 It is of great concern to the Committee that a project of this importance, size and scope remains uncertain. The central role of an AEW&C capability in completing the air defence 'package' is a serious issue.
- 3.24 The unique security environment for which Australian defence assets are acquired, will from time to time require tailored or special design solutions. That said, many Australian defence needs can be properly met with Military-Off-The-Shelf (MOTS) acquisitions. The case for adopting high risk first-of-type acquisitions such as Wedgetail needs to be made. In the absence of a clear strategic case for such purchases, MOTS should be the default option. Recommendation 1 refers to this matter.
- 3.25 It is the Committee's view that the most important objective is for the ADF to acquire needed AEW&C capability in the shortest time practicable. This will entail a renewed focus by Defence on managing the Wedgetail contract in an effective and efficient manner and dramatically improved outcomes from the prime contractor.

Tiger Armed Reconnaissance Helicopter - AIR 87

Introduction

- 3.26 AIR 87 is a project to acquire 22 Eurocopter Tiger helicopters on behalf of Army. They will operate as Armed Reconnaissance Helicopters (ARH).
- 3.27 The Tiger ARH is considered:
- ... a key element of Australia's emerging Hardened and Networked Army. Its suite of sensors and tactical data links, along with its gun and missile armament, bestow a significant airborne

¹⁹ Mr King, *Transcript*, Thursday 16 April 2009, pp.35-36.

reconnaissance capability along with the ability to escort other helicopters and provide fire support when required.²⁰

- 3.28 The helicopters will replace 'obsolete, Vietnam-era' elements of Army's current helicopter fleet, consisting of Bell UH-1H gunships and Bell 206 Kiowa reconnaissance helicopters.²¹
- 3.29 The full scope of the AIR 87 project is to acquire the 22 helicopters, training systems for flight and ground crews; a software support capability; systems to support operational communications, electronic warfare missions and maintenance; and 'facilities and ammunition'.²²

Time-lines

- 3.30 AIR 87 began with a government endorsement of a Capability Proposal (1994). A preferred tender was approved by Cabinet in 2001.²³
- 3.31 Since then, there have been significant changes to project time-lines. The original In-Service Date was in December 2004. Currently, Initial Operational Release is scheduled for March 2010, and Full Operational Capability for December 2011.²⁴
- 3.32 The *Defence Annual Report 2007-2008* shows that the project is 24 months overdue on achieving 'delivery of operational capability'.²⁵
- 3.33 The ANAO *Defence Major Projects* report shows a delay of 21 months for acceptance of the first 11 ARH aircraft, and a delay of 28 months for the remaining 11 aircraft of the order. It also shows that the project is overdue on a number of other components, including 43 to 56 month overruns for Cockpit Procedural Trainers. There is a projected 53 month overrun for the Full Flight Mission Simulator (Full Training capability).²⁶

20 Thomson, Mark, *The Cost of Defence: ASPI Defence Budget Brief 2008-09*, ASPI, viewed 23/02/09, http://www.aspi.org.au/publications/publication_details.aspx?ContentID=170&pubtype=-1, p.182.

21 Thomson, Mark, *Cost of Defence 2008-09*, p.174.

22 *Projects: AIR 87 - Armed Reconnaissance Helicopters*, viewed 18/03/09, <http://www.defence.gov.au/dmo/asd/air87/main.cfm>.

23 *Projects - AIR 87 - Armed Reconnaissance Helicopters*, <http://www.defence.gov.au/dmo/asd/air87/main.cfm#history>.

24 *Projects - AIR 87 - Armed Reconnaissance Helicopters*, <http://www.defence.gov.au/dmo/asd/air87/main.cfm#history>.

25 *Defence Annual Report 2007-08*, Vol. 2, p.34.

26 Australian National Audit Office 2008, *Defence Materiel Organisation Major Projects Report 2007-08*, viewed 18/02/09, http://www.anao.gov.au/uploads/documents/2008-09_Audit_Report_09.pdf, p.202.

Delays and risks

- 3.34 The certification process for the Tiger helicopter has contributed to project delays. To be considered air-worthy, aircraft need to be assessed and certified by appropriate authorities. For Tiger, Defence decided to rely on certification in France, obviating the need for a separate certification process in Australia.
- 3.35 However, as the French certification process did not run according to plan, this has exposed the Australian project to considerable delay. This has also led to delays for simulation and training equipment.²⁷
- 3.36 These delays have resulted in a reduced capacity to train instructors, and therefore pilots, for the ARH.²⁸ There are also fewer ADF pilots who are in a position to conduct acceptance testing, due to high operational tempos in the ADF. As a result, 'Initial Operational Capability (IOC) with a cadre of trained aircrew for the first of the two Squadrons has been delayed significantly'.²⁹
- 3.37 There continue to be ongoing levels of risk for the project. The *Defence Annual Report 2007-08* suggests this stems from challenges with 'qualification and certification for aircraft and systems'.³⁰
- 3.38 The ANAO *Major Projects* report identifies further elements of risk for the project. It agrees that certification is an identified risk for the project, particularly in relation to 'schedule slippage', but it also notes other risks.
- 3.39 The ANAO report also suggests that skilled personnel 'particularly in engineering and Test and Evaluation, are at a critical level', and flags this as 'the highest priority risk under management'. Another risk is that a 'sustained high rate of effort is required to complete aircrew training and introduce the operational capability'.³¹

Current status

- 3.40 In relation to timelines, Defence told the Committee that the project was on a 'tight schedule' to achieve one of its milestones in September 2009. This was 'a test and certification to finalise the aircraft to hand them over in a complete stage to army for its initial operational test evaluation'.³²

27 ANAO *Major Projects Report 2007-08*, p.202.

28 Thomson, Mark, *Cost of Defence 2008-09*, p.174.

29 Thomson, Mark, *Cost of Defence 2008-09*, p.175.

30 *Defence Annual Report 2007-08*, Vol 2, p.34.

31 ANAO, *DMO Major Projects Report*, p.205.

32 Major General Fraser, *Transcript*, Thursday 16 April 2009, p.8.

- 3.41 It is necessary to amass a certain number of flying hours to achieve certification. Defence told the Committee that it had based three of the ARH helicopters in Darwin, and this had been 'successful' in providing a sufficient 'rate of effort' toward certification. However, for aircraft based in Adelaide the rate of effort had proved not 'as high as we would like'.³³
- 3.42 Defence did not discuss project delays for the ARH with the Committee in a broader sense. However, it raised two matters that were relevant to this issue.
- 3.43 First, Defence told the Committee that there were indicators, such as the speed and effectiveness of a recent software upgrade, which showed that the ARH had 'reached a level of maturity that I would regard as off the shelf'.³⁴
- 3.44 Other indicators of project maturity were successful integration of weapons systems, in particular mounted guns and Hellfire missiles. For Hellfire, integration had been sufficiently successful that it had paved the way for their adoption on the Tiger/ARH platform in France.³⁵
- 3.45 Defence also informed the Committee that there were also other advanced capabilities integrated into the Australian Tiger /ARH, such as the ability to slave mounted guns to helmet systems, which 'is above what the others in the world are using in Tiger'.³⁶
- 3.46 From this point of view, Defence told the Committee, the project was progressing well. It was 'now just a matter of keeping up with the work rate in order to achieve the milestones'.³⁷
- 3.47 Second, Defence told the Committee that it had responded to problems in the progress of helicopter projects by ensuring that sufficient resources were devoted to them. Two years previously DMO had created 'a specific helicopter systems division' to 'answer that question about resourcing, ensuring that we have that important capability, which our helicopters required for the ADF'.³⁸
- 3.48 This division, 'with those resources led by an experienced general in army aviation, and with a team of aviators and senior project managers who are managing that area' has, Defence told the Committee, produced the 'sorts

33 Major General Fraser, *Transcript*, Thursday 16 April 2009, p.8.

34 Major General Fraser, *Transcript*, Thursday 16 April 2009, p.8.

35 Major General Fraser, *Transcript*, Thursday 16 April 2009, p.8.

36 Major General Fraser, *Transcript*, Thursday 16 April 2009, p.9.

37 Major General Fraser, *Transcript*, Thursday 16 April 2009, p.8.

38 Mr Gillis, *Transcript*, Thursday 16 April 2009, p.9.

of performances we are seeing now on these new platforms', which 'are a testament to that resourcing'.³⁹

3.49 At the 21 August 2009 public hearing, Defence advised the Committee that the latest position was:

We have accepted 16 aircraft at the moment and three of those are in the mature configuration, the final configuration for Tiger, which is a software based platform, as you saw during your visit. We are on schedule to achieve for Army the initial operational test and evaluation milestone later this year, where they will take the aircraft, having been individually trained, and migrate across the collective war-fighting skills to truly fight the aircraft. That is going well. Essentially, we have completed most of the risk areas associated with testing. There is still a little bit to be done to tidy up some certification work for night and for instrument flying of the aircraft, but the gun work was done recently, about three months ago. You might have seen some media associated with the aircraft that flew and fired a live fire demonstration in Darwin, with the Abrams tanks, with the light armoured vehicles and with the soldiers of the 1st Brigade. That was very important, I think, for the capability itself and for embedding it into Army operations... As for the total fleet, we have flown now 4,200 hours and fired about 4,000 rounds out of the cannon, which is an exceptional weapon. I think they briefed you on the accuracy of the hellfire missile. That integration has been a great success. Dr Gumley has provided evidence to you and to other committees previously about the technical challenges we had with the Tiger, as a developmental type aircraft. It certainly was that when we bought it. It was more developmental than we would have liked, but we have been very satisfied with the contractor and with DGA's support to bring us to the capability we are now fielding.⁴⁰

Committee comment

- 3.50 The Committee is encouraged to see that the Tiger / ARH project is moving toward a successful conclusion, despite some delays that beset the earlier stages of this project.
- 3.51 For this project, there have been readily-identifiable risk factors that have contributed to delays. Defence's position as an early-adopter / purchaser

39 Mr Gillis, *Transcript*, Thursday 16 April 2009, p.9.

40 Major General Fraser, *Transcript*, Friday 21 August 2009, p.7-8.

of Tiger / ARH is clearly one aspect of this. In this context though, we note that the Australian development of the Tiger has outpaced the French parent facility.

- 3.52 However, the Committee notes that there have been certification issues for both the Tiger and Chinook helicopter projects.⁴¹ It is the Committee's view, therefore, that Defence should review its procedures on certification.

Joint Strike Fighter

Introduction

- 3.53 Australia's interest in the Joint Strike Fighter (JSF) stems from the identification of a requirement for air superiority fighter capability by the Defence White Paper 2000.⁴²
- 3.54 In the 2009 Defence White Paper, the government announced its intention to acquire 'around 100 F-35 JSF' aircraft, and 'not fewer than 72'.⁴³ This will see Australia move from its present participation in the System Design and Development (SDD) phase of the JSF project to actual acquisition of the aircraft. The DMO project, *Acquiring Leading Edge Air Combat Capability* is dedicated to managing this process.⁴⁴
- 3.55 The JSF acquisition will be the most expensive single acquisition in Defence's history. As our sole or principal air fighting platform, it is also arguably our most important defence acquisition.
- 3.56 The JSF is regarded as a technologically-advanced aircraft. Claims for it are that, to an advanced degree, it will be able to identify hostile and friendly forces, provide a single, fused stream of information on 'situational awareness', and track and attack a wide range of targets in real-time.⁴⁵ This is regarded as a significant advance over previous military aircraft.

41 Major General Fraser, *Transcript*, Thursday 16 April 2009, p.4.

42 *Defence 2000: Our Future Defence Force*, 2000, Commonwealth of Australia, viewed 27/03/09 <http://www.defence.gov.au/publications/wpaper2000.PDF>, p.85.

43 Department of Defence 2009, *Defending Australia in the Asia Pacific Century: Force 2030*, http://www.defence.gov.au/whitepaper/docs/defence_white_paper_2009.pdf, pp.78-79.

44 *Acquiring Leading Edge Air Combat Capability*, viewed 27/03/09, [http://www.defence.gov.au/dmo/lsp/Joint%20Strike%20Fighter%20\(JSF.cfm](http://www.defence.gov.au/dmo/lsp/Joint%20Strike%20Fighter%20(JSF.cfm)

45 Houston, Angus 2004, *Is the JSF good enough? - Can Australia's air combat requirements be met by the JSF, or do we need the F/A-22?* ASPI, viewed 30/03/09

- 3.57 In current terminology, the JSF is a 'fifth generation' aircraft, that is: it embodies stealth (low visibility to radar) characteristics pioneered in the F-117, B-1 bomber and F-22 aircraft. Stealth characteristics provide such aircraft with an advantage due to a lower vulnerability to enemy guided weapons and sensing.⁴⁶
- 3.58 Further interest in the JSF is created by the prospect of elements of the Australian defence industry being contracted to supply products to the project.⁴⁷

Surrounding debates

- 3.59 This is one of the most controversial defence procurement projects of recent years. This is due to several factors. There are two essential areas of debate. One which can be characterised as relating to business processes and a second that considers JSF technical capabilities.
- 3.60 Firstly, business arguments focus on the original decision in 2002 for Australia to take part in the SDD phase made outside existing procurement protocols.⁴⁸ This appears to work against undertakings that defence procurement will increasingly take place under strong conventions of process and review.
- 3.61 Secondly, the JSF is a high-risk project that entails early acquisition of an unproven product. A number of authoritative sources indicate that taking this role as a 'lead customer' correlates with higher levels of risk in defence acquisitions.⁴⁹ This combination could bring significant levels of risk to the project.
- 3.62 A further dimension of risk is that the number of JSFs to be acquired by other nations remains unknown, particularly in view of the Global Financial Crisis. It has been suggested that lower numbers from other

http://www.aspi.org.au/publications/publication_details.aspx?ContentID=56&pubtype=6, p.4.

- 46 These matters are covered in greater detail in the report of the Joint Standing Committee on Foreign Affairs Defence and Trade, 2007, *Inquiry into Australian Defence Force Regional Air Superiority*, Parliament of Australia, viewed 09/04/09, <http://www.aph.gov.au/house/committee/jfadtd/adfair/report/fullreport.pdf>.
- 47 Wright, Christopher 2006, 'The Joint Strike Fighter: a global supply chain with local impact', in *The business of defence: sustaining capability*, ed. Marsh, I., CEDA, Melbourne, pp.66-67.
- 48 Wright, Christopher, 2006, 'The Joint Strike Fighter', p.65.
- 49 ANAO, *DMO Major Projects Report 2007-08*, p.52.

purchasers – including the US – could result in a higher cost for Australia.⁵⁰

- 3.63 ‘Technical arguments’ focus on the extent to which the JSF is the best means available to fulfil the identified requirement for an air superiority fighter. On one side there are those who see the JSF as the technologically-capable fighter that it is promised to be,⁵¹ or that it is simply ‘the only 5th generation aircraft available’.⁵²
- 3.64 In essence, these views focus on an asserted technological superiority for the JSF, particularly in the realm of sensing and targeting.⁵³ If they prove to be valid, claims for JSF capability – such as the ability to track multiple targets simultaneously, to fuse information streams into a single picture, and to share information with other aircraft and systems – puts the project squarely within the domain of Network Centric Warfare.
- 3.65 There are also critical views on JSF. Some suggest that the JSF is too small to provide an adequate air superiority capability. This, it is suggested, limits the JSF in terms of range, capacity to carry weapons, and prevents the JSF from being fitted with improved radar facilities as they become available.⁵⁴ These limitations have been supported by war-game simulations against possible antagonists.⁵⁵
- 3.66 A further criticism is that the JSF has inferior flight characteristics to other aircraft currently being acquired by other nations in Asia and South-East Asia, notably aircraft of the Sukhoi Su-35 family.⁵⁶ Debate over this encapsulates differences between those in favour of the JSF and those against. Pro-JSF opinion asserts that technological superiority in stealth, sensing, targeting and data capabilities makes this unimportant,⁵⁷ or less

50 Kopp, Carlo 2007, ‘Lockheed-Martin F-35 Lightning II Joint Strike Fighter - Assessing the Joint Strike Fighter’, *Air Power Australia*, viewed 30/03/09 <http://www.ausairpower.net/APA-JSF-Analysis.html>; Kerr, Julian 2009, ‘JSF consortium pricing on the cards?’ *Australian Defence Magazine*, vol. 17, no. 3, p.84.*

51 Gubler, Abraham S 2009, ‘Gauging the Lethality Edge of the F-35’, *Australian Defence Monthly*, vol. 17, no. 3, pp.36-40.

52 Air Marshal Errol McCormack in *The Defence White Paper - Balancing Competitive Demands*, 2008, Royal United Services Institute of Australia (RUSI), viewed 27/03/09 http://dpl/Books/2008/RUSI_DWP_Forum_Proceedings.pdf, p.22.

53 Houston, Angus 2004, *Is the JSF good enough?* p.4 ff.

54 Kopp, Carlo, 2007, *Lockheed-Martin F-35 Lightning II Joint Strike Fighter*.

55 Stillion, John & Scott Perdue 2008, *Air combat past, present and future*, Rand Corporation, viewed 30/03/09 http://reporter.kro.nl/downloads/rand_pacific_view.pdf.

56 Kopp, Carlo 2007, *Sukhoi Flankers - The Shifting Balance of Regional Air Power*, *Air Power Australia*, viewed 30/03/09 <http://www.ausairpower.net/APA-Flanker.html>.

57 Gubler, Abraham S, *Gauging the Lethality Edge of the F-35*, p.40.

important.⁵⁸ JSF sceptics, however, say that recent developments (particularly Infra-red sensing) make stealth characteristics a less significant advantage, and that as 'opposition' forces develop technological responses to stealth technology, flight characteristics of aircraft become correspondingly more important.⁵⁹

GAO report on scheduling and cost

3.67 An important further strand of debate and information on JSF comes from the US Government Accounting Office (GAO). A series of GAO reports have identified or anticipated cost and time-line overruns.⁶⁰

3.68 The most recent GAO report on the JSF identifies a 30 per cent increase in project costs and a two-year delay in the project schedule.

3.69 Importantly, in this report, the GAO expresses strong concerns over decisions to conduct a very high proportion – without precedent – of testing for the JSF in laboratory conditions. The Committee notes that when this concern was put to Defence the response was:

The JSF project officers also looked at that and given the size of the JSF production run they have done some costing based on the F22. They looked at the cost of the retro fit to correct any errors against the size of the JSF program. The business case was that it was far more cost-effective to keep going.⁶¹

3.70 While accepting that the two projects are very different, the Committee notes a marked contrast with the position Defence took in its evidence at para 2.15 of this report during a similar discussion on retrospectivity and the HF Communications project:

As a part of the program to try to catch up time, they cut corners on their systems engineering process. The cutting of corners and then led to rework. It takes you longer to rework stuff than it does to do it right in the first place.⁶²

58 Houston, Angus, 2004, *Is the JSF good enough?* p.4 ff.

59 Kopp, Carlo 2004, 'F/A-22As, JSFs and 21st Century air combat', *Air Power Australia*, viewed 30/03/09 <http://www.ousairpower.net/0915-ADM-Rebuttal.pdf>.

60 GAO 2006, *Major Weapon Systems Continue to Experience Cost and Schedule Problems under DOD's Revised Policy* (GAO-06-368), GAO, viewed 24/03/09 <http://www.gao.gov/new.items/d06368.pdf>; GAO 2009, *Joint Strike Fighter: Accelerating Procurement before Completing Development Increases the Government's Financial Risk* (GAO-09-303), viewed 27/03/09 <http://www.gao.gov/new.items/d09303.pdf>.

