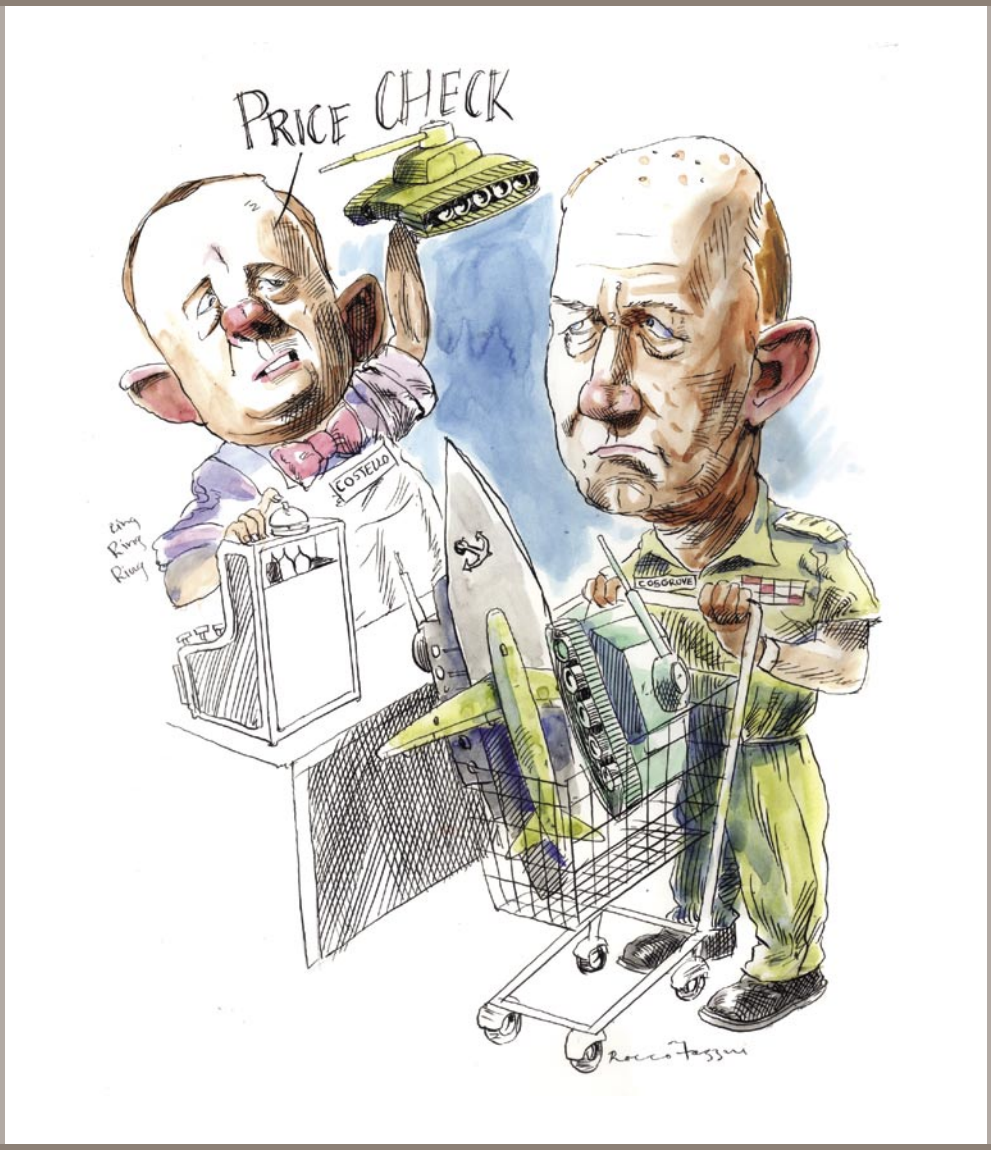
ASPI
AUSTRALIAN STRATEGIC POLICY INSTITUTE

The Cost of Defence

ASPI Defence Budget Brief 2004–2005



$44,665,322.40 $44,665,322.40 $44,665,322.40 $44,665,322.40 $44,665,322.40 $44,665,322.40 $44,665,322.40 $44,665,322.40

Forty-four million, six hundred & sixty-five thousand, three hundred & twenty-two dollars & forty cents per day

The Cost of Defence

ASPI Defence Budget Brief 2004-2005

RRP $20.00

The Cost of Defence
ASPI Defence Budget Brief 2004–05

Forty-four million, six hundred & sixty-five thousand, three hundred and twenty-two dollars & forty cents per day.

Prepared by:
Mark Thomson
Program Director
Budget and Management

Remuneration Section:
Prepared by
Dougal McInnes

Top 24 Project Briefs Compiled by:
Gregor Ferguson
Daniel Cotterill
Tom Muir
Editor and senior writers of Australian Defence Magazine

Cover cartoon courtesy of Rocco Fazzari.

First published May 2005

Published in Australia by:
Australian Strategic Policy Institute (ASPI)
Level 2, Arts House, 40 Macquarie Street
Barton ACT 2600
Australia

Tel: + 61 (2) 6270 5100
Fax: + 61 (2) 6273 9566
Email: enquiries@aspi.org.au
Web: http://www.aspi.org.au

Note on title:

The figure of $44,665,322.40 represents one three-hundred-and-sixty-sixth (it's a leap year) of the total funds available to Defence for financial year 2004–05. This does not include funds appropriated to the Defence Housing Authority nor those administered by Defence for military superannuation schemes and housing support services.

CONTENTS

Director's introduction v

Executive summary vi

Section 1 – Background 1

1.1 Strategic context for the budget 1

1.2 Defence organisation and management 3

1.