61 Air Vice-Marshal Harvey, *Transcript*, Friday 21 August 2009, p.12.

62 Ms McKinnie, *Transcript*, Thursday 16 April 2009, pp.40-41.

- 3.71 The GAO also notes that under current project time-lines a significant number of aircraft are to be provided to the US military before the full suite of test aircraft come off the production line. In the view of the GAO, both of these factors significantly increase overall risk associated with the project.⁶³
- 3.72 The main source of risk for the project, however, is the very considerable task of software development and systems integration whose scale and complexity may be unprecedented. It is notable that commentators both in favour and against the JSF agree that these are pivotal areas for the project.⁶⁴

Current status

- 3.73 In terms of scheduling, on 21 August 2009 the Committee was informed that:

The JSF is on schedule, I think the test program is running four or five months late. The aircraft are going through the factory and being built pretty much on time but the test program has been delayed by about four or five months. Before we get our aircraft that will be caught up of course because this affects the early delivery of the US aircraft and we are some years behind the US. It is not something I lose much sleep about. About this time last year I gave some estimates and they have not really changed that much on cost.⁶⁵

- 3.74 In terms of costing estimates the Committee received the following advice from the DMO:

The F135 engine though is more expensive than people expect. Lockheed and Pratt and Whitney are working very hard now on how they can get the engine costs down. The airframe itself is coming through at about the same price as we talked about last year. It is not cost that worries us so much, it is the four or five months behind schedule and how that is going to affect the test program.⁶⁶ The DMO added:

63 GAO 2009, *Joint Strike Fighter: Accelerating Procurement*.

64 Houston, Angus, 2004, *Is the JSF good enough?* p.5; Kopp, 2007, *Lockheed-Martin F-35 Lightning II Joint Strike Fighter*.

65 Dr Gumley, *Transcript*, Friday 21 August 2009, p.9.

66 Dr Gumley, *Transcript*, Friday 21 August 2009, pp.9-10.

The system development demonstration phase was essentially based on a contribution by the partners, the US government, where they are responsible for about 90 per cent of total development and they have taken on the increased cost of development, other than in one small area where we contributed or proposed to contribute, but otherwise we are protected because the US takes the lead in the development costs.⁶⁷

- 3.75 The Committee notes that, as matters currently stand, there will only be one engine type available for this aircraft:

People say it is good to have two engines, both for strategic reasons – you could only have half the fleet down perhaps – and because it is good to have competition. They have a strategic reason for their base capability in the country to build fighter engines. The counter argument is that it is a lot cheaper to just design one engine, because it is some billions of dollars to design it. With one engine type, you are producing twice as many and you get down the learning curve and it is cheaper. That is still in discussion in Congress at the moment.⁶⁸

- 3.76 The Committee also notes that there are contemporary examples of risks with a single engine type:

...there is the fact that occasionally an engine goes crook and a whole fleet can be grounded, so there might be an argument to have two types of engines. It has happened to our Hawk lead-in fighter aircraft recently, where an engine got crook and we had to ground the fleet for a short period of time. So there are reasons both ways and that is why Congress is tussling with it very carefully at the moment.⁶⁹

Committee comment

- 3.77 This is a highly complex acquisition with inherent risks that have been highlighted by the GAO. When such issues are raised within the United States Government there are concurrent reassurances from the manufacturer and those involved in the project. From an Australian perspective, such inconsistencies are, at times, difficult to reconcile:

67 Air Vice-Marshal Harvey, *Transcript*, Friday 21 August 2009, p.10.

68 Air Vice-Marshal Harvey, *Transcript*, Friday 21 August 2009, p.14.

69 Dr Gumley, *Transcript*, Friday 21 August 2009, p.14.

I also have trouble reconciling the two views. I go across to the CEOs conference for the Joint Strike Fighter and we get presented with lots of data and the data looks reasonably positive. I think it is honest – they tell us where there are problems; for example, the four or five months of testing and so on. But what I do is reconcile that against where Australia sits in the program. On Wedgetail, we are the lead customer and we are wearing a three-year delay. On JSF, we take most of our aircraft at years 5 and 6 of the program, so, even if a two- or three-year delay does happen, it affects us a lot less than it affects the Americans.⁷⁰

- 3.78 This is not a project Defence or Australia can afford to get wrong. If the delays and capability shortfalls that have been experienced with Wedgetail are replicated with JSF there will be serious implications for Australia's defence and regional stability.

Hornet Upgrade

- 3.79 The Committee sought an update regarding the contractual arrangements between British Aerospace (BAE) and Defence:

...the contract with BAE was signed last week, so the matter is now settled. When you last examined the issue, of course, there was some uncertainty about whether or not BAE had the intellectual property to sign a contract and there was some tooling and froing and some examination of the legal contract behind that. We were able to sign that contract with BAE and L3 as a partner in that contract last week.⁷¹

- 3.80 The Committee asked for an outline on what the upgrade program will contain now that the contract has been assigned to BAE:

There are two contracts that have been let recently, and they may tend to get confused. The first one is the one that has just been signed by BAE with L3 as a partner. That covers the structural refurbishment elements of the Hornet upgrade and some of the routine servicing. That is the contract that was signed last week. Boeing has just been selected as the preferred tenderer for a second contract which is the incorporation of electronic warfare upgrades of the fleet. They are the preferred tenderer and we would expect that worked to commence in May. So both BAE and L3 will be

70 Dr Gumley, *Transcript*, Friday 21 August 2009, p.13.

71 Air Vice Marshal Thorne, *Transcript*, Thursday 16 April 2009, p.2.

working on Hornets and Boeing, if they are successful with the contract negotiations, will work on the electronic warfare upgrades.⁷²

- 3.81 The Committee is concerned about reports of problems with intellectual property rights within this project.
- 3.82 The Committee notes the challenges concerning the ongoing structural issues affecting what is now an ageing fleet. The Committee were reassured by Defence's view that:

Our program to upgrade the Hornets – the F18A and F18B models – has been going very well. I think we have probably got F18As and F18Bs that are as good as anybody else's in the world. It is a very capable aircraft and we have kept abreast of the technology that is available. So I am very comfortable with that.

Of course, you would be aware that as we go further downstream we do start to encounter some fatigue management issues and there will be a need to basically replace the centre barrel. The centre barrel is the central part of the fuselage of some of the F18 aircraft that we have in the fleet. But with the introduction of the Super Hornet we have got a little more breathing space than perhaps we would otherwise have had. We should be able to transition into the Joint Strike Fighter quite effectively in the fullness of time. I am very comfortable with where we sit at the moment.⁷³

72 Air Commodore McPhail, *Transcript*, Thursday 16 April 2009, p.3.

73 Air Chief Marshal Houston, *Transcript*, Friday 19 June 2009, pp.6-7.

Maritime Capability and Procurement

Introduction

- 4.1 During 2007-08 it was clear that maritime assets would make up a large part of the Defence procurement program for the next decade or more. The 2009 Defence White Paper confirmed and strengthened the importance of maritime procurement by describing a leading role for the Royal Australian Navy (RAN) within Australia's defence posture.¹
- 4.2 In hearings for the *Review of the Defence Annual Report 2007-08*, the Committee engaged Defence on a number of topics, including procurement and force readiness.
- 4.3 In relation to the Air Warfare Destroyer (AWD) project, Defence told the Committee that building would be initiated in September of 2009,² and while the current order was for three ships, an absolute deadline to expand the order to four ships would not be reached until July 2009.³ The Committee notes that in a press release on 13 October 2009 the Government stated:

...Australia's \$8 billion Air Warfare Destroyer (AWD) project was progressing well and would commence hull construction in the next few months... The AWD Alliance has recently signed six contracts worth approximately \$18 million with Australian

1 Department of Defence 2009, *Defending Australia in the Asia Pacific Century: Force 2030*, viewed 2 May 2009, http://www.defence.gov.au/whitepaper/docs/defence_white_paper_2009.pdf.

2 Mr King, *Transcript*, Thursday 16 April 2009, p.48.

3 Mr King, *Transcript*, Thursday 16 April 2009, p.43.

companies for the supply of a wide range of services and equipment for the three Air Warfare Destroyers.⁴

- 4.4 The Committee raised its concerns regarding the tender process for the AWD in particular the viability of Australia's shipbuilding capacity noting that competition may be eroded and as a result 'Australian jobs will be lost, and Australian opportunity will be lost and we will be left with only one major shipbuilder in Australia.'⁵
- 4.5 In relation to the project to acquire Landing Helicopter Dock (LHD) amphibious ships, Defence told the Committee that the project was 'in good shape'. Delays that had arisen for ships built for the Spanish navy, and storm damage to the originating shipyards in Spain would not affect the construction of LHDs for the Australian order.⁶
- 4.6 Defence and the Committee engaged in more extensive discussion of three other topics, considered in this chapter, including:
- The provision of a new ship-based helicopter capability for the RAN's ANZAC class frigates, particularly in view of:
 - ⇒ the failure of the Seasprite project, and
 - ⇒ the RAN's need to find a replacement for its ageing Seahawk helicopters, and
 - The readiness for deployment of the present FFG (Guided Missile Frigate) fleet.

Seasprite - SEA 1411

Introduction

- 4.7 Helicopter capability plays an integral role in modern maritime warfare, providing Intelligence, Surveillance and Reconnaissance (ISR) facilities, and weapons platforms for air-to-ship and anti-submarine weapons. The increased altitude and mobility available to helicopters increases the range and reach of both sensing and weapons platform applications.

4 <http://www.minister.defence.gov.au/gregCombettpl.cfm?CurrentId=9581>, Press release 85/09 dated 13 October 2009.

5 The Hon. Bob Baldwin MP, *Transcript*, Friday 19 June 2009, p.16.

6 Mr King, *Transcript*, Thursday 16 April 2009, p.48.

- 4.8 The Seasprite project, cancelled in March 2008, sought to acquire a new ship-based helicopter capability for the RAN's 8 ANZAC class Frigates. The helicopter was to provide situational awareness for the frigates via sonar and radar, and to have the capacity to carry and deploy anti-ship and anti-submarine weapons.
- 4.9 A request for tender for the project was issued in 1995, and a contract with the preferred tenderer was signed mid-1997. 'Fully-compliant' deliveries were to have commenced in early 2001, but problems with software and systems integration led to delays.⁷
- 4.10 These delays were ultimately to prove intractable. In 2006, all RAN Seasprite helicopters were grounded due to concerns with the in-flight control system. Ultimately, concerns with software and systems integration resulted in the project's cancellation.
- 4.11 In 2008, announcing the decision to cancel the project, the Minister of Defence commented that the project represented \$1.3 billion of tax-payers' money 'down the drain'.⁸ A subsequent newspaper article suggested that as a result of an agreement with the prime contractor Australia stood to recoup \$40 million of this.⁹

Public Hearings

- 4.12 In hearings, Defence told the Committee that software and systems integration had played a large part in the failure of the Seasprite project:
- The biggest issue for integration, as you quite rightly point out – the biggest task – was understanding the risk and difficulties of integrating a complex software system into an older analogue airframe ... It was our ability to solve those that faced us with the greatest challenge, both in the tactical system for the combat system and in the flight control system.¹⁰
- 4.13 Defence told the Committee that further problems arose in connection with the process of certification for airworthiness. This brought the project to the point of failure:

7 Thomson, Mark, *Cost of Defence 2007-08*, p.172.

8 'Australia cancel Sea Sprite contract', 2008, *Radio Australia*, 5 March 2008, viewed 24/03/09 <http://www.abc.net.au/ra/news/stories/200803/s2181094.htm>.

9 'Seasprite saga ends, salvaging \$40m', 2008, *The Australian*, March 20, 2008, viewed 24/03/09 <http://www.theaustralian.news.com.au/story/0,25197,23407856-601,00.html>.

10 Major General Fraser, *Transcript*, Thursday 16 April 2009, pp.4,6.

The issue was just trying to integrate and certify to Australian standards. Our expectations changed, the contemporary standards changed over that period of time, informed by the two major helicopter accidents that we had during that period of time. So the Australian appetite – both the military and public perception – was for a greater degree of certainty about the certification and other issues for the aircraft.¹¹

4.14 Defence told the Committee that in this instance it had initiated the project without a ‘true assessment’ of these difficulties.¹²

4.15 The Committee asked Defence whether the unique, ‘one-off’ nature of the project had contributed to its risk of failure, to which Defence agreed. In view of this, the Committee asked Defence about its criteria for when military equipment should be ‘customised’ or ‘Australianised’. Defence told the Committee that there was now a heightened imperative for Defence to procure off-the-shelf equipment ‘where we possibly can’.¹³

4.16 To support this, Defence cited the example of another helicopter, the Chinook, currently in use by the ADF. This had been kept to a ‘US-standard configuration as closely as possible’. Modifications were kept to a minimum, and such changes as were adopted were driven by the ADF’s need to use helicopters in a wider variety of roles, as compared to other countries with greater numbers of helicopters at their disposal.¹⁴

4.17 Defence told the Committee that reforms in procurement reduced the likelihood of a repetition of the difficulties Defence experienced with the Seasprite project:

Since then, and since the formation of DMO in 2000, we have had the Kinnaird review and the implementation of that from 2003 onwards. Indeed, the Mortimer review will strengthen that to make sure that we truly understand what those risks are and, where necessary, still take an appropriate level of risk but make sure that appropriate resources, schedule and cost are apportioned to the risk reduction requirements for the introduction of that equipment.¹⁵

11 Major General Fraser, *Transcript*, Thursday 16 April 2009, p.6.

12 Major General Fraser, *Transcript*, Thursday 16 April 2009, p.4.

13 Major General Fraser, *Transcript*, Thursday 16 April 2009, p.4.

14 Major General Fraser, *Transcript*, Thursday 16 April 2009, p.4.

15 Major General Fraser, *Transcript*, Thursday 16 April 2009, p.4.

- 4.18 In relation to recovery of some costs on the failed Seasprite project, Defence advised the Committee that this was being pursued through prospective sales of whole aircraft and spare parts:

What we negotiated between command and ourselves was that command would take ownership of the aircraft and equipment to try and resell them and provide us with some funding back. That was subject to US government approval. That US government approval was obtained on 6 February this year, and the transfer was exchanged for bank guarantees on 12 February this year. Command are actively marketing the aircraft and equipment at this point in time, and we have started to get some flow of sale from some of those parts. It is a small amount at this point in time, but we are comfortable that they are at least trying to sell them. We are working cooperatively with command to maximise the best possible sale value, but command is taking the liability and the warranty issues, to rectify the issues that we were not able to bring the aircraft into service for. It was \$39.5 million, just to clarify.¹⁶

Committee comment

- 4.19 In the Committee's view, the failure of the Seasprite project is a powerful indicator of the risks Defence takes on when it attempts to acquire unique equipment. All of the key elements that contributed to the collapse of this project – specialised software development, systems integration and difficulties with certification – are common factors in project risk, which are exacerbated where procurements are unique or unusual.
- 4.20 For the Committee, the low level of cost recovery for Seasprite underscores this point. To date, a very low proportion of the project outlay is expected to be recovered.
- 4.21 At the same time, in the Committee's view, the true cost of the project's failure is not only to be counted in dollar terms. It is also to be counted in terms of capability not available to the ADF, where it may in fact be needed.
- 4.22 The Committee is encouraged by Defence's assurances that the Kinnaird and Mortimer reviews have had a positive impact on the process of defence procurement, in that there is a higher expectation that procurements will be off-the-shelf, and in the sense that there is both a better appreciation of risk and means to mitigate project risk.

16 Major General Fraser, *Transcript*, Thursday 16 April 2009, p.5.

- 4.23 But in the Committee's view there is a need for Defence to continue to press forward with this message so that it can achieve, to a full extent, what amounts to a very significant change in the culture of Defence procurement. Such projects as Seasprite, which manifest very substantial delays and increased project costs, will ultimately undermine public support for Defence procurement if they continue.

Seahawk replacement

- 4.24 The Committee asked Defence about its plans to replace the Seahawk helicopter, which currently provides a helicopter capability on RAN ships.
- 4.25 Defence told the Committee that this procurement was planned under Project AIR 9000 phase 8, and that more information about this procurement would be forthcoming in the 2009 Defence White Paper.
- 4.26 In the meantime, Defence told the Committee, there would be limited upgrades to the existing Seahawk fleet, sufficient to keep them in service until their nominated end-of-life in 2025.¹⁷ This is 'a capability assurance program to make sure we retain the level of capability in the Seahawk until the end of its life'.¹⁸
- 4.27 The Committee expressed concern as to the amount of time left to Defence to acquire a replacement for the Seahawk. Again, Defence told the Committee that reforms arising from the Kinnaird Report had resulted in a better procurement process, capable of delivering such a capability within the necessary time-frame. In describing this change, Defence described procurement processes before the advent of the reform process:

Kinnaird talked about spending time and effort and, importantly, money, to get your facts right before you go to government and second pass. That is really important. In the bad old days, 10 or more years ago, we went to government to get its agreement before we knew what the requirements were and before we knew what were the costs or the risks. In the old days they would claim that you got approval from government very quickly. But then we were doing a lot of stuff that we should have been doing before we went to government.¹⁹

17 Vice Admiral Tripovich, Major General Fraser, *Transcript*, Thursday 16 April 2009, p.12.

18 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.12.

19 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.13.

- 4.28 Defence went on to contrast this with the way procurement works now that reforms have begun to take hold:

Now we frontload all that effort and it takes a long time to get to second pass. The theory is that you have a request for tender or an offer from an FMS case, or a foreign military sales case, and you know the risks, the costs and the schedule, and you have sufficient provision. Theoretically, shortly after the government gives approval you can come back and sign a contract and get going. The decision point has moved further out but the action you have to take to activate the government's approval can happen relatively quickly.²⁰

- 4.29 Defence noted that the rapidity with which procurements can be conducted then rests on the degree to which the chosen solution is off-the-shelf:

Once again, it depends on the maturity of the solution and whether or not any more work has to be done. With the C17 you are literally buying them off the shelf.²¹

Committee comment

- 4.30 The Committee will continue to take an interest in this project, particularly in view of RAN ship procurements currently underway, which will require embarked helicopters to fulfil their intended capability. This is heightened in view of the increased priority on maritime capability adopted in the 2009 Defence White Paper.

Operational readiness of the FFG fleet

- 4.31 The Committee engaged Defence on the preparedness of the RAN's FFG fleet for operations. The Committee asked Defence to advise on the progress of the current FFG upgrade, Project SEA 1390. In particular, the Committee asked if the readiness to be deployed in support of operations near the Persian Gulf would be compromised by the progress of the upgrade.²²

20 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.13.

21 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.13.

22 Various, *Transcript*, Thursday 16 April 2009, pp.45-47.

- 4.32 Defence told the Committee that the FFG upgrade was currently in an advanced stage:

The vast majority of the upgrade work has been completed. We have a missile upgrade program that goes with it, but it is a collateral program. The electronic systems measures system and some of the torpedo detection systems are the last two major areas of concern in terms of the contractor meeting requirements for the ships to be accepted.²³

- 4.33 Upgrade to three out of four ships would be complete by the middle of 2009, and the fourth would be completed by December 2009. For the ships that were approaching the completion of the upgrade, Defence told the Committee that the 'core upgrade [had] met all its testing'.²⁴

- 4.34 Defence told the Committee, however, that questions of operational readiness of vessels for a particular theatre or application were a separate question. DMO can 'make sure that it meets the technical requirements', but questions of operational readiness are dependent on the capabilities of the vessel and the demands of the theatre and operations under consideration.²⁵

- 4.35 Defence told the Committee that the RAN then conducts its own tests, against its own criteria, to determine operational readiness against the characteristics of the envisaged scope of operations:

At the end of the day after the DMO says here it is to the Chief of Navy he will know the bits that he now has to test. He will then determine in what theatres it can be released to operate. Is there a submarine or not? In that scenario that will determine how important ASW is. Is there an electronic threat, yes or no, will determine how important that electronic support measure is to the scenario. It is very much likely scenario driven.²⁶

23 Mr King, *Transcript*, Thursday 16 April 2009, p.46.

24 Mr King, *Transcript*, Thursday 16 April 2009, p.46.

25 Mr King, *Transcript*, Thursday 16 April 2009, pp.46-47.

26 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.48.

4.36 Consistent with this principle, for deployment to the Persian Gulf Defence told the Committee that there are particular environmental characteristics to which a ship should be ready to respond:

... in taking a ship to the gulf – and the Chief of Navy is concerned about certain threats that exist there – it is important to have the ESM system. In his determining that a ship is ready to do that, not only do you have to have the system performance, you also have to have the people performance and everything else.²⁷

27 Mr King, *Transcript*, Thursday 16 April 2009, p.49.

Land capability and procurement

Introduction

- 5.1 The Committee engaged Defence on a number of land procurement projects. Some of these are occasioned by the need to periodically upgrade military vehicles, but in addition there are new requirements that have emerged from the ADFs current overseas deployments.
- 5.2 Coalition involvement in 'asymmetric' conflicts in Iraq and Afghanistan has introduced a significant increase in threats to personnel from Improvised Explosive Devices (IEDs), a type of weapon favoured by opposition forces in these conflicts.
- 5.3 This has highlighted shortcomings in military vehicle design. Current military patrol and other military vehicles, such as the current US standard Humvee vehicle, have been found to be vulnerable to IEDs.
- 5.4 In particular under-vehicle profiles, including wheel wells and other features, have been found to trap blast forces, thus increasing the destructive effect of IEDs on both vehicles and vehicle occupants.¹ Defence procurement in Australia and other countries has sought to respond to these threats.

1 Ogorkiewicz, R M 2009, 'Shaping up for the fight: vehicle design responses to challenge of mine warfare', *International Defence Review*, 10-Mar-2009, viewed 01/04/09
http://search.janes.com/Search/documentView.do?docId=/content1/janesdata/mags/idr/history/idr2009/idr12011.htm@current&pageSelected=allJanes&keyword=IEDs&backPath=http://search.janes.com/Search&Prod_Name=IDR&

- 5.5 As a result, a new generation of vehicles is being sought with designs more resistant to this kind of threat. There are a number of Australian defence acquisition projects relevant to this area.
- 5.6 Procurement projects in related areas, to provide new or upgraded land vehicles and higher levels of protection, are Defence's involvement in the US-led Joint Light Tactical Vehicle program; LAND 121 - Overlander; and the LAND 106 - M113 Upgrade Project.²

Project LAND 121 - Overlander

Introduction

- 5.7 The Defence Materiel Organisation's project description for LAND 121 Project Overlander notes that it is:
- ... a multi-phased project that will provide the Field Vehicles, Modules and Trailers (FVM&T) and the associated support items that the ADF requires beyond the life-of-type of the current assets in order to meet ADF mobility requirements. This large project will deliver several thousand vehicles, modules and trailers over the next decade.³
- 5.8 This approach represents a new model for procurement of this kind, based on an imperative to increase commonality between types:
- Previously, FVM&T replacement programs were based on a fleet by fleet basis. LAND 121 is an amalgamation of the entire FVM&T requirements of the ADF into a single project, seeking to facilitate a materiel solution based on a 'capability brick'.⁴

Public hearings

- 5.9 In hearings, Defence provided further detail to the Committee on the progress of LAND 121:
- It is a complex project. Initially it was a \$3.1 billion project to replace all of army's light, heavy, medium vehicles, trailers and

2 Defence Materiel Organisation 2009, *Land Projects*, viewed 02/04/09
http://www.defence.gov.au/dmo/dmo/function.cfm?function_id=72

3 Defence Materiel Organisation 2009, *LAND 121 - Overlander*.

4 Defence Materiel Organisation 2009, *LAND 121 - Overlander*.

modules – some 12,000 pieces of kit. It was divided into three segments – three RFTs for the heavy medium, the light lightweight capability, and the trailers. The light lightweight segment RFTs are on track and the heavy medium and the trailer segments are going to plan.⁵

5.10 The Committee asked Defence if delays suffered by the project were due to ‘scope creep’ – where the purchaser changes requirements for a project are changed over time, making it more difficult for contractors to meet requirements, and for projects to be completed on time.⁶

5.11 Defence told the Committee that delays for elements of the project arose because ‘basically, industry could not provide the vehicle that they said they would in the tender, and subsequently the scope could not be met by the industry bid’.⁷ As a result, Defence:

...had to adjust the scope after testing in the market. The selected company is now coming back with proposals to meet that program and we are assessing those bids.⁸

5.12 While this process had as a whole resulted in project delays, Defence told the Committee that its response to these eventualities underscored the strength and effectiveness of the reformed procurement process that had resulted from the Kinnaird report, ‘that all these things were found between first and second pass and we could take the decision to government’.⁹

5.13 Defence told the Committee that contractors submitting proposals faced an inherently complex task:

In testing the market we expect companies to position themselves at either a cost or a capability trade off. It is difficult for companies and it is difficult for the requirer when they are going for a whole new capability. This is a complex project; it is about the modules and the module fit and there are many variants within each sector.¹⁰

5.14 This process encourages contractors to adopt a pragmatic response to requirements, and to engage Defence in a conversation on what kind of

5 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.22.

6 *Transcript*, Thursday 16 April 2009, p.23.

7 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.22.

8 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.22.

9 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.23.

10 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.23.

solution will best meet Defence's twin concerns of providing capability while staying within budget constraints:

To get specific, when a company bids it has to position itself to trade off and to provide the most capable vehicle at the least cost. In that capable vehicle there is a trade off between numbers and capability. Again, companies are positioning themselves to say, 'I can provide you with a very capable vehicle and fewer numbers of them. I can provide you with a lower capability or at least I can meet the essential requirements. It is a lower cost and you can get more of them'.¹¹

- 5.15 Defence also told the Committee that the reformed procurement process not only allowed Defence to respond to these proposals in a more flexible manner, but also to respond to changing environmental characteristics, and their consequences for materiel requirements. A chief characteristic of this process is that it allows Defence to step back where requirements are not met, potentially to re-consider requirements in such a way as to respond either to the capability of the market to deliver, or to change, requirements:

The contract was never let; that was the thing about the Kinnaird process. We did not get to contract with them. In the testing of the vehicle the vehicle did not meet the requirements that we wanted. Subsequently, in looking at the re-tender, the ballistic protection requirements had moved on with the threat in the MEAO [Middle East Area of Operations] and capability said, 'Now is an opportunity to re-look at the heavy medium and recast that scope.' It is not a linear process.¹²

- 5.16 The result, Defence told the Committee, is a palpable improvement in procurement practice:

I think we are quite proud of the ability of the DMO...to be able to re-position itself without prejudice to the contractors to say, 'The capability requirement is moving and we will take every opportunity in the Kinnaird process to deliver that high capability.'¹³

11 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.23.

12 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.24.

13 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.24.

Project Land 121 – Phase 4 - Joint Tactical Light Vehicle

Introduction

- 5.17 The Joint Light Tactical Vehicle (JLTV) is a US Department of Defence project to develop and acquire new-generation military vehicles to meet these requirements.¹⁴ Australia is reported as participating in the ‘technology demonstration phase’ of the project,¹⁵ and this is confirmed by statements by the Minister of Defence.¹⁶
- 5.18 Defence anticipates that participation in the JLTV program will provide ‘options available to deliver protected mobility vehicles for the Army under project LAND 121 Phase 4’.¹⁷
- 5.19 Project LAND 121 Phase 4 is a proposal to:
- ...provide the ADF with a light Protected Mobility Vehicle capability (PMV-L), which will serve as the platform for command, control, communications, computers, intelligence, surveillance, reconnaissance and electronic warfare capabilities.¹⁸
- 5.20 Defence may source vehicles from the JLTV project as a means to fulfil this requirement.¹⁹

Public hearings

- 5.21 In hearings, the Committee engaged Defence on two particular aspects of Australia’s involvement with the JLTV project:
- the size, scope and cost of Australia’s procurement with respect to this stage of the project; and

14 Feickert, Andrew 2008, *Joint Light Tactical Vehicle (JLTV): Background and Issues for Congress*, Congressional Research Service, viewed 02/04/09
<http://www.fas.org/sgp/crs/weapons/RS22942.pdf>.

15 Walters, Patrick 2008, ‘Australia to join US in developing army vehicles that offer better protect from roadside bombs’, *The Australian*, October 29, 2008, viewed 31/03/09
http://www.theaustralian.news.com.au/story/0,,24568421-31477,00.html?from=public_rss.

16 Fitzgibbon, Joel 2009, *Opposition wrong on joint light tactical vehicle*, Department of Defence, 18 Mar 2009, viewed 31/03/09
<http://www.minister.defence.gov.au/Fitzgibbontpl.cfm?CurrentId=8896>.

17 Fitzgibbon, Joel 2009, *Opposition wrong on joint light tactical vehicle*

18 Defence Materiel Organisation 2009, *LAND 121 - Overlander*, viewed 28/05/09
<http://www.defence.gov.au/dmo/lsd/land121/index.cfm>.

19 Defence Materiel Organisation 2009, *LAND 121 - Overlander*.

- opportunities for the Australian defence industry to engage with the project. In particular, the Committee sought to explore whether the Australian Bushmaster vehicle, the outcome of LAND 116, could form the basis of a proposal to the JLTV program.²⁰

Scope of project

5.22 With respect to the size, scope and character of the project, Defence affirmed to the Committee that it had contributed money to this JLTV program under the administration of Defence in the US:

Just to clarify, the government has approved that we participate in the joint light tactical vehicle program, which is a United States program. We have contributed our money to their money and their program has selected those three companies to deliver a number of prototypes for evaluation.²¹

5.23 The JLTV project will be based on an assessment of these prototypes.²²

5.24 Defence told the Committee that the JLTV would come in 'various forms from transport that carries about six people down to what I would call a two-seater that carries one tonne of stores'. Out of a variety of possible configurations, Defence were considering four.²³

5.25 Defence told the Committee that Australia would seek to acquire, under LAND 121 Phase 4, 1,200-1,300 vehicles with a load capacity of 1 tonne, depending on the configuration.²⁴

5.26 In characterising the type of vehicle in question, Defence confirmed that those to be acquired under LAND 121 phase 4 were intended to replace Land Rover vehicles currently in use by the Australian Army.²⁵

5.27 Defence advised the Committee that vehicles acquired under an Australian involvement in the JLTV program would provide requisite levels of protection from IEDs, including blast-deflection, consistent with relevant NATO standards.²⁶ Defence could not provide exact requirements for blast-protection as this was classified information.²⁷

20 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, pp.13-14.

21 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.14.

22 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.14.

23 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.29.

24 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, pp.14, 16.

25 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.17.

26 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.17.

27 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.30.

Australian industry engagement

5.28 With respect to opportunities for the Australian defence industry to engage with the JLTV project, the Committee asked Defence whether Australian defence contractors had been given an opportunity to provide prototypes to the US JLTV program.²⁸

5.29 In particular, the Committee asked Defence if it had sought to approach the Australian defence contractor Thales, 'given their success' with the Bushmaster military vehicle in project LAND 116.²⁹

5.30 Defence told the Committee that it had 'consulted industry' in Australia prior to contracts being awarded in the US, but there had been no expressions of interest within the nominated time-frame.³⁰ Defence stated:

We joined the joint light tactical vehicle program which had been underway for a long time and there was nothing else on the market. Nothing else was going at the same time.³¹

5.31 The Committee questioned whether the Australian defence contractor Thales was asked whether it had the capacity or opportunity to design a JLTV:

Did you ask them at any time whether they had the capacity, a design, a draft, or an opportunity?³²

5.32 Defence's response was: 'I did not'.³³

5.33 Requests for proposals for this project were called a second time. In respect of this new requested proposal, Defence advised:

One of the senior directors from Thales came to my office and gave me a rough sketch outline of a proposal on which he had been working.³⁴

5.34 The Committee asked:

...looking at Australian defence industry, there will then be an opportunity for those that put in an RFP that is successful to

28 The Hon Bob Baldwin MP, *Transcript*, Thursday 16 April 2009, pp.14-17; Vice Admiral Tripovich, *Transcript*, Thursday 16 April, pp.14-17.

29 The Hon Bob Baldwin MP, *Transcript*, Thursday 16 April, p.14.

30 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.15.

31 Vice Admiral Tripovich, *Transcript*, Thursday 16 April, p.15.

32 The Hon Bob Baldwin MP, *Transcript*, Thursday 16 April, p.15.

33 Vice Admiral Tripovich, *Transcript*, Thursday 16 April, p.15.

34 Vice Admiral Tripovich, *Transcript*, Thursday 16 April, p.16.

attract financial support from the government for the development of their prototypes?³⁵

5.35 Defence replied:

We will look at the proposals when they come back, but I imagine that if those proposals required some financial contribution to enable them to be fairly developed I think I would be making that suggestion.³⁶

5.36 At the time of the hearings, Defence told the Committee that it was anticipating a point in the near future where Australian industry had a chance to participate:

The important thing is that now that we know there is an opportunity, we are moving quickly to get a request for proposal out and to get industry to tell us what it can do.³⁷

5.37 In light of the \$40 Million provided by the Australian Government to the US program, the Committee asked Defence whether it would consider providing a similar amount of money to support Australian Defence contractors wishing to engage with the JLTV program.³⁸

5.38 In response, Defence told the Committee that:

... if proposals come back that would allow an industry involvement we will take that back to government. It would require money to facilitate it and that is something we would be recommending to government. However, it is for the government to decide whether or not to do that.³⁹

5.39 Speaking to the question of whether Australian defence contractors would receive that support, Defence told the Committee, in effect, that proposals would be considered on merit:

... it is important to have a level playing field...depending on what comes back in the proposals, we will consider them and make some recommendations to the government.⁴⁰

5.40 Defence told the Committee that Australian defence contractors would indeed have an opportunity for input to the JLTV program:

35 The Hon Bob Baldwin MP, *Transcript*, Thursday 16 April, p.16.

36 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.16.

37 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.16.

38 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.15.

39 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.15.

40 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.16.

In October 2008 the government gave approval to go to the Thales JLTV program. On 16 March 2009 the director general of land development....received an email from Thales saying that they would like to brief him about an idea that they had relating to the Land 121 Phase 4. As is subsequently known, they came and talked to us and provided us with an unsolicited proposal. That resulted in us looking at the potential for having a formal request for proposal and, as you know, that process is about to get underway.⁴¹

5.41 This is consistent with statements by the Minister of Defence.⁴²

Committee comment

5.42 The Committee was interested to explore whether the Bushmaster could have formed the basis of a bid for work under the JLTV program. If Bushmaster were to be part of the JLTV, and Defence acquired outputs of the JLTV program, there would be both economies of scale and overseas military sales, producing benefits for Australian Defence Industry.

5.43 In the Committee's view there are two salient issues in Australia's involvement in the US JLTV project.

5.44 First, it appears that Defence in Australia is pursuing a policy of selection-on-merit for the products of local Defence contractors, and this is to be applauded. Australia should lend a measure of support to local contractors with respect to the costs of generating prototypes and similar inputs to development programs, but the choice of best fit for task should conform to a merit principle.

5.45 The second hinges on the importance of an indigenous defence industry in Australia. This is important for both strategic and economic reasons. The Committee will continue to take an interest in the level of support from government to defence suppliers particularly to deal with initial resource issues in bidding for work in the developmental stages of defence contracts.

5.46 The Committee notes the increasing tendency for Defence and indigenous defence contractors to think in terms of participation in international collaborations to develop and produce materiel, and looks forward to future developments with interest.

41 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.29.

42 Fitzgibbon, Joel 2009, *Opposition wrong on joint light tactical vehicle*.

Bushranger – LAND 116

Introduction

- 5.47 Bushmaster vehicles have been discussed above as a possible input to the US-led JLTV program. This section considers another dimension of the program which gave rise to the Bushmaster.
- 5.48 The Defence Materiel Organisation's web-page for LAND 116 describes its purpose and scope:

Project BUSHRANGER will provide protected land mobility to Army combat units and the Royal Australian Air Force's Airfield Defence Guards with the Bushmaster Protected Mobility Vehicle (PMV). A total of 737 Thales Australia Bushmaster vehicles in seven variants will be acquired. The variants are Troop; Command; Mortar; Assault Pioneer; Direct Fire Weapon; Ambulance; and Air Defence.⁴³

Public hearings

- 5.49 In hearings, the Committee engaged Defence on LAND 116, inquiring into project governance and, in particular, questions over the contribution of 'scope creep' to any delays as had occurred in the delivery of project outputs.⁴⁴ The Committee also touched on this question above, in relation to project LAND 121 - Overlander.

Defence told the Committee that such changes in requirements as had occurred in LAND 116 could not accurately be considered 'scope creep'. Defence told the Committee that scope creep was:

...about bad practice – putting out a requirement and then in the negotiating phase increasing the requirement beyond that tolerance so that a company has to increase its costs and you then change the project approval or whatever.⁴⁵

- 5.50 However, Defence told the Committee, in 'the case of tenderers who were invited back to look at the new requirement after the first round, that is not scope creep'.⁴⁶

43 Defence Materiel Organisation, *LAND 116 Bushranger*, viewed 29/05/09 <http://www.defence.gov.au/dmo/lsd/land116/index.cfm>.

44 *Transcript*, Thursday 16 April 2009, p.24.

45 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.24.

46 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.24.

5.51 In this case, Defence told the Committee, 'the vehicles did not meet the specifications', and this led to a new phase of consideration by Defence of 'what could be met and what had to be met':

So it was not creep; it was a question of, 'This is what our requirement is after we have tested the market and seen what can be provided.' We have now gone back again.⁴⁷

5.52 Defence then provided more detail about this process in general within procurement:

There are a large number of specifications on these vehicles, and rightly so, to discriminate between contenders and to settle the requirement. They are graded as essential, important and very important. When bidders come back they have a range of capabilities that they can offer. Bidders might be strong in some areas but they might not comply with others. In the negotiation period it becomes a matter of cost.⁴⁸

5.53 Defence added:

Subsequently the scope changed quite fairly and companies have been re-bidding on that scope. But it became clear that the vehicle that was tendered at the cost it was tendered gave it an advantage. In a large number of cases it did not meet the requirements that we wanted. To do so, the costs were adjusted up significantly, which made it necessary to go back to government and to say, 'This is not the solution that we want.'⁴⁹

5.54 Defence advised the Committee that this was an example of the reformed Defence procurement process, that 'this is the Kinnaird process working':

We did this test and evaluation; we have the tenders in; we have evaluated the tenders; and we found that they did not meet the requirements. We then said to the tenderer, 'No, we will not progress.' That is not what we were doing 10 or 15 years ago. We would probably have selected somebody and we would then have found out what was going wrong. This process is working.⁵⁰

47 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.24.

48 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.25.

49 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.25.

50 Mr Gillis, *Transcript*, Thursday 16 April 2009, p.25.

M113 Upgrade – LAND 106

5.55 The Committee asked Defence to comment on delays experienced in connection with the M113 Upgrade project.

5.56 LAND 106 is a project to 'provide a major upgrade' to all of 'the Army's in-service M113A1 vehicles', to a total of 431 vehicles. Defence claims that the 'upgrade will provide significant enhancements in protection, lethality and mobility while also providing improved supportability'. Seven variants of the M113A1 vehicle are in production.⁵¹

5.57 Defence told the Committee that the project had 'experienced some technical problems', which have now been 'overcome':

We were behind with the technical problems. Before we went into full production we were a year behind, which has been well canvassed in the public. We are now looking at clawing back a year of that schedule and the company is committed to delivering all the 350 vehicles by December 2010 in accordance with the original contract.⁵²

5.58 This, Defence told the Committee, was:

... a terrific effort for the project and the company. Usually when you get that far behind in a project you do not deliver; that lag position remains. So we have done pretty well.⁵³

While the company is still 'behind its planned production rate', steps have been taken to increase capacity by establishing new facilities. Defence told the Committee that while 'this is still a high-risk program', in view of this increased production, all 'indications are that that program will be delivered in accordance with the contract timetable.'⁵⁴

51 Defence Material Organisation 2009, *LAND 106 – M113 Upgrade*, <http://www.defence.gov.au/dmo/lsd/land106/index.cfm> viewed 28/05/09

52 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.20.

53 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.21.

54 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.21.

Committee Comment

- 5.59 Defence is making real efforts to bring robust improvement to its procurement procedures. Notable improvements have emerged in Defence's agility with regards to project requirements.
- 5.60 It affords Defence a greater capacity to respond to other eventualities, outside the procurement process, to which it may need to respond, such as emerging IED threats faced by ADF personnel in particular theatres of war.
- 5.61 An ongoing commitment to procurement reforms will result in better capability and a better state of readiness for the ADF, providing better value for money.
- 5.62 Land 106 also brings some good news on defence procurement: that projects that fall behind schedule can, under current methods of contract management, be moved back onto schedule.
- 5.63 The Committee welcomes this outcome, and anticipates a future in which it is the norm rather than the exception for defence procurements to come in on-time and on-budget. Every project that does so in the near-term contributes to changing the culture of defence procurement in this direction, and that is an outcome greatly valued.

Defence Personnel

Gender issues

Introduction

- 6.1 The *Defence Annual Report 2007-08* details recent strategies to increase the proportion of women within the Defence establishment. These include efforts to 'provide more family-friendly work arrangements'; the creation of an external Reference Group on Women; and the adoption of a 'comprehensive' Recruitment of Women Strategy.¹
- 6.2 In addition each of the arms of the ADF has strategies in this regard, including: the Air Force 'Making Women Feel Welcome' program, the Navy Sea Change program, and Army trials of reduced Initial Minimum Periods of Service.² There are also a number of Defence-wide and service specific initiatives to promote and market the role of women in Defence, and to monitor and support their progress once women are hired to Defence positions.³
- 6.3 These measures are designed to counter 'popular stereotypes and myths about military life': that is, that it is inherently masculine.⁴ According to the *Defence Annual Report 2007-08* they are motivated by a desire to recruit and retain personnel in a competitive labour market, and to 'create an

1 *Defence Annual Report 2007-08*, Vol.1, p.111.

2 *Defence Annual Report 2007-08*, Vol.1, pp.111-112.

3 *Defence Annual Report 2007-08*, Vol.1, p.111.

4 *Defence Annual Report 2007-08*, Vol.1, p.111.

organisation that is ... representative of ... the Australian community than is presently the case'.⁵

- 6.4 The Defence Annual Report Appendix 1, Staffing & Remuneration, shows the underlying conditions that have spurred these initiatives, and what challenges may lay ahead. It shows that at 30 June 2008, ADF total personnel 86.4 per cent was made up of men, and only 13.6 per cent of women.
- 6.5 Information for each of the arms of the ADF showed considerable disparities between the proportion of men and women who were officers. As at 30 June 2008 male officers in its trained force accounted for 13.5 per cent of Navy personnel were, while female officers made up only 3 per cent of its total trained force.⁶
- 6.6 Snapshots of Defence senior management follow a similar contour. For star-ranked officers, there were only 5 women out of a total of 171. In the 2007-2008 year, 42 male star-ranked officers were promoted and only one woman. Separations for the same year show that 12 male star-ranked officers left the ADF, and no women.⁷
- 6.7 Proportions were only slightly more balanced in senior civilian (Senior Executive Service) positions within Defence. Here there were 31 women out of a total of 125, and 9 men were hired but only 2 women. 11 men left the Defence SES, but no women.⁸
- 6.8 This chapter considers Defence's response to these challenges, detailing Defence's testimony to the Committee, on matters of:
- culture and targets with respect to gender issues;
 - initiatives on gender issues;
 - the gap year program; and
 - other allied approaches to recruitment and retention.

Public hearings

- 6.9 In public hearings, the Committee asked Defence for details on the gender profile of the ADF, whether there were grounds for concern, and

5 *Defence Annual Report 2007-08*, Vol.1, p.111.

6 *Defence Annual Report 2007-08*, Vol.1, p.169.

7 *Defence Annual Report 2007-08*, Vol.1, p.173.

8 *Defence Annual Report 2007-08*, Vol.1, p.174.

Defence's position on this, including Defence's responses and aspirations with regard to achieving greater gender balance.⁹

- 6.10 Defence advised the Committee on gender balance across the Australian armed services, confirming that women made up 13.6 per cent of personnel.¹⁰ Other comparable countries were Canada, where women make up 13.3 per cent of Defence; New Zealand 17 per cent; the United Kingdom 9.4 per cent; and the US 14.4 per cent.¹¹
- 6.11 Defence told the Committee that there were a number of reasons why it sought to increase the proportion of women within Defence personnel. First, 'where possible' Defence 'would like to reflect the community that the organisation serves in terms of its composition'. That, however, 'is a grand aspirational goal': Defence is 'some significant distance from it in respect to women in the ADF [and the] gap will not be closed instantly or quickly'.¹²
- 6.12 Second, Defence told the Committee, the 'simple reason why we are interested in seeing more women in the ADF and more people from a non-English speaking background within the ADF is the notion of talent in the economy'. If Defence fails to do this, if 'we have classes of the external labour market and if you think they do not belong':
- ... we reduce the pool that we are recruiting from. Recruitment is hard enough as it is without crossing people off the list. In essence, we are trying to make sure that people who could be successful in the organisation know that we want them and know that we have a culture that is welcoming to them and so that we do not have any classes of that external labour market population writing us off.¹³
- 6.13 Third, Defence told the Committee, there are other, wider, demographic trends in Australia that lead Defence to a broadening of its target group for recruiting:
- ... with the social issues in our country – the ageing population and all of those factors including that women are 51 per cent of the population – we struggle to get manpower in a man's

9 *Transcript*, Thursday 16 April 2009, p.66.

10 Mr Minns, *Transcript*, Thursday 16 April 2009, pp.66, 70.

11 Mr Minns, *Transcript*, Thursday 16 April 2009, p.70.

12 Mr Minns, *Transcript*, Thursday 16 April 2009, p.66.

13 Mr Minns, *Transcript*, Thursday 16 April 2009, p.69.

environment in the issue, so we would be absolutely bonkers to persist in not trying to get women into our organisation.¹⁴

- 6.14 In summary, Defence told the Committee, that it has raised its expectations on recruiting women to the ADF because it 'just makes absolute sense that we have to keep after women and get them interested in our service'.¹⁵

Culture and targets

- 6.15 The Committee engaged Defence on the question of targets for its recruitment of women to the ADF.
- 6.16 Defence advised the Committee that organisational culture was relevant to such questions. On one hand, 'Defence has dealt with what you would call the deliberate or specific discrimination':

It is not there. It is an organisation that has zero tolerance for people who practise that form of overt discrimination, but it is an organisation that, for a significant part of its history, did not have women in it. So it has many cultural traditions and many policies that were framed in that time frame. You have to make sure that you are working through and addressing those areas. They are kind of like systemic bias: They are not intentional, they are not deliberate, and they are not overt, but they are perhaps still lurking within the organisation historically.¹⁶

- 6.17 Defence told the Committee changing organisational culture in this respect requires a certain proportion of women to be recruited: 'getting critical mass and getting a shift in culture that then becomes self-supporting and reinforcing from that point'. This 'will not happen until you get above 20 or 25 per cent'.¹⁷
- 6.18 Defence suggested that this 'critical mass argument' carries 'some weight' because:

It is about the internal dialogue within Defence and it is about how people with experience communicate with other people in the community to tell them about their experience, their time within the service and their contact with it. If the broad message is positive and there are enough people carrying that message, then

14 Lieutenant General Gillespie, *Transcript*, Thursday 16 April 2009, pp.69-70.

15 Lieutenant General Gillespie, *Transcript*, Thursday 16 April 2009, p.70.

16 Brigadier Fogarty, *Transcript*, Thursday 16 April 2009, p.72.

17 Mr Minns, *Transcript*, Thursday 16 April 2009, p.66.

you start to shift away totally from the idea that it is not an organisation that is a suitable place for a young woman to go or to join.¹⁸

- 6.19 However, Defence told the Committee, whether such targets are achievable is yet to be confirmed:

We have a target of trying to improve our enlistment performance of women through the recruitment activity and that is around the 20 per cent level, but we are currently reviewing it see again if it is a realistic and valid target to put effort and resources into.¹⁹

- 6.20 A target to recruit women as 25 per cent of Defence had not been adopted; rather this figure had been identified as a 'breakthrough' proportion necessary for cultural change.²⁰

- 6.21 However, Defence told the Committee that there are unique challenges in pursuing higher proportions of women, because in some parts of the armed services there are limitations on gender:

Essentially for reasons that are structural in nature, not all of the occupations within the services are open to women, for example. It is quite a lot – it is 94 per cent of the positions – but significant and large components of the Army, for example, are not areas that women enlist in. Indeed they are the areas in which we have seen growth in the last three or four years.²¹

- 6.22 This, Defence told the Committee, has implications for determining targets:

In setting targets, we have to make them mathematically achievable. The Army case is illustrative of why it is a challenge. As the Army grows through the Enhanced Land Force (ELF) program, it is essentially growing its infantry ranks...but that is an area of employment and classification that women cannot enlist in. So the Army is actually growing that part of its workforce from which women are excluded while it is trying to grow women in its workforce. You could set an aspirational target for the Army, but it would be mathematically unachievable.²²

18 Brigadier Fogarty, *Transcript*, Thursday 16 April 2009, p.72.

19 Mr Minns, *Transcript*, Thursday 16 April 2009, p.69.

20 Mr Minns, *Transcript*, Thursday 16 April 2009, p.68.

21 Mr Minns, *Transcript*, Thursday 16 April 2009, p.66.

22 Mr Minns, *Transcript*, Thursday 16 April 2009, p.69.

- 6.23 Defence told the Committee, however, that a more positive view is to see the problem of recruiting numbers and its role in cultural change across the services. The cause of cultural change in the ADF can be advanced in aggregate by areas where the recruiting of women is more advanced:

Actually, if you look at the 67 per cent that we have, the participation rate of women in the Army has increased from about 11 per cent to 13 per cent. If I can keep that slowly creeping up each year, [it] will not reach 25 per cent for quite a while. But if the Navy and the Air Force are doing pretty well at it at the present time and can reach that sort of mass, then it gives a brand to the ADF that will help us along the path as well.²³

- 6.24 Further, Defence advised the Committee that positive effects on organisational culture would also flow from a growing cohort of women currently in Defence, as they develop in their careers. Their impact would become more apparent as they reach higher levels of seniority:

We have got over the hump of the man's club issue in the Army and I think in the Defence Force. The women we have in our force are absolutely outstanding. There is a bow wave of women who have come through under the equal charter of men, doing all the same courses and career progressions at the lieutenant colonel or early colonel level in our system. In six or seven years time when we are sitting here you will find a whole bunch of very senior women sitting here and doing this sort of thing. The talent coming through is absolutely extraordinary...²⁴

Initiatives

- 6.25 Defence advised the Committee of approaches it was pursuing to increase the proportion of women in the armed services.
- 6.26 In part, this involved the creation of a women's reference group, 'established in the middle of last year with the aim of getting some external perspectives and views', which included 'senior women in large organisations'.²⁵
- 6.27 The objective was, in particular, for the reference group to advise Defence on 'what might be the reasons why the ADF is not making the progress' it had wished to make. One initial contribution by the reference group had

23 Lieutenant General Gillespie, *Transcript*, Thursday 16 April 2009, p.70.

24 Lieutenant General Gillespie, *Transcript*, Thursday 16 April 2009, p.70.

25 Mr Minns, *Transcript*, Thursday 16 April 2009, p.66.

been its identification of the significance of 'critical mass', discussed above.²⁶

6.28 Defence told the Committee that this reference group would play an ongoing role in a process of increasing Defence's power to attract women to Defence. The three services were working 'on an integrated view of all the initiatives that already are in train, and some new ones that are being considered', and this would go, in addition to the Chief of Service Committee, to the women's reference group for 'comment and review'.²⁷

6.29 Defence told the Committee that this had arisen because the reference group had recommended that it was more effective, 'to get to that breakthrough point', to 'concentrate on five or six critical issues rather than 56 worthy initiatives'.²⁸

6.30 As a result, Defence told the Committee, 'we are trying to clarify with the three services what would be those breakthrough initiatives that we think will have the most impact'.²⁹

6.31 However, there continued to be challenges, along the lines already noted:

There is a whole bunch of issues there that we have to do a lot more work on...the participation rate of women has actually decreased. But it has decreased because they are only entitled to fill 67 per cent of the employment categories in the Army, and we have had a big focus on increasing those employment categories that they are not entitled to join – the Enhanced Land Force and the HNA [Hardened Network Army] sort of approaches.³⁰

6.32 Defence told the Committee that 'we are making progress':

...the three services are seriously looking at options to make their service more attractive to women entering and to make the experience of women within the service consistently improve so that retention goes up.³¹

26 Mr Minns, *Transcript*, Thursday 16 April 2009, p.66.

27 Mr Minns, *Transcript*, Thursday 16 April 2009, p.66.

28 Mr Minns, *Transcript*, Thursday 16 April 2009, p.66.

29 Mr Minns, *Transcript*, Thursday 16 April 2009, p.66.

30 Lieutenant General Gillespie, *Transcript*, Thursday 16 April 2009, p.70.

31 Mr Minns, *Transcript*, Thursday 16 April 2009, p.66.

Gap year

- 6.33 The Committee engaged Defence on the subject of the gap year program. In this, young men and women are able to join the Defence Force for a period of a year, without further obligation to stay in the services.
- 6.34 Defence told the Committee that in 2008, the gap year program accounted for '700-500 in the Army and 100 in the Navy and Air Force', while in 2009, 'numbers [were] 267 in the Navy, 321 in the Army and 112 in the Air Force'.³² As at 1 April 2009, '221 of the 2008 cohort had transferred to the permanent forces'.³³
- 6.35 Defence advised the Committee that although the gap year program was not directed at women in particular, it was one of the most important new developments through which to address gender balance in the armed services. Defence told the Committee that 'we had an amazing number of young women apply for the gap year at percentages far in excess of what we could expect annually to ask at the recruiting desk to come in'.³⁴
- 6.36 Defence quoted specific figures on participation in the gap year program to show a contrast with its normal recruiting effort:
- ...currently about 10 per cent of the Army is made up of women and approaching 13 per cent of positions that are available to them. In the gap year, we had 20 per cent of the intake in the first year who were women, which was a very pleasing result.³⁵
- 6.37 Why this was the case was less certain. Defence told the Committee that:
- We have been debating whether...mothers are not prepared really to support and sponsor their daughters to go into the Army for four years, but they will give them a crack at it for 12 months with a free exit card if they do not like what they are doing. Maybe that is why there has been such heavy participation rate of young women.³⁶
- 6.38 One of the important aspects of the gap year program was that it allowed Defence to engage with a new client group. This also entailed working with a client group about which Defence knew less than its regular target population for recruiting:
-

32 Mr Minns, *Transcript*, Thursday 16 April 2009, p.65.

33 Mr Minns, *Transcript*, Thursday 16 April 2009, p.65.

34 Lieutenant General Gillespie, *Transcript*, Thursday 16 April 2009, p.70.

35 Brigadier Fogarty, *Transcript*, Thursday 16 April 2009, p.72.

36 Lieutenant General Gillespie, *Transcript*, Thursday 16 April 2009, p.71.

We did a lot of research ... to track the reasons why it was so attractive. We know that out of the first year of the gap year about 30 per cent of the applicants said they would never have considered joining the Army if the gap year program was not available to them. So we knew immediately that we were tapping into a new segment of the population.³⁷

- 6.39 Further research showed something of the motivations of gap year participants. A principle element appeared to be the freedom to experience life in the services without the longer term obligation to stay on after training:

[T]heir principal reasons were that a one-year program with no risk and the option to leave at the end was very attractive. We had several focus groups, with 20 per cent who were women, ask why particularly they were interested and again it was because it was a one-year program with no risk. They could try it, and if they liked it they would stay.³⁸

- 6.40 Defence told the Committee that 'a large number of the people who join the ADF are predisposed to being a joiner of the ADF', however the focus of gap year and similar programs is to engage:

...the people who are neutral towards the ADF; they do not really have a view one way or the other, but perhaps they are able to consider it. That is why gap year represents such a learning opportunity for us. I think there is a try before you buy component going on ... We are extending into that neutral part of the external labour market that has not really had a contact or experience with the ADF.³⁹

- 6.41 In terms of outcomes from the program, Defence told the Committee, some participants in the program were continuing on in the services after the end of the gap year:

... it is nice to see in the Navy, the Air Force and in the Army the number of gap year women who are staying on and doing the business.⁴⁰

- 6.42 However this was not, Defence told the Committee, the program's principle objective:

37 Brigadier Fogarty, *Transcript*, Thursday 16 April 2009, p.72.

38 Brigadier Fogarty, *Transcript*, Thursday 16 April 2009, p.72.

39 Mr Minns, *Transcript*, Thursday 16 April 2009, p.72.

40 Lieutenant General Gillespie, *Transcript*, Thursday 16 April 2009, p.71.

Transferring into the regular Army is not necessarily our measure of success. Because we are tapping into this different segment, we want this group to have a successful one year and then go back in and talk among their social network about what a great experience they had...changing the propensity of the join discussion that occurs in this new segment in the market place.⁴¹

6.43 Other important outcomes, Defence told the Committee, were insights and changes in strategy for Defence with respect to its recruiting process, including suggestions of new 'minimum enlistment periods': this is 'a good application of that experience from gap year'.⁴²

6.44 In short, Defence told the Committee, 'the ADF gap year has picked up a new segment that we were not tapping into before'. A significant part of the value to Defence is that it is 'trying to learn from that and adjust and change our approach'.⁴³

6.45 Defence told the Committee that further research would be undertaken to capitalize on this experience. The gap year program was due for 'formal assessment' in the year 2010-11, and a 'longitudinal study of retention' also captured information relevant to the program.⁴⁴

6.46 Individual arms of the services also capture information about the program. A representative of the RAN told the Committee that 'Certainly from a Navy perspective ... we are closely monitoring gap year':

Those people who are charged with supervising gap year participants speak with them frequently. They are spoken to when they arrive at Recruit School in the case of the Navy and undergo a qualitative information-gathering process as to why they joined. Their progress is monitored through the 11 weeks of Recruit School, and when they go into the fleet and other establishments they are assigned a supervisor who similarly monitors their progress.⁴⁵

6.47 Defence advised the Committee that gap year participants are:

... interviewed at the end of the program, so in tandem with the qualitative data that we can tell you from the Navy's perspective,

41 Brigadier Fogarty, *Transcript*, Thursday 16 April 2009, p.72.

42 Mr Minns, *Transcript*, Thursday 16 April 2009, p.72.

43 Lieutenant General Gillespie, *Transcript*, Thursday 16 April 2009, p.72.

44 Mr Minns, *Transcript*, Thursday 16 April 2009, p.64.

45 Captain Hill, *Transcript*, Thursday 16 April 2009, p.64.

30 per cent or thereabouts of the first 100 participants subsequently transferred to the regular Navy.

6.48 In addition:

I am confident that the internal study we have commissioned at the end of the first year, which will be in May this year, will also contain a good deal of qualitative data as to the attitudes of those people when they joined, their attitudes throughout their training and, importantly, their attitudes when they left.⁴⁶

Other allied approaches to recruitment and retention

6.49 Defence told the Committee of other approaches it had used to address wider questions of recruitment and retention of the manpower capacity, and skills, it requires in order to fulfil its remit. Taken as a whole, these do not focus explicitly on women. But in addressing matters that affect both men and women in the armed forces, particular benefits often still arise for the situation of women.

6.50 It has been mentioned above that Defence's experience of the gap year program had led to reflection on other types of initiatives. Defence's discovery that reduced requirements to stay in the services after joining had been a significant enabler in that context.

6.51 A result of this thinking had been to consider altering, in a 'number of our categories', a 'reduced initial minimum period of service'. Defence told the Committee that this had been considered, in particular, in skill areas of which Defence was particularly in need. This would produce 'an opportunity to have a reduced initial minimum period of service in some categories'. This would be of the order of 'perhaps two years', allowing Defence 'to leverage off some of the success that we have had in the gap year' and to 'try to target a broader segment of the community'.⁴⁷

6.52 Defence went on to observe that this would 'be non-gender specific':

It will just focus on some areas and trial a two-year minimum period. In some of those areas where we hope to attract women, yes; but it will be open to both genders.⁴⁸

46 Captain Hill, *Transcript*, Thursday 16 April 2009, p.65.

47 Brigadier Fogarty, *Transcript*, Thursday 16 April 2009, p.72.

48 Lieutenant General Gillespie, *Transcript*, Thursday 16 April 2009, p.72.

- 6.53 There are also things that can be done at the other end of the career trajectory. Defence told the Committee that traditional career structures had been particularly difficult for women who chose to have a family, due to short timelines between career 'gates':

Until last year, the retirement age in the Defence Force was 55, and then we made it 60. The men structure for command going through to becoming a unit commander and to general and all the rest of it was based on people going through gates that got them there, and they started to pay off between 52 and 55. One of the common criticisms that we had of that sort of process is that that was unfriendly to women, particularly if they wanted to be women who had a career and a family because the gates were so close together that to get through them you really had to forgo the family to be successful, or you had the family and then you could not go through the gates.⁴⁹

- 6.54 However, the extension of the retirement age by five years had made a difference to the options open to both male and female personnel. Defence told the Committee that:

We have this wonderful situation at the present time whereby extension of the retiring age by five years, if nothing else, gives us five years we can insert in between the gates. That is a great policy and not necessarily just for women because it does say that over a career there is room for you to have five kids, if you want to, in that sort of process. But it also says to men whom we might want to send off to Harvard or to go out into industry for 12 months to gain some skills that they bring back to refresh out profession as we go through that we are going to do that. If you like, we have good policy. We have a happy circumstance of five years up our sleeve now so that we keep people in the system longer to 60.⁵⁰

- 6.55 It also opens options up to Defence, in the sense that in getting more people through career 'gates' it had access to a wider pool of qualified personnel. Defence told the Committee that this 'allows us not to give up any standards at all on our gate'. With more time allotted to a career span Defence 'can introduce gaps where people can take time off for all sorts of reasons'. Defence told the Committee that it is anticipated that these

49 Lieutenant General Gillespie, *Transcript*, Thursday 16 April 2009, pp.72-73.

50 Lieutenant General Gillespie, *Transcript*, Thursday 16 April 2009, p.73.

initiatives will work better due to 'the fact that we are doing it not specifically for women but for the workforce in general'.⁵¹

6.56 Defence told the Committee that there were other areas where similar effects could apply: that is, where removing tensions between life-patterns and careers would improve Defence's ability to engage male and female personnel. Particular benefits for women arise not because they have been singled out, but due to their greater experience, for example, of career interruptions.

6.57 This approach was echoed in Defence's thinking on contemporary expectations of the span of a career:

... something like 52 per cent of males will leave the ADF inside 10 years, and the number is either 72 or 78 per cent of females. ... [this points] ...to a sense that women are seeing a career as something that is a within-10-year stint, but a good half of men who join the ADF see it that way as well.⁵²

6.58 From Defence's point of view, addressing this would have advantages, first, across all personnel, male and female, and special benefits for Defence's ability to retain female personnel.

6.59 Similarly, Defence noted another area where arrangements made for one gender had positive implications for the other. Defence told the Committee that there 'is an increasing number of single parents who are men in our organisation', who face career dilemmas which were in the past more often suffered by women.⁵³ If Defence is able to address this, it enhances its ability to retain valued personnel.

6.60 In fact, Defence told the Committee that feedback from female personnel was also strongly supportive of this general approach:

Our women are telling us, 'Don't get into positive discrimination to support us. We don't need that. We're doing quite well in our own right.'⁵⁴

6.61 Thus, Defence told the Committee, 'special' treatment for women was considered less effective than measures that remove mismatches between life and career patterns for Defence personnel regardless of gender. While this principle applies to arrangements made for Defence force personnel, however, there is still more that can be done to change outside

51 Lieutenant General Gillespie, *Transcript*, Thursday 16 April 2009, p.73.

52 Mr Minns, *Transcript*, Thursday 16 April 2009, p.71.

53 Lieutenant General Gillespie, *Transcript*, Thursday 16 April 2009, p.73.

54 Lieutenant General Gillespie, *Transcript*, Thursday 16 April 2009, p.73.

perceptions. There are positive stories that Defence could use to better advantage in working to change those perceptions.

For example, I wonder how many women will front up to give the address in all the little RSLs on Anzac Day wearing their medals as veterans. We are looking at that right now. That is the sort of message that Australia needs to hear. We actually have a lot of women.⁵⁵

6.62 Defence told the Committee that 'we have women who served in the Middle East area of operations and have performed to exceptional levels of performance'. This 'is known within the service, but perhaps it is not known well outside the service and outside the Defence organisation'.⁵⁶

6.63 To capitalize on this, Defence told the Committee it has to look 'at some of the people who have been successful and have achievement in their career and being more deliberate about telling that story as a way of getting the message out'.⁵⁷

6.64 One example of these very creditable contributions was the involvement by female personnel in supporting ADF helicopters engaging in current operations:

We see the Chinook organisation that is in Afghanistan at the present time. It is a really professional, strong, dangerous environment in which they are operating, and it is commanded by a young woman who is doing it magnificently. They are the stories that people need to hear. If we can cash in on those, if we can get you, the press and ourselves and public engagements to show women in that light, then hopefully it will start to feed that we are not a man's club and that actually we have some really clever young women who are trail blazers and who are doing a great job.⁵⁸

6.65 This, Defence told the Committee, in combination with the gap year program and changes to working conditions, could form a foundation for a change in the perceptions of women's role in the ADF, and women's perception of the ADF.

55 Lieutenant General Gillespie, *Transcript*, Thursday 16 April 2009, p.73.

56 Mr Minns, *Transcript*, Thursday 16 April 2009, pp.66-67.

57 Mr Minns, *Transcript*, Thursday 16 April 2009, pp.66-67.

58 Lieutenant General Gillespie, *Transcript*, Thursday 16 April 2009, p.74.

Committee Comment

- 6.66 Defence have clear objectives, and a good business case, with regard to increasing the proportion of women in Defence personnel.
- 6.67 As with other recruitment and retention measures, increasing the opportunity for all Australians with the skill and commitment to serve our nation's defence forces is desirable.
- 6.68 The Committee welcomes the establishment of the women's reference group, and its integration into Defence's strategy to create an environment that is more able to attract, support and retain female personnel. This will increase the talent available to Defence.
- 6.69 The Committee is also mindful of the continuing perceptions of the ADF as a masculine domain. Changing this will require a sustained period of cultural and structural change.

The Committee finds it encouraging that Defence are tackling gender issues in ways that are non-discriminatory, and from a number of different perspectives: not only addressing recruiting, but also promotion paths, length-of-career and other dimensions.

Defence personnel – Niche skills and pay

- 7.1 The previous chapter considered efforts by Defence to obtain the best qualities and skills in its personnel by widening its access and appeal to women. This chapter considers further challenges facing Defence in its efforts to recruit and retain the best available candidates from the employment pool.
- 7.2 The *Defence Annual Report 2007-08 Volume 1*, reporting on the Australian Defence Force, stated a continuing emphasis on annual recruitment targets and the 'reduction of the ADF separation rate to below ten per cent', both of which were deemed necessary 'in order to meet ADF workforce capability requirements over the next decade and beyond'.¹
- 7.3 Reported were 'strong overall ADF recruitment' and a lower separation rate than 'the overall target'. However, this still presented 'a challenge in some employment categories': at that time a 'tight labour market continued to provide competition to recruit and retain people with sought-after professional, technical and trade skills'.²
- 7.4 Similar pressures were registered in the *Defence Annual Report 2007-08 Volume 2*, reporting on the Defence Materiel Organisation. This stated the organisation's objectives of 'professionalising, recognising the competencies of, and raising the skills of DMO people'. To achieve this continued efforts would be necessary to ensure a 'stronger focus on attracting, developing and retaining the critical skills that the DMO needs'.³

1 *Defence Annual Report 2007-08*, Vol.1, p.9.

2 *Defence Annual Report 2007-08*, Vol.1, p.9.

3 Department of Defence 2008, *Defence Annual Report 2007-08, Volume 2: Defence Materiel Organisation*, viewed 02/06/09 http://www.defence.gov.au/budget/07-08/dar/2007-2008_Defence_DAR_14_v2_full.pdf, p.9.

- 7.5 This chapter considers matters arising from these areas, particularly with regard to:
- efforts to attract candidates with the skills Defence needs; and
 - pay systems designed to reward training and skills, thus helping to attract and retain skilled and experienced personnel.
- 7.6 Both of these form key aspects of Defence's endeavour to develop a sufficient and sustainable cohort of skilled personnel, capable of satisfying the increasingly technical requirements of modern defence forces. The Committee regards this as a key element in Defence's overall endeavour to provide the best possible Defence of Australia.

Niche skill areas

Introduction

- 7.7 The RAN, and skilled trades across all three arms of the ADF, are among those areas experiencing significant difficulties in this regard:
- ... within each Service skilled personnel (like technicians and trades people) are particularly hard to recruit. This no doubt reflects the very buoyant labour market and the national skilled labour shortage that Australia is experiencing. As the data shows, Navy has the most serious problem at the moment.⁴

Public hearings

- 7.8 The Committee engaged Defence on skills shortages in the ADF, asking Defence to nominate in which categories skills shortages were 'most severe'.⁵
- 7.9 In response, Defence advised that there were security limitations on what it could provide, but that there were 22 nominated categories across the ADF where skills shortages were most pronounced. Most seriously affected was the RAN, followed by Army and then the RAAF:
- ... we have 22 categories that we are focused on in the Navy, 13 in the Army, and one in the Air Force... The most prominent

4 Thomson, Mark, *Cost of Defence 2008-2009*, p.42.

5 *Transcript*, Thursday 16 April 2009, p.59.

examples relate to engineering skills, submarine service, aviation, technical and medical.⁶

- 7.10 Defence advised the Committee that such shortages present special challenges, in that they take quite some time to resolve:

We track all of the critical trades pretty much all the time, but each six months we do a full reassessment of their status and their likely remediation over the next two to three years out to a decade.⁷

- 7.11 For those it is unable to recruit, it takes time to train personnel to perform these skilled tasks:

...we struggle to recruit people into some of these trade groups [but] we also have a problem around the throughput of the training system within the service in respect of that ...⁸

- 7.12 In response, Defence told the Committee, deliberate strategies have been adopted to increase Defence's ability to train personnel, such as the 'Plan Train initiative in the Navy', which 'are having a direct impact'. It involves work to 'increase the capacity of the training pipeline to remediate particular trade groups'. In the face of a common problem, this 'sort of thinking is occurring across all the services'.⁹

- 7.13 However Defence also emphasised in its advice to the Committee that recruitment is only one part of a picture on skills. Another important component is retention.

- 7.14 On this, Defence advised that while on the face of it an organisation might seem to want to retain as many of its personnel as possible, in fact the best settings involve a balance between retention and renewal:

I will just make a point on separation rates. A certain level of separation rate is healthy for the organisation to allow that turnover to happen. About 10 per cent is a good figure as a rule of thumb.¹⁰

- 7.15 But actual separation rates are 'influenced by the skills that a person needs'. In other words, the best rates of separation vary according to whether personnel have higher or lower skill levels:

6 Mr Minns, *Transcript*, Thursday 16 April 2009, p.59.

7 Mr Minns, *Transcript*, Thursday 16 April 2009, p.59.

8 Mr Minns, *Transcript*, Thursday 16 April 2009, p.59.

9 Mr Minns, *Transcript*, Thursday 16 April 2009, p.59.

10 Air Commodore Needham, *Transcript*, Thursday 16 April 2009, p.60.

Generally speaking, the higher the skill, the lower will be the retention because obviously there is a training lead time to replace people. But with lower skilled people, a greater separation rate is probably healthier for us.¹¹

- 7.16 One initiative of Defence creates new options for training available to personnel who had been in the ADF for a longer period, who may otherwise have chosen to leave:

One of the great initiatives that we have had, which is helping recruiting at the present time, is that we have a program in the Army called *Stay Army*. People say, 'Look, I have been at this for 10 years as an infantryman and I've done enough overseas and all the rest of it, and my family and I want something different.' We are saying to them: 'Well, why don't you do something different in the Army? You don't have to get out to do something different. There are other trades.'¹²

- 7.17 Defence reported a high level of success with this kind of approach:

We are finding a really strong response to this. What we have is a lot of internal movement now. We are able to coax some of these people who have a proven track record, who are well trained, who have supervisory and leadership skills, et cetera, to transfer to some of those critical trades and to undertake training and then give us another 10 years in that sort of area.¹³

- 7.18 This, Defence told the Committee, is one of a 'a basket of ... initiatives' with a similar purpose, including the two-year enlistment initiatives, designed to increase intakes, and reduce loss, of high quality personnel.¹⁴

11 Air Commodore Needham, *Transcript*, Thursday 16 April 2009, p.60.

12 Mr Gillis, *Transcript*, Thursday 16 April 2009, p.75.

13 Mr Gillis, *Transcript*, Thursday 16 April 2009, p.75.

14 Mr Gillis, *Transcript*, Thursday 16 April 2009, p.75.

Services pay

Graded Other Ranks Pay Structure

Introduction

- 7.19 Where service personnel have completed training modules they are eligible for increases in pay. Hitherto these have been paid as allowances, but under the Graded Other Ranks Pay Structure initiative (GORPS), these pay increases have been rolled into a single determination by the Defence Force Remuneration Tribunal, to make them an integral part of pay.¹⁵ This has the effect of making them superannuable.¹⁶
- 7.20 GORPS is the counterpart of the GOPS (Graded Officer Pay Structure) initiative.¹⁷ Both are intended to enhance Defence's ability to attract and retain skilled personnel, and to rationalise incentive payments intended to achieve that effect.
- 7.21 In the Committee's view GORPS is integral to Defence's overall effort to hire the best talent so that it can employ a suitably skilled workforce.

Public hearings

Purpose

- 7.22 Defence told the Committee that the purpose of GORPS was to:
- ...put in place a simplified pay structure that will endure for a number of years, that will facilitate increased differentials for people in terms of pay on promotion and that will increase differentials for people who up-skill within their trade or category.¹⁸

15 Senate FAD&T Estimates, *Transcript*, 25 February 2009, p.8.

16 Senate FAD&T Estimates, *Transcript*, 25 February 2009, p.20.

17 *Defence Force Remuneration Tribunal Twenty-second Report 2006 – 2007*, viewed 03/06/09, http://www.dfrt.gov.au/About/AnnualReports/PDF_Version/DFRT%20Annual%20Report%202006-2007.pdf, p.6. See also *Defence Force Remuneration Tribunal Twenty-third Report 2007 – 2008*, viewed 03/06/09, http://www.dfrt.gov.au/About/AnnualReports/PDF_Version/Annual%20Report%202007%20-%202008%2029%20Sept%2008.pdf, pp.6-17.

18 Mr Grzeskowiak, *Transcript*, Thursday 16 April 2009, p.60.

- 7.23 The main effect of these changes was that ‘compared to the previous pay structures, there is now a greater reward for up-skilling and promotion’.¹⁹
- 7.24 Defence told the Committee that there were other benefits to the implementation of GORPS. Some of these were administrative, while others were a direct benefit to Defence personnel: as indicated above, this made allowances superannuable.²⁰ Defence told the Committee that GORPS enabled ‘the roll-in of some of the bigger allowances that we used to call environmental allowances, which are the flying allowance, the submarine service allowance, the special action forces allowance and the special operations allowance’.²¹
- 7.25 Defence told the Committee that this was designed to resolve some outstanding problems with pay structures:
- The previous pay structure could not really accommodate the rolling in of those allowances. To roll them in, what we had to do was add a whole bunch of extra pay grades onto the old pay structure, and it ended up with 16 pay grades. It was not very coherent, so we have taken the opportunity to restructure around the new rates of pay, which are in effect, with the allowances being rolled in.²²
- 7.26 A third intended benefit of GORPS was, Defence told the Committee, a greater flexibility with regard to pay settings: that is, Defence could use:
- ... the pay structure in a flexible way through the Defence Force Remuneration Tribunal as we look at the various trades and categories within the ADF in terms of being able to match market forces in the pay that we offer to our ADF people.²³

History

- 7.27 Defence told the Committee that this was part of a broader initiative that had begun some years previously:
- Fundamentally, it is the last part of the remuneration reform project which flowed from the Nunn review of 2001, which was a review into the pay and conditions of the ADF.²⁴

19 Mr Grzeskowiak, *Transcript*, Thursday 16 April 2009, p.60.

20 Senate FAD&T Estimates, *Transcript*, 25 February 2009, p.20.

21 Mr Grzeskowiak, *Transcript*, Thursday 16 April 2009, p.60.

22 Mr Grzeskowiak, *Transcript*, Thursday 16 April 2009, p.60.

23 Mr Grzeskowiak, *Transcript*, Thursday 16 April 2009, p.60.

24 Mr Grzeskowiak, *Transcript*, Thursday 16 April 2009, p.60.

7.28 This Remuneration Reform Project ‘was pursued in four stages over a number of years’, the result of recommendations by the Nunn review:

... that said that we should seek to simplify our pay structures and we should seek to roll allowances into pay when that is sensible. So GORPS is the culmination of that four-phase project... The other impetus came from the DFRT [Defence Force Remuneration Tribunal] itself in around the end of 2006 early 2007.²⁵

7.29 Defence told the Committee that a further context for GORPS was that:

...in December 2006 the then government agreed to a range of recruiting and retention measures, ... a range of bonuses that were seen as short-term bonuses necessary to encourage certain people to stay with the ADF in what was a time of high separation, and recognised the need to at least go some way to matching pay to those bonuses, which also drove the need for a reformed pay structure.²⁶

Scope

7.30 The implementation of this system is a task of some size. Defence told the Committee that migration to GORPS involved ‘the replacement of approximately 37,000 regular members of the other ranks and a significant number of Reservists ... into the new structure’.²⁷

7.31 For each arm of the services, implementation was devolved to the individual service, Army, the Navy or Air Force, who were ‘responsible for deciding which category each of the people needed to be placed in, in line with the decisions of the DFRT’.²⁸

7.32 Other parts of the Defence establishment were responsible for components of the project, including: the Chief Information Officer Group, for ‘adjusting our pay computer systems’; Defence Support Group, for ‘managing the implementation and rollout of the new placements into the computer systems and into effect in terms of pay’; and the Personnel Strategies and Policy Group, ‘for the DFRT case’.²⁹

25 Mr Grzeskowiak, *Transcript*, Thursday 16 April 2009, p.61.

26 Mr Grzeskowiak, *Transcript*, Thursday 16 April 2009, p.61.

27 Mr Grzeskowiak, *Transcript*, Thursday 16 April 2009, p.61.

28 Mr Grzeskowiak, *Transcript*, Thursday 16 April 2009, p.61.

29 Mr Grzeskowiak, *Transcript*, Thursday 16 April 2009, p.61.

Results

7.33 Defence told the Committee that implementation thus far had proceeded according to plan. At the time of the hearings, the RAN had implemented the new system and Defence considered that this had proceeded 'very smoothly'.³⁰ Implementation for the RAAF was in prospect:

All of the Air Force other ranks have been mapped into the new structure and the data starts to be loaded into the HR and pay computers next week.³¹

7.34 This was, Defence told the Committee, subject to 'a structured process that sees the data being put into the computers, checked, fixed where necessary and then the pay calculations run'.³²

7.35 Implementation by Army formed the next phase of implementation. Defence advised the Committee that overall progress was going well, and that 'lessons learned' would be applied to the parts of the project yet to be implemented in full:

The Army is due for a payday in the middle of June and then we will do the Reservists, which is currently planned for August. Clearly we are learning lessons that we find from the Navy implementation and we are feeding those into the subsequent Air Force and Army implementations.³³

7.36 On the question of errors and anomalies, Defence advised the Committee that it was not anticipating a high number of errors as a result of adopting the system. However that:

... is not to say that there will not be the odd error in there somewhere. We are adjusting the pay of 37,000 people, so it will be pretty unlikely that no errors will occur. But if they do, there are people who are skilled and available to get the errors fixed up quickly.³⁴

30 Mr Grzeskowiak, *Transcript*, Thursday 16 April 2009, p.62.

31 Mr Grzeskowiak, *Transcript*, Thursday 16 April 2009, p.62.

32 Mr Grzeskowiak, *Transcript*, Thursday 16 April 2009, p.61.

33 Mr Grzeskowiak, *Transcript*, Thursday 16 April 2009, p.61.

34 Mr Grzeskowiak, *Transcript*, Thursday 16 April 2009, p.62.

Special Operations pay anomalies

Introduction

- 7.37 Senate Estimates of October 2008 saw discussion of anomalies in the pay of Defence Force personnel, particularly in Special Operations. Senate Estimates in February 2009 saw further inquiries into this matter.³⁵
- 7.38 In the event, however, some service personnel were eligible for these increased rates of pay, by virtue of having completed training modules, and some were not. The issue came to be a matter of discussion in Senate Estimates with claims that Defence had sought to recover these overpayments. It was alleged that some of the personnel involved were serving in Afghanistan at the time, and this was seen as a significant potential problem for morale.³⁶
- 7.39 Subsequent to the original emergence of this issue in Senate Estimates, a KPMG audit report was commissioned by the Minister of Defence, to inquire into anomalies in Special Forces pays. KPMG's report of 31 March 2009 found that contributing factors included:
- a 'complex and detailed Determination process';
 - a 'complex pay and allowance structure';
 - 'ageing systems';³⁷ and
 - 'a change management and accountability environment which is complex and at times lacking in end to end control'.³⁸
- 7.40 The report suggested that these were symptomatic of deeper systemic issues, particularly undue complexity and a lack of sufficient command and control for the administration of Defence pays.³⁹
- 7.41 In response the report recommended the adoption of a 'remuneration strategy' to create simpler and more purposeful business processes and

35 Senate Standing Committee on Foreign Affairs, Defence and Trade, *Estimates (Additional Budget Estimates)*, Wednesday, 25 February 2009, Canberra, <http://www.aph.gov.au/hansard/senate/commtee/S11649.pdf>

36 Senate Standing Committee on Foreign Affairs, Defence and Trade, *Estimates (Supplementary Budget Estimates)*, Wednesday, 22 October 2008, pp. 14-15, 59-60.

37 KPMG 2009, *Independent Audit of the implementation of Defence Force Remuneration Tribunal (DFRT) Determinations for Special Forces Pay*, Department of Defence, viewed 19/05/09 <http://defence.gov.au/publications/kpmgDefenceSpecialForces.pdf>, p.28.

38 KPMG 2009, *Independent Audit*, unpaginated cover letter to Report.

39 KPMG 2009, *Independent Audit*, p.27.

systems (over 3-5 years), and a Control Framework to establish clear lines of accountability (over 12 months).⁴⁰

- 7.42 Proposed longer term goals were to align Defence remuneration policy to the objectives of delivering 'an effective workforce', implementing 'IT and process reform' and implementing an effective 'control and accountability model'.⁴¹

Public hearings

- 7.43 When asked why it takes so long for pay decisions to translate to member's pay accounts⁴² Defence gave the following answer:

This goes to the whole issue of the reform program: the inefficiencies within Defence, the poor processes that we have in Defence in many areas, the poor systems that we have in other areas and the need for there to be a holistic process of reform. One of the issues we had most recently, of course, was the SAS pay debacle, where a number of factors were in play: the lack of specific and clear individual accountabilities, the lack of good process and the fact that there are IT systems in respect of pay and HR which do not talk to each other and are old, inefficient and in some respects even 'handraulic'.

All those questions and problems led to the SAS pay problems and to the other pay problems that you are referring to. What we are doing now – since the reform program has been agreed and since we have been through this problem with special forces pay – is to go to government with a program that will knit together our various processes, update our ICT systems, create a shared services approach to payroll and to payroll reform and give us much clearer individual accountabilities.⁴³

- 7.44 Defence were also asked whether they would be pursuing off-the-shelf solutions for a new pay system and gave the following answer:

... I hope that we do not get a system designed specifically, because I think there are some very great risks in doing that. As you said, I hope we can actually get an off-the-shelf system that will suit our processes. Bear this in mind. It is not just the ICT

40 KPMG 2009, *Independent Audit*, pp.8, 29.

41 KPMG 2009, *Independent Audit*, cover letter to Report.

42 The Hon Arch Bevis MP, *Transcript 19 June 2009*, p.22.

43 Mr Warner, *Transcript 19 June 2009*, p22.

systems that are broken. It is more than that that led to the SAS problems. But we have three relevant pay systems here. We have ADF pay, we have CENRES, which does Reserve pay, and we have Def pay. CENRES is MS-DOS. This is as old as it gets in ICT systems. The other two systems do not talk to each other.⁴⁴

Committee conclusion

- 7.45 The Committee welcomes the move by Defence to adopt a more flexible pay structure so that it is better placed to attract, retain and develop skilled personnel. The Committee is particularly mindful that modern Defence Forces require high skills in their personnel as a result of changing military technology and tasks in modern war fighting.
- 7.46 In practice, some risks in the implementation of these new pay systems were not sufficiently anticipated. Checks or audits of the training achievements of Defence personnel, such as those employed in Special Forces, could have been performed before the implementation of GORPS rather than after.
- 7.47 The Committee will be looking for early evidence that Defence is implementing a solution to the difficulties that it, and KPMG, has identified with these pay systems.
- 7.48 Defence is clearly attempting to engage the Australian employment pool in new and innovative ways. This should be encouraged. That Defence is prepared to implement creative solutions to the staffing challenges it has experienced over the years is a promising sign for Australia's future Defence capability.

Recommendation 3

The Committee recommends that Defence places a high priority on developing a solution to the difficulties that it, and KPMG, has identified with the current pay systems.

44 Mr Warner, *Transcript 19 June 2009*, p23.

Submarines

- 8.1 This report has reflected the Committee's interest in the two main components of Defence capability: acquiring equipment and providing sufficient, and sufficiently skilled, personnel to render it effective. Chapters 2-5 focus on equipment, and 6-7 on personnel.
- 8.2 This chapter, on Australia's submarine capability, focuses on aspects from both of these areas. The first section considers submarine rescue training for submariners. A second section considers incentives that been offered to personnel in the RAN's submarine force in order to retain them.
- 8.3 Recent advice by Defence in Senate Estimates was that Australia was well below full complement on submariners. As at 1 January 2009 the requirement was for 662 fully trained submariners with which to man the current submarine fleet. However the number of submariners available to Defence was 429: 233 short of full complement.¹
- 8.4 As a result, Defence is considered to be capable of operating only three of its six Collins class submarines at any one time.
- 8.5 The *Defence Annual Report 2007-08 Volume 1* states that 'Navy is able to routinely crew three submarines with appropriately qualified personnel'. It also states that '[c]ontinuing personnel shortages are impacting on experience levels in the submarine force', and that training requirements are being 'hampered' by a 'shortage of available trainees' and 'pressures in the training pipeline'.²

1 Senate Standing Committee on Foreign Affairs, Defence and Trade, *Estimates (Additional Budget Estimates)*, Wednesday 25 February 2009, Canberra, <http://www.aph.gov.au/hansard/senate/committee/S11649.pdf>, p.72.

2 *Defence Annual Report 2007-08*, Volume 1, p.59.

8.6 In evidence to the Sub-Committee on 19 June 2009, Air Chief Marshal Houston enlarged on this point, noting that the Navy would have:

...three fully operational submarine crews next year. Right now, we can probably crew three boats, but what I am talking about is three boats that you could send away to do things.³

8.7 The 2009 Defence White Paper includes the planned acquisition of 12 new submarines.⁴ This will put renewed pressure on the RAN's ability to recruit, train and retain personnel for its submarine fleet. Both rescue training and incentives for submariners, considered here, are among measures relevant to the RAN's ability in this respect.

Submarine rescue and rescue training

Introduction

8.8 The entry in the *Defence Annual Report 2007-08, Volume 2*, for the Maritime Systems Division of the Defence Materiel Organisation, lists among its 'achievements' that:

The submarine escape and rescue vehicle Remora was refurbished and re-certified in Canada and is awaiting transport to Australia. Remora's lifting and recovery system was refurbished in Scotland.⁵

8.9 The Senate Standing Committee on Foreign Affairs, Defence and Trade was told by representatives of the ADF that the submarine rescue vehicle Remora remains out-of-service due to technical obstacles with lifting equipment and subsequent hold-ups on sea-worthiness certification.⁶ That Committee was told, as a result, that:

- Australian Sub-mariners were flying to Canada to receive escape training;⁷

3 Air Chief Marshal Houston, *Transcript*, 19 June 2009, p.7

4 Department of Defence 2009, *Defending Australia in the Asia Pacific Century: Force 2030*, http://www.defence.gov.au/whitepaper/docs/defence_white_paper_2009.pdf, pp.70-71.

5 Department of Defence 2008, *Defence Annual Report 2007-08, Volume 2: Defence Materiel Organisation*, viewed 02/06/09 http://www.defence.gov.au/budget/07-08/dar/2007-2008_Defence_DAR_14_v2_full.pdf, p.62.

6 Senate FAD&T Estimates, *Transcript*, 25 February, 2009, pp.51-52, 54-56.

7 Senate FAD&T Estimates, *Transcript*, 25 February, 2009, p.50.

- ADF had contracted submarine rescue capability from the UK, able to deliver a rescue vehicle in Australia within 80 hours;⁸ and
 - The Australian submarine escape training facility at HMAS Stirling was not in use.⁹
- 8.10 In discussion, questions were raised about the cost of out-sourced training; the potential loss of indigenous capability in respect to escape training, particularly regarding skilled personnel, and ADF management of the problem.¹⁰

Public hearings

Current status of *HMAS Stirling*

- 8.11 In hearings, the Joint Committee engaged Defence on the current status of the facility at HMAS Stirling purpose-built to train RAN submariners. The Committee expressed concern that while this was a 'world-class facility' it was 'not being used'.¹¹
- 8.12 Two elements were involved: first, the availability or otherwise of the RAN's Australian Submarine Rescue Vehicle Remora (ASRV Remora) and, second, the use of the HMAS Stirling facility itself.

Background

- 8.13 Defence advised the Committee on the history of this matter. Until 1987 submarine escape training for the RAN had been performed in the United Kingdom. Subsequently, Defence built its 'own facility and we undertook our own training program'.¹²
- 8.14 From 2001 to 2003 the two basic elements of submarine rescue and training were managed separately: 'ASC managed the rescue service with the Remora and the Navy did in-house training'. However, from 2003 to 2008 they were managed under a single contract:¹³

The thinking at the time was, and it remains valid, that if an emergency occurred and we had had the rescue equipment, we

8 Senate FAD&T Estimates, *Transcript*, 25 February, 2009, p.53.

9 Senate FAD&T Estimates, *Transcript*, 25 February, 2009, p.51.

10 Senate FAD&T Estimates, *Transcript*, 25 February, 2009, pp.51, 54-58.

11 *Transcript*, Thursday 16 April 2009, p.49.

12 Rear Admiral Robinson, *Transcript*, Thursday 16 April 2009, p.52.

13 Rear Admiral Robinson, *Transcript*, Thursday 16 April 2009, p.49.

would use the experienced workers from the training facility to assist and to man that equipment. That makes sense because they are trained in those sorts of aspect of escape.¹⁴

8.15 Defence told the Committee that this contract expired in June 2008, and 'tender activity started some 12 months before then with a view to having a new contract in place'.¹⁵

8.16 However, a critical event intervened:

In December 2006, the Remora was lost off the Western Australian coast. It was recovered in April 2007 and it was sent back to Canada to be refurbished and have some obsolescence issues dealt and recertified for 10 years.¹⁶

8.17 Subsequently, Remora was recertified for 10 years and returned to Australia in June 2008, 'fully certified'.

Lifting gear

8.18 However, as a ship-launched vessel, Remora also needed lifting gear in order to deploy, and this also needed repair work and certification. Lifting gear was due in Australia 'in the middle of 2008', and 'returned in August' but 'was not certified by our classification society because of [concerns] about its ability to operate in the sea states that we want it to operate in'.¹⁷

8.19 This, Defence told the Committee, proved to be a significant obstacle. The equipment was not certified and couldn't be introduced 'into the service in the time frame we had envisaged'. This produced difficulties for the process to establish new contractual arrangements to manage submarine rescue and the training facility.¹⁸

8.20 Defence told the Committee that at this stage it had 'selected a preferred tenderer and had started negotiations for the new contract'. However, with the lifting gear unavailable, Defence now 'needed to amend the contract to say we were going to take out the rescue service and change the contract to a training contract' and this had 'proved a difficult negotiation'.¹⁹

14 Rear Admiral Robinson, *Transcript*, Thursday 16 April 2009, pp.49-50.

15 Rear Admiral Robinson, *Transcript*, Thursday 16 April 2009, p.50.

16 Rear Admiral Robinson, *Transcript*, Thursday 16 April 2009, p.50.

17 Rear Admiral Robinson, *Transcript*, Thursday 16 April 2009, p.50.

18 Rear Admiral Robinson, *Transcript*, Thursday 16 April 2009, p.50.

19 Rear Admiral Robinson, *Transcript*, Thursday 16 April 2009, p.50.

8.21 Further, Defence told the Committee:

In December 2008 we were advised by...the classification society, that they were not in a position to certify this equipment without further modifications.²⁰

8.22 Subsequently, Defence's probity advisor advised that it should not proceed, and the contract was terminated in December 2008. This led to consideration of alternative arrangements:

At the time we realised that the tender negotiations were going to take some time, we started exploring how we would conduct the training process for mariners in the event that we could not recommission escape training facility in Western Australia. When that came to pass, we made the arrangements with Canada and we have since been sending submariners who need that training or retraining to Canada.²¹

New developments

8.23 However, Defence advised the Committee that new arrangements were under way, and use of the facilities at HMAS *Stirling* would be resumed:

We put out a new tender for the escape training facility last month. Tenders close this month and they will be assessed and we will have a contract signed in June. The contractor will have to get his team trained and up to speed and then we can start training people in our facility before the end of the year.²²

8.24 A more exact timeline was that Defence would 'have a contract in June and then it will depend on the time taken-it could be 12 weeks to 16 weeks-to fully train and certify' specialised 'water workers', who train submariners in rescue procedures. In the meantime, Defence told the Committee, there would be 'no impact because we are training the submariners in Canada'.²³

Out-sourcing or in-house?

8.25 The Committee engaged Defence on the question of whether staff at the escape training facility should be RAN personnel. The Committee suggested to Defence that many former RAN instructors had gone on to

20 Rear Admiral Robinson, *Transcript*, Thursday 16 April 2009, p.50.

21 Rear Admiral Robinson, *Transcript*, Thursday 16 April 2009, p.50.

22 Rear Admiral Robinson, *Transcript*, Thursday 16 April 2009, p.50.

23 Rear Admiral Robinson, *Transcript*, Thursday 16 April 2009, p.51.

become employees of the private contractor. The Committee asked about the fate of these staff, in view of the facility not being in use.

8.26 Defence advised that it was unable to tell the Committee in detail as to the disposition of this staff. Money had been allocated to retain skilled personnel for a time, but this had ceased. Defence believed that there were 'a number of them still in Western Australia', but was uncertain of exact numbers.²⁴

8.27 The Committee asked whether this risk of the loss of availability of specialist skills might suggest a different way to proceed for Defence. Should these specialist tasks again be performed by RAN personnel?²⁵

8.28 Defence responded by saying that it had performed 'an assessment of taking that training in-house to establish whether we could do it'. However it had put this requirement out to tender 'because it is a significant step and it would take some time to reconstitute that in-house capability'.²⁶

8.29 Further, Defence told the Committee that the decision to continue to put these services out to tender was an expression of how the RAN regards a specialised function in this particular instance. While escape training for submariners is a mandatory requirement of the Navy, the specialist skills required by 'water workers' (that is, trainers) at HMAS Stirling are not:

One of the reasons for outsourcing it is that it is not an inherent Navy skill. The skills of the water workers are not training we normally give to any of our personnel. The skills that the people who run the training facility need are not normally skills that the Navy requires ...²⁷

Committee comment

8.30 In the Committee's view, the difficulties experienced with HMAS Stirling and Remora are indicative of challenges that Defence has often faced in recent times, including contractual difficulties and problems managing (and retaining) skills while at the same time attempting to deliver financial efficiency. Defence procurement projects are often complex, in that they involve highly-specialised equipment and, in some instances, high levels of certification.

24 Rear Admiral Robinson, *Transcript*, Thursday 16 April 2009, p.50.

25 *Transcript*, Thursday 16 April 2009, p.52.

26 Rear Admiral Robinson, *Transcript*, Thursday 16 April 2009, p.52.

27 Rear Admiral Robinson, *Transcript*, Thursday 16 April 2009, p.52.

- 8.31 The Committee is concerned that escape training for submariners, which is essential and a mandatory requirement of the Navy, could not be provided within Australia. Whilst there will be financial analysis comparing in house with contracted options, any option which fails to provide necessary capability is unacceptable. It is clear that the previous arrangements failed this basic test.
- 8.32 The Committee returned to this issue at its public hearing on 19 June when the Chair asked Air Chief Marshal Houston why the submarine escape training facilities at HMAS Stirling were no longer being used:

You would know that the tower, the submarine escape system, was outsourced some years ago because that was a more efficient way to do business and we went down that route. Unfortunately, there were some issues with the contract and in the renegotiation of a contract we were not able to get a value-for-money solution. So the DMO is working through those issues at the moment.²⁸

Recommendation 4

The Committee recommends that Defence ensure the provision of submarine escape training at HMAS Stirling be re-established.

Recommendation 5

The Committee recommends that the deployability issues governing the Australian Submarine Rescue Vehicle Remora be resolved without delay.

Incentives for RAN submariners

- 8.33 The Committee engaged Defence on incentives intended to retain submariners in the RAN's fleet. The Committee's interest was to consider any possible anomalies that had been generated by special incentives or allowances to personnel in the graded ranks. These included pay

28 Air Chief Marshal Houston, *Transcript*, 19 June 2009, p. 11

arrangements which provided a \$60,000 incentive to 're-sign for an additional 18 months or to stay for 18 months'.²⁹

- 8.34 The Committee asserted that this 'brought about a position in which the pay of a chief petty officer was lifted to around \$10,000 under that of a commanding officer'. In addition, 'the lowest ranking personnel on the ship, the able seaman or steward with less than three years experience, was actually paid substantially more than a lieutenant navigator with more than three years of seagoing experience'.³⁰
- 8.35 As a result, the Committee wished to explore whether this had created reasonable grievances among serving officers of the submarine corps.³¹ At issue was the question of whether motivation and incentive for officers were harmed by these arrangements, under which a 'steward ... is paid \$30,000 more over an 18-month period' than a 'lieutenant navigator with more than three years seagoing service'. The Committee asked: '[w]hat does that say to junior officer ranks?'³²
- 8.36 Defence told the Committee that:
- ...across all the services and within my group, we hold the view that retention bonuses are a somewhat blunt instrument, and in a sense they are an emergency instrument; you use them when you are seeking to get a significant effect on a trend which we do not think can be sustained or is sustainable.³³
- 8.37 Defence acknowledged that such arrangements 'create a range of cultural issues and a range of relativity issues', such as were raised by the Committee.
- 8.38 However, Defence told the Committee that incentive payments of this nature had not flowed through to officers in the submarine corps because:
- ...naval officers had received movements in their pay through the GOPS scheme, the graded officer pay structure. My recollection is that it was the view of the Defence Force Remuneration Tribunal that extending the naval capability generally would amount to a double dip for officers.³⁴

29 *Transcript*, Thursday 16 April 2009, p.55.

30 *Transcript*, Thursday 16 April 2009, p.55.

31 *Transcript*, Thursday 16 April 2009, p.55.

32 *Transcript*, Thursday 16 April 2009, p.56.

33 Mr Minns, *Transcript*, Thursday 16 April 2009, p.55.

34 Mr Minns, *Transcript*, Thursday 16 April 2009, p.55.

- 8.39 Defence agreed that there had been ‘some initial disquiet from officers’, this had ‘abated’, ‘largely because the GOPS decision, which is the officers’ pay scale decision, has been well received by submariners’.³⁵
- 8.40 At the public hearing on 19 June, Air Chief Marshal Houston told the Committee that the flow-on effect of the 18 month retention fee for submarine crew should take into account the fact that:
- ...in terms of the retention of officers and the retention of sailors, there is quite a difference between the two. The problem we had was that we were losing sailors to the mining industry; we were not losing the officers. We have to react to the problems of supply and demand. We have to compete in a highly competitive labour market. That is really what drove the realities of the retention bonuses.³⁶
- 8.41 Another important dimension, Defence told the Committee, was that ‘the broader non-financial conditions of service improved’. These were improvements that had been ‘specifically directed at the submarine arm’ and they ‘had taken effect’.³⁷
- 8.42 Defence told the Committee that these ‘non-financial conditions’ were an important part of its approach to retaining the submarine workforce:
- I was with the submariner team in Perth approximately three weeks ago. When we spoke about the sorts of factors and issues that they felt were contributing factors to how they feel about their service in the last six months or a year. It was much more things like changes to the activity schedule and shore leave arrangements and the ability for them to spend more time at home while in port.³⁸
- 8.43 Defence told the Committee that these changes had led to ‘a discernible view that some things had improved about the lifestyle of being a submariner’ and, as a result, the submariner team ‘did not raise with me questions about pay’.³⁹

35 Captain Hill, *Transcript*, Thursday 16 April 2009, p.56.

36 Air Chief Marshal Houston, *Transcript*, Friday 19 June 2009, p. 9

37 Captain Hill, *Transcript*, Thursday 16 April 2009, p.56.

38 Mr Minns, *Transcript*, Thursday 16 April 2009, p.55.

39 Mr Minns, *Transcript*, Thursday 16 April 2009, p.55.

8.44 Defence told the Committee that changes to remuneration were one part of its strategy to maintain and extend the submariner corps. While:

...we will always be looking at the reward framework, the remuneration framework for submariners and indeed the other critical trades that we have within the three services, the overwhelming theme that comes through the Moffatt review is the issue about the lifestyle of submariners and the way that their crewing arrangements operate, such as the issues dealing with shore leave postings and so on.⁴⁰

8.45 Thus, remuneration is part of 'a broader range of measures that the Chief of Navy is pursuing', which taken as a whole 'goes to the theme of what we are saying to people who are contemplating a career as a submariner and what is the promise of employment that they can expect if they join the submariner [team] in the Navy'.⁴¹

8.46 While Defence admits retention bonuses are a 'blunt instrument', it suggested to the Committee that it was a valuable strategy, among others, for Defence with respect to the challenges in recruiting and retention it has encountered, and continues to do so. This applies not only for specialist areas such as the submarine corps, but more broadly across the services:

One of the points that I have raised with the three services within the last year is that we have to start focusing on what I would call the critical talent categories of our organisation. There will be occasions when reward outcomes do not follow a traditional pattern because of the nature of the shortage we face in particular parts of our workforce.⁴²

8.47 Defence told the Committee, to 'get on top of the issues we face, we have to run a differentiation strategy around reward', such as had been done for submariners.⁴³ But a more sustainable strategy involved considering broader elements of the work environment:

Over time, what we have to do is see if we can create that kind of working environment that is more attractive, rather than off-putting for people to contemplate a career as submariners, and then ensure that we keep adjusting their remuneration framework

40 Mr Minns, *Transcript*, Thursday 16 April 2009, p.56.

41 Mr Minns, *Transcript*, Thursday 16 April 2009, p.56.

42 Mr Minns, *Transcript*, Thursday 16 April 2009, p.56.

43 Mr Minns, *Transcript*, Thursday 16 April 2009, p.56.

for both other ranks and officers so that we sustain the required number and that we grow the number.⁴⁴

- 8.48 On 19 June, Air Chief Marshal Houston returned to the issue of a broader strategy to retention issues which included all aspects of the working environment:

One of the things that Admiral Crane (*Chief of Navy*) is seized with is the need to get the right balance between the mission and the need for people to have time with their families. You cannot send people to sea forever and expect them to stay in the Navy.⁴⁵

- 8.49 In response to a Committee request to provide details of actual separation rates for Naval officers and sailors for the three years preceding and following the introduction of the Navy Capability Allowance, the figures were given as follows:

- May 05 to April 08, separation rate of officers – 5 per cent, of sailors, 13 per cent.
- May 08 to April 09, separation rate of officers – 8 per cent, of sailors, 11 per cent.
- April 09 to May 09, separation rate of officers – 7 per cent, of sailors, 10 per cent.⁴⁶

- 8.50 Air Chief Marshal Houston provided a summary of the effects of the post - Moffitt Report changes as follows:

...one of the recommendations was to increase the size of the crew. We think that that will be very useful. That is phase two of the project – phase two is the stabilise phase. That will also be supported by a submarine support group to provide the technical and administrative support in-port. The idea there is that when they come back to port – where in the old days they would have stayed aboard the submarine and look after it – they go on leave and this other group gets aboard and looks after the submarine. The workforce supply across the submarine categories has been stable at 435, plus or minus five, between April 2008 and April 2009.⁴⁷

44 Mr Minns, *Transcript*, Thursday 16 April 2009, p.56-57.

45 Air Chief Marshal Houston, *Transcript*, Friday 19 June 2009, pp. 8-9

46 Department of Defence, *Submission no. 4*,

47 Air Chief Marshal Houston, *Transcript*, Friday 19 June 2009, p.10.

Committee comment

- 8.51 Recruitment and retention are impacted by a range of considerations, extending beyond pay to encompass the complete work environment and its interaction with the private lives of personnel and their families.
- 8.52 In the Committee's view elements of safety, such as the submarine rescue vehicle and submarine rescue training, form an integral part of this whole. The priority Defence assigns to safety sends a clear signal to Defence personnel as to what degree they are valued. Accordingly, this must attract a high priority if Defence is to project a positive message for recruiting and retention.

Constraints

- 9.1 Importantly, the Committee inquired into external constraints facing Defence – which relate to energy and the environment.
- 9.2 These matters are considered in this, and the following Chapter. For these, the Committee sought Defence comment by written questions on notice. This chapter is based on those questions and Defence’s written responses.

Climate change

- 9.3 Appendix 7 of the *Defence Annual Report 2007-08* details aspects of Defence’s environmental approach and constraints, including reporting on Defence’s management of its obligations regarding climate change (including carbon outputs), and its handling of ‘ozone-depleting substances and synthetic greenhouse gases’.¹

Carbon

- 9.4 The Committee asked Defence to provide it with greater detail on Defence’s responsible management of its obligations in relation to carbon outputs. In particular, the Committee asked what Defence was doing to monitor its carbon footprint.
- 9.5 Defence advised the Committee that it did not maintain a separate monitoring regime for carbon outputs from Defence. Rather, Defence gathered data on carbon outputs as part of its obligations as part of

1 *Defence Annual Report Volume 1*, pp.208, 210.

government, 'utilising the Whole of Government Energy Reporting regime as the method to monitor Defence's carbon footprint'.²

9.6 Under these arrangements Defence reports on its greenhouse gas emissions 'from electricity, gas and operational fuel annually as part of the energy report regime to meet the Commonwealth Governments Energy Efficiency in Government Operations Policy (2006)'.³

9.7 The Committee asked Defence to detail its efforts to reduce its carbon footprint. Defence advised the Committee that it was:

... working to reduce energy consumption by increasing efficiency of existing equipment and infrastructure, for example by adjusting temperature control settings in buildings and replacing high energy using equipment with more efficient equipment.⁴

9.8 In addition, Defence was:

... implementing a wide range of energy saving initiatives across the estate including Defence's Green Building policies, pilot energy efficiency projects, and the ongoing development of regional and site energy action plans and communication and support tools.⁵

9.9 The Committee asked Defence to describe efforts it made to bench-mark its carbon footprint. Defence advised the Committee that it had not undertaken a formal bench-marking exercise against comparable Defence establishments in the UK and US. However, Defence was able to tell the Committee that:

- Defence is the largest consumer of electricity within the Commonwealth Government;
- Defence's energy consumption was 'reported in the Energy Use in the Australian Government's Operations report'; and that
- in the 2006-07 reporting period 'Defence's energy consumption was around 4 million gigajoules, which is equivalent to approximately 1.6 million tonnes of greenhouse gas emissions'.⁶

2 Department of Defence, *Submission no.2*, p.6.

3 Department of Defence, *Submission no.2*, p.6.

4 Department of Defence, *Submission no.2*, p.7.

5 Department of Defence, *Submission no.2*, p.7.

6 Department of Defence, *Submission no.2*, p.7.

Ozone-depleting substances and synthetic greenhouse gases

9.10 The Committee also asked Defence for further detail on its monitoring and management of ozone depleting substances and synthetic greenhouse gases, including reporting mechanisms in this area. The Committee also asked how Defence rates against comparable organisations in this regard.

9.11 Defence advised the Committee that it was 'in the process of finalising an Ozone Depleting and Synthetic Greenhouse Chemicals Manual', which provides:

...the policy under which Defence will meet its obligations under the Vienna Convention for the Protection of the Ozone layer, the Montreal Protocol on Substances that Deplete the Ozone Layer and the United Nations Framework Convention on Climate Change.⁷

9.12 Defence advised the Committee that it has an obligation to 'comply with the *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989* (the Act) and the *Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995* (the Regulations)'.⁸

9.13 Defence advised the Committee that, its activities '[i]n accordance with the Act' were scrutinised by appointed agencies:

... the acquisition, possession or disposal of fire extinguishing agents which are deemed to be scheduled substances is regulated and appropriate permits, licences and exemptions are required to be obtained from the Department of the Environment, Water, Heritage and the Arts (DEWHA) or the agency appointed by DEWHA to administer the regulations on behalf of the Government. The agency appointed by DEWHA to administer these regulations is the Fire Protection Association of Australia.⁹

9.14 Defence advised the Committee that under this regime:

Defence monitors its stockpile of ozone depleting substances and synthetic greenhouse gases by fortnightly leak detection and biannual weighing of cylinders. Defence's leak monitoring is conducted above the minimum regulatory requirement.¹⁰

7 Department of Defence, *Submission no.2*, p.7.

8 Department of Defence, *Submission no.2*, p.7.

9 Department of Defence, *Submission no.2*, p.7.

10 Department of Defence, *Submission no.2*, p.7.

- 9.15 As a result of these measures, Defence advised the Committee, 'Defence's monitoring and reporting is comparable to other public sector organisations and meets regulatory requirements'.¹¹
- 9.16 Further, 'Defence closely aligns its system of managing ozone depleting and synthetic greenhouse gases with DEWHA'. To further this process, a 'Memorandum of Understanding is currently being developed between the two departments', which 'will formalise arrangements and bond common objectives of enhanced control and the uptake of alternatives as they become available'.¹²
- 9.17 The Committee also asked Defence if there were avenues for improvement on Defence's management of carbon outputs and synthetic greenhouse gases. Defence advised the Committee that it was pursuing improvements in this area by:
- considering climate impacts during procurement decision-making;
 - 'constant review' of opportunities to replace 'ozone depleting substances and synthetic greenhouse gases with less hazardous extinguishing agents'; and
 - active engagement in 'discussion with international partners', including the 'US Defense Department and Environmental Protection Agency'.¹³
- 9.18 Defence advised the Committee that 'replacement of ozone depleting substances and synthetic greenhouse gases with less hazardous extinguishing agents is under constant review'.¹⁴ This process, Defence advised the Committee, would be expressed in the Defence procurement process, resulting over time in the acquisition of other technologies more favourable to the environment:
- The search for ozone depleting substance alternatives will change the way Defence makes procurement decisions. Defence sources the majority of its equipment from other countries such as the United States, and is reliant on platform design changes in those countries to eliminate the use of ozone depleting substance. Defence recognises the need to become an influential and informed consumer and to carefully consider commercially viable replacements for ozone depleting substances.¹⁵
-

11 Department of Defence, *Submission no.2*, p.8.

12 Department of Defence, *Submission no.2*, p.8.

13 Department of Defence, *Submission no.2*, p.8.

14 Department of Defence, *Submission no.2*, p.8.

15 Department of Defence, *Submission no.2*, p.8.

- 9.19 Defence also suggested that this would form part of the criteria upon which to make procurement decisions within a wider process of 'equipment selection':

With a greater reliance on civilian systems and solutions, equipment selection will continue to be based on a rational assessment of value-for-money and fit-for-purpose requirements.¹⁶

Preparation for oil depletion and oil shocks

- 9.20 The Committee asked Defence to detail its strategy on sudden shortages or the depletion of oil. The Committee noted that oil shortages had occurred periodically over the past 40 years, resulting in sudden escalations in the price of oil. It also noted recent debates on whether world oil production had reached a peak ('peak oil'), in which case declining production could be anticipated overall. In the Committee's view these matters were of special importance to Defence, in view of its energy and mobility requirements.¹⁷
- 9.21 In the first instance, the Committee asked Defence what actions it was taking to mitigate such risks. Defence advised the Committee that in the event of a sudden scarcity of oil, Defence would have recourse to a framework established under federal legislation, of which an important component is the *Liquid Fuel Emergency Act 1984*.¹⁸
- 9.22 This framework consists of the National Oil Supplies Emergency Committee, 'the main executive mechanism by which the Commonwealth, State/Territory Governments and Australian industry develop national responses to fuel supply emergencies'.¹⁹
- 9.23 Defence advised the Committee that the National Oil Supplies Emergency Committee, of which Defence was a 'standing member', had developed a National Liquid Fuel Emergency Response Plan, which 'would be implemented during a national liquid fuel emergency'.²⁰
- 9.24 Defence advised the Committee that under this framework 'the importance of maintaining fuel supplies to the ADF is recognised by both legislation and the National Oil Supplies Emergency Committee'.²¹

16 Department of Defence, *Submission no.2*, p.8.

17 Department of Defence, *Submission no.2*, p.4.

18 Department of Defence, *Submission no.2*, p.4.

19 Department of Defence, *Submission no.2*, p.4.

20 Department of Defence, *Submission no.2*, p.4.

21 Department of Defence, *Submission no.2*, p.4.

- 9.25 It also indicated that there was ‘a standing process for designating the ADF as a priority fuel user in a national fuel supply emergency’. This process would include:
- The declaration by the Governor General of a ‘national liquid fuel emergency’ under the Act;²²
 - Provision to the Minister for Resources, Energy and Tourism of ‘wide-ranging powers’ over crude oil and liquid fuels;
 - Defence would then seek from the Minister identification as a ‘bulk customer’ under s.10 of the legislation, and this would be provided in recognition of Defence’s ‘role in facilitating a Government response to any emergency’;
 - Defence ‘would also seek to be identified as an essential user under s.11 of the Act’. The National Oil Supplies Emergency Committee would ensure that all ‘essential users’, including Defence, ‘had sufficient fuel to meet their requirements’.²³
- 9.26 Defence advised the Committee that there were also measures Defence pursued within its own domain. This entailed, Defence advised the Committee, a focus on ‘internal policy reform and strategic engagement to drive a comprehensive whole-of-Defence approach to fuel management’.²⁴
- 9.27 Defence advised the Committee that a key element in this was the establishment of the Defence Fuel Management Committee ‘to provide a coordinated whole-of-Defence approach to fuel management’. This also ‘acts as the principal advisory body to the Chief of the Defence Force on fuel-related matters’.²⁵
- 9.28 Defence noted that it maintains ‘Stock on Hand’, ‘which could be used to mitigate against a short-term fuel shock’. However, Defence noted:
- ...the circumstances surrounding the shock, likely period of fuel outage/shortage and consequent level of ADF intensity for the period of the fuel shortage would determine the endurance of the fuel held in bulk storage.²⁶

22 Department of Defence, *Submission no.2*, p.4.

23 Department of Defence, *Submission no.2*, p.5.

24 Department of Defence, *Submission no.2*, p.5.

25 Department of Defence, *Submission no.2*, p.5.

26 Department of Defence, *Submission no.2*, p.5.

9.29 Accordingly, Defence advised the Committee:

Work has also commenced to determine the strategic fuel reserve stockholding requirements of the Services [and] it is expected that surge provisions will be included within new fuel procurement arrangements that will enable Defence to task its commercial suppliers to meet heightened operational usage requirements at short notice.²⁷

Alternatives to oil

9.30 The Committee asked Defence to advise on progress in seeking alternatives to oil. Defence advised the Committee that it 'had undertaken some initial investigations into the effects of alternative fuels on the ADF'.²⁸

9.31 Defence noted that specific element of Defence responsible for this area is the Defence Science and Technology Organisation (DSTO). DSTO 'is responsible for coordinating research and providing specialist scientific advice to Defence's technical regulatory authorities and capability developers on the suitability of alternative fuels for Defence platforms'.²⁹

9.32 In terms of research, Defence advised the Committee that the DSTO 'recently completed a study to estimate the joint fuel demands for the Navy, Army and Air Force'. Further, the DSTO 'is a partner with the United States, the United Kingdom and Canada in a Study Group examining future military power and energy requirements'.³⁰

9.33 Defence advised the Committee that, as part of a new strategy, the DSTO 'will work closely with the CSIRO and other agencies to investigate the development and use of alternative fuels'.³¹

9.34 Defence also advised the Committee that it was maintaining a close watching brief on developments by other defence establishments on this matter, particularly the US:

The United States has been trialling alternative fuels in the United States Air Force. The use of alternative fuels in aviation applications requires development of detailed specifications, supported by comprehensive testing and certification activities to

27 Department of Defence, *Submission no.2*, p.5.

28 Department of Defence, *Submission no.2*, p.5.

29 Department of Defence, *Submission no.2*, p.6.

30 Department of Defence, *Submission no.2*, p.6.

31 Department of Defence, *Submission no.2*, p.6.

ensure that airworthiness requirements are not compromised. The United States Air Force has a forward program for certifying the use of alternative fuels in specific fleets such as B52 and C-17.³²

9.35 Moreover, Defence advised the Committee:

The ADF remains engaged with the United States military to support the exchange of relevant information that is developed in the United States certification programs. The exchange of this information will allow Defence to position itself to exploit the benefits of alternative aviation fuels as they are certified for use and become commercially available.³³

Committee comment

- 9.36 On the matter of climate change and associated arrangements, Defence's efforts are in step with other government agencies. They do not appear to go beyond any other government agency, nor is there any apparent plan to do so. This raises some questions about what is an appropriate objective for a large governmental agency with a considerable carbon footprint and a large discretionary budget in terms of defence procurement.
- 9.37 On the matter of peak oil, oil shocks and alternatives to oil, Defence's current policy stance does not sufficiently protect Australia's defence capability against foreseeable risk. Again, Defence appears to be in step with other agencies, but not ahead, also prompting questions about appropriate objectives.
- 9.38 The Committee notes that a sizable component of Australia's fuel suitable for vehicles is sourced from overseas, and this increases strategic risk. Defence's advice to the Committee is that in the event of an oil shock Defence will have access to a proportion of fuel oil available in the domestic market.
- 9.39 In the Committee's view, this position does not anticipate more severe disruptions to fuel supply, where the overall quantum of fuel available to domestic users could, conceivably, be smaller than anticipated. This represents a significant gap in Australia's current strategic planning.
- 9.40 Research on alternative energy sources for military equipment and facilities needs to be given greater priority. Undertaking this in a joint manner with our allies is desirable.

32 Department of Defence, *Submission no.2*, p.6.

33 Department of Defence, *Submission no.2*, p.6.

Recommendation 6

The Committee recommends that Defence adopt a more assertive strategy with regard to oil shocks and alternative fuels, with the specific purpose of providing a capability to mitigate risk due to a dependence on oil-based fuels. Defence should provide such a capability, sufficient to maintain an identified core capability, within a timeframe of 10 years.

Recommendation 7

The Committee recommends that new fuels developed to mitigate risk to Australia's defence capability from oil shocks and oil scarcity be designed to reduce Defence's carbon footprint, where possible, in balance with energy yields and other practical considerations.

Challenges

- 10.1 The Committee is aware of new challenges faced by Defence, due to the changing profile of security threats. In a number of instances these are generated by both state and non-state actors, ushering in a new, complex defence environment.
- 10.2 There were three matters which formed the basis of the Committee's questioning in this area:
- Defence's involvement in the Proliferation Security Initiative (PSI);
 - Defence's readiness to respond to radiological threats; and
 - Defence's preparedness for cyber warfare threats.

Defence's involvement in the Proliferation Security Initiative

Introduction

- 10.3 The Committee asked Defence to describe its current engagement with the PSI, a 'means of cooperating to prevent illicit trafficking in weapons of mass destruction'.¹
- 10.4 PSI institutes cooperative arrangements between partner countries and provides an overarching layer for regional counter proliferation engagements, as well as training, preparation and response to radiological threats. Participation in PSI entails signing up to the Statement of

1 Department of Foreign Affairs and Trade, *Proliferation Security Initiative*, viewed 11/06/09, <http://www.dfat.gov.au/globalissues/psi/index.html>.

Interdiction Principles (SIP), and participation in training and exercises. 'More than 90' countries are involved.²

Anticipated threats

- 10.5 The Committee asked Defence to detail current anticipated threats from Weapons of Mass Destruction (WMDs) to Australia and the region. Defence advised the Committee that:

The proliferation of Weapons of Mass Destruction (WMD) is, and will likely remain, a security issue of concern to Australia. The number of states with WMD, or with a 'break out' capability to rapidly produce WMD, is growing due to increasing industrialisation in the region. Moreover, terrorist groups have expressed a desire to acquire WMD. Proliferation networks have, in the past, been active in the region, and inadequate export controls means that the region is likely to remain attractive to proliferators.³

- 10.6 In response to these threats, Defence told the Committee:

Law enforcement, counter-proliferation and export control regimes, and security assurances up to and including US extended deterrence will likely remain features of the region's response to such risks.⁴

Greater detail on PSI

- 10.7 The Committee asked Defence for greater detail on PSI and the Statement of Interdiction Principles. Defence advised the Committee that:

PSI creates a framework for practical international cooperation to combat the illicit transfer of WMD, delivery systems and related materials.⁵

- 10.8 On the SIP, Defence advised the Committee that, it served to build upon:
... participants' existing defence, enforcement, intelligence and diplomatic capabilities consistent with domestic and international

2 DFAT, *Proliferation Security Initiative*.

3 Department of Defence, *Submission no.2*, p.1.

4 Department of Defence, *Submission no.2*, p.1.

5 Department of Defence, *Submission no.2*, p.1.

law – to deter, interrupt and interdict the transshipment of WMD materials.⁶

- 10.9 Defence advised the Committee that obligations pursuant to signing the SIP, were such that participants committed to:
- ‘Undertake effective measures, either alone or in concert with other states, for interdicting the transfer or transport of WMD, their delivery systems, and related materials to and from states and non-state actors of proliferation concern’;
 - ‘Adopt streamlined procedures for rapid exchange of relevant information’;
 - ‘Review and work to strengthen their relevant national legal authorities’;⁷ and
 - ‘Take specific actions in support of interdiction efforts regarding cargoes of WMD, their delivery systems, or related materials, to the extent their national legal authorities permit and consistent with their obligations under international law and frameworks.’⁸

Support for PSI

10.10 The Committee also asked how involved Defence is in PSI; whether Defence could advise the Committee of instances where the SIP had have come into play; and had PSI scenarios emerged that were not covered by the SIP?⁹

10.11 Defence advised the Committee that Australia had continued strong involvement in, and support for the PSI since its inception by the United States in 2003.

Defence is actively involved in the PSI, including through annual international meetings of the OEG (the Australian delegation is led by Defence), workshops and multilateral exercises.¹⁰

10.12 The depth of Defence’s involvement with PSI is indicated by its record in supporting the Initiative:

6 Department of Defence, *Submission no.2*, p.1.

7 Department of Defence, *Submission no.2*, p.1.

8 Department of Defence, *Submission no.2*, p.2.

9 Department of Defence, *Submission no.2*, p.2.

10 Department of Defence, *Submission no.2*, p.2.

Defence has been extensively involved in all of the activities hosted by Australia including two Operational Experts Group (OEG) meetings (in 2003 and 2004) and two PSI exercises (in 2003 and 2007). Defence has supported PSI exercises in other Asia-Pacific countries (eg New Zealand, Singapore and Japan) with ships, aircraft and specialist personnel.¹¹

- 10.13 Defence described in greater detail the specific kinds of support it provides within the cooperative framework of PSI:

The Australian Defence Force (ADF) provides support to Australia's PSI activities through the provision of assets to PSI tasks, advice to the Government on PSI matters and liaison/training with other government departments and other nations supporting the PSI.¹²

- 10.14 In response to the Committee's question on events falling within the remit of PSI, but outside the boundaries of the SIP, Defence advised the Committee that this had not occurred.¹³

Radiological threats

- 10.15 The Committee asked Defence to provide information on its preparedness and participation where radiological threats are anticipated. Specifically, the Committee asked Defence to advise it on:

- Defence's assessment of the current and future levels of radiological threat for Australia and its region;
- Whether units of the ADF are routinely equipped, trained and exercised in anticipation of radiological threats;
- Which other services would be involved, should a radiological threat emerge, and whether Defence conducted regular exercises with these services with respect to radiological threat scenarios; and
- Whether there had been instances where this capability has been brought into play due to radiological threats, whether anticipated or actual.¹⁴

11 Department of Defence, *Submission no.2*, p.2.

12 Department of Defence, *Submission no.2*, p.2.

13 Department of Defence, *Submission no.2*, p.2.

14 Department of Defence, *Submission no.2*, pp.3-4.

Relevant functions

10.16 Defence advised the Committee that the Defence Intelligence Organisation (DIO) 'conducts classified intelligence assessments relevant to the defence of Australia and its interests'. As a function of this, DIO:

...routinely provides assessments relating to Chemical, Biological, Radiological and Nuclear (CBRN) threats to the ADF, and in support of whole-of-government counter terrorism and counter proliferation efforts.¹⁵

Training and preparedness

10.17 In response to the Committee's question on Defence's training and preparedness for radiological threats, Defence advised the Committee that 'ADF personnel undertake familiarisation training in the areas of CBRN defence as part of Basic Training' and 'some ADF groups undertake additional training based on their primary role and likely tasks'.¹⁶

10.18 Defence told the Committee that there are CBRN Defence Advisors in the ADF at unit level, who qualify through the School of Military Engineering's CBRN Instructor/Adviser course. These advisors receive four days of training (per course) on radiological issues.¹⁷

10.19 Further 'selected officers' attend an Advanced CBRN course in Canada, qualifying them to provide 'radiological threat advice to operational planning and higher headquarters'. In addition, there is a Defence Ionising Radiation Safety Officers Course for 'specialist personnel from across Defence'.¹⁸

Equipment, training and exercises

10.20 In response to the Committee's question on ADF units being routinely equipped, trained and exercised for radiological threats, Defence advised the Committee that this function is largely served through a specialised regiment, the Incident Response Regiment, which:

...is prepared to deal with CBRN threats and its collective training levels are considered high. Specialist equipment and training enable its personnel to deal with radiological threats. The need for

15 Department of Defence, *Submission no.2*, p.3.

16 Department of Defence, *Submission no.2*, p.3.

17 Department of Defence, *Submission no.2*, p.3.

18 Department of Defence, *Submission no.2*, p.3.

specific training and exercising for a response to a radiological threat scenario is determined by the assessed threat. Unit CBRN Defence Advisers provide the ability for Defence to surge its training if dictated by an increased threat.¹⁹

- 10.21 As noted, the Committee expressed interest in other agencies or services that would be involved in the event of a radiological threat, and whether Defence conducts regular exercises with these agencies.
- 10.22 In response, Defence advised the Committee that relevant agencies in this context were Emergency Management Australia in the Attorney-General's Department and the Australian Nuclear Science and Technology Organisation.²⁰
- 10.23 Defence noted that the 'duties and responsibilities of these organisations are articulated in the National Counter Terrorism Handbook', produced by the Attorney-General's Department, which 'is not a publicly available document'.²¹
- 10.24 Defence also advised the Committee that it had created a new function within the ADF to provide support for cooperation between Defence and other government agencies on these matters:
- Defence has raised the CBRN Directorate in the Vice Chief of the Defence Force Group that, among other things, is tasked to provide a conduit for working-level engagement between Defence, Commonwealth and State Governments on CBRN matters.²²
- 10.25 Defence advised the Committee that this Directorate also participates in and conducts exercises on radiological threat scenarios. At time of hearings, it was to coordinate 'Defence participation in the upcoming Department of Foreign Affairs and Trade led Discussion Exercise 'Blue Glow'. In addition, the 'Incident Response Regiment conducts regular exercises with the other agencies and organisations'.²³

19 Department of Defence, *Submission no.2*, p.3.

20 Department of Defence, *Submission no.2*, p.3.

21 Department of Defence, *Submission no.2*, p.3.

22 Department of Defence, *Submission no.2*, p.3.

23 Department of Defence, *Submission no.2*, p.3.

Actual incidents

10.26 In response to the Committee's inquiry on whether Defence had been called upon to respond to actual radiological threats or incidents, Defence advised the Committee that:

There is no recent history of an actual radiological threat response involving the ADF. On two separate occasions in the 1980s and one incident in 2001, Defence was requested to provide assistance to the Australian Nuclear Science and Technology Organisation in the unlikely event that damaged weather satellites entered the atmosphere and crashed into Australia. The satellites self-destructed as planned and Defence assistance was not required.²⁴

Cyber warfare

Introduction

10.27 The Committee asked Defence to advise it on:

- Defence's involvement with Cyber Warfare, including which areas of activity it is pursuing, and which receive high priority;
- Measures taken by Defence to prevent unauthorised intrusions into Defence computer networks, such as have occurred in other countries;
- Protections for Defence's Network-Centric Warfare (NCW) capability against such intrusions; and
- The adequacy of resources devoted to securing Australia's defence capability in this regard.

Level of involvement

10.28 In relation to its involvement in protection against cyber warfare, Defence told the Committee that all 'Internet-connected systems are potential targets for electronic attack so it is critical that Australia has an effective defensive capability'.²⁵

24 Department of Defence, *Submission no.2*, p.4.

25 Department of Defence, *Submission no.2*, p.9.

- 10.29 Responsibility for Defence's activities in this area lies with two components of Defence:

The Chief Information Officer Group (CIOG) in the Department of Defence employs a wide range of measures to protect its networks from such threats and actively monitors its systems to detect potentially malicious activity. The Defence Network Operations Centre provides this capability and works closely with the Defence Signals Directorate (DSD) to ensure its measures are able to protect Defence information and systems in a dynamic threat environment.²⁶

- 10.30 Further, Defence advised the Committee that:

DSD is pursuing areas of activity that will enhance its ability to discover and respond to threats to Government networks as well as improve our ability to identify vulnerabilities in those networks.²⁷

Defence network security

- 10.31 Defence advised the Committee that while 'Defence does not comment on the security status of Defence information systems', the 'CIOG [Chief Information Officer Group] actively defends its systems from a range of cyber threats'.²⁸

- 10.32 Defence told the Committee that the DSD also plays an active role in this area:

As the national authority on information security, DSD provides material, advice and assistance to Commonwealth and State/Territory authorities. This includes assisting the Defence CIOG with cyber threat detection and warning for Defence information systems.²⁹

- 10.33 Defence advised the Committee that both of these areas maintain close working relationships with cognate agencies:

DSD and CIOG have ties with close allies, and cooperate with relevant agencies. When such threats have arisen in our partners' countries, DSD and CIOG have been informed and DSD has

26 Department of Defence, *Submission no.2*, p.9.

27 Department of Defence, *Submission no.2*, p.9.

28 Department of Defence, *Submission no.2*, p.9.

29 Department of Defence, *Submission no.2*, p.9.

provided technical advice and assistance to the CIOG to ensure the confidentiality of sensitive information and the integrity of its networks.³⁰

10.34 Defence advised the Committee that on a day-to-day basis:

DSD also performs detection and reporting on cyber threats to Government agencies; this includes a seven-day, 24-hour incident response capability.³¹

Protection for Network-Centric Warfare capability

10.35 Defence advised the Committee that implementation of 'the Network Centric Warfare concept in Defence and the ADF is a critical force multiplier and it is important that the systems that contribute to that goal are protected from all forms of attack'.³²

10.36 As a result, Defence told the Committee:

The targets of hostile cyber warfare activities of concern to Network Centric Warfare are the networks that carry the essential information and intelligence. The protection of these networks includes physical, personnel and information security measures in accordance with Government information security.³³

Adequacy of resources

10.37 In relation to the adequacy of resources for protection against cyber warfare threats, Defence advised the Committee that:

The Defence CIOG operates the Defence Network Operations Centre to provide comprehensive monitoring and response to cyber threats. It assigns resources in this area commensurate with the level of threat and the sensitivity of the information being protected. Like all Government agencies, Defence CIOG benefits from DSD material, advice and assistance to protect its information systems.³⁴

30 Department of Defence, *Submission no.2*, p.9.

31 Department of Defence, *Submission no.2*, p.9.

32 Department of Defence, *Submission no.2*, p.9.

33 Department of Defence, *Submission no.2*, p.9.

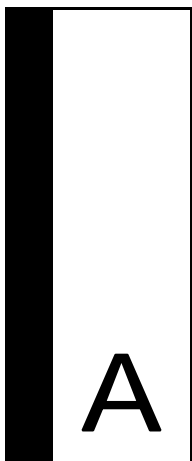
34 Department of Defence, *Submission no.2*, p.10.

10.38 Moreover, Defence told the Committee:

DSD has received funds to enhance its cyber defence capabilities under the E-Security National Agenda, approved in two tranches by the Government in 2001 and 2006. These enhancements focus on trialling a network monitoring capability, conducting vulnerability assessments and improving training and awareness of cyber threats and security measures across government.³⁵

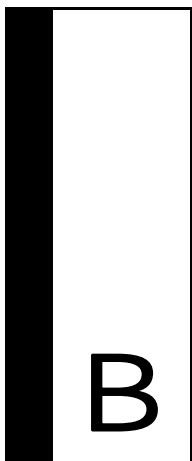
The Hon Arch Bevis MP
Chair Defence Sub-Committee
October 2009

35 Department of Defence, *Submission no.2*, p.10.



Appendix A – List of Submissions

1. Mr E J Bushell, Air Commodore (Ret'd)
2. Department of Defence
3. Department of Defence – Answers to Questions on Notice
4. Department of Defence – Answers to Questions on Notice from 19 June hearing – classified CONFIDENTIAL
5. Department of Defence – Answers to Questions on Notice from 21 August 2009 hearing



Appendix B – Witnesses appearing at public hearings

Canberra

16 April 2009

Department of Defence

Lieutenant General Ken Gillespie AO DSC CSM – Chief of Army

Brigadier Gerard Fogarty – Director-General, Personnel, Army

Mr Steven Grzeskowiak – Head, People Strategies and Policy

Captain Mark Hill – Acting Director-General, Navy Personnel and Training

Mr Phil Minns – Deputy-Secretary, People Strategies and Policy

Air Commodore Anthony Needham – Acting Head, People Capability

Vice Admiral Matt Tripovich – Chief, Capability Development Group

Defence Material Organisation

Commodore Mark Campbell – Director-General, Naval Aviation Systems

Major General Tony Fraser – Head, Helicopter Systems Division

Mr Kim Gillis – General Manager, Systems

Mr Warren King – General Manager, Programs

Ms Shireane McKinnie – Head, Electronic Systems Division

Air Commodore Roy McPhail – Director-General, Aerospace Combat Systems

Rear Admiral Boyd Robinson – Head, Marine Systems Division

Mr Colin Sharp – Head, Land Systems

Air Vice-Marshal Colin Thorne – Head, Aerospace Systems Division

Canberra

19 June 2009

Department of Defence

Air Chief Marshal Angus Houston AC AFC – Chief of the Defence Force

Mr Nick Warner – Secretary, Department of Defence

Canberra

21 August 2009

Defence Material Organisation

Dr Steve Gumley – Chief Executive Officer

Mr Anthony Cawley – Program Manager, Air Warfare Destroyer

Mr Kerry Clark – Head, Industry Division

Major General Anthony Fraser – Head, Helicopter Systems Division

Mr Kim Gillis – General Manager, Systems

Air Vice Marshall John Harvey – Project Manager, New Air Combat Capability

Mr Warren King – General Manager, Programs

Ms Shireane McKinnie – Head, Acquisition and Sustainment Reform Division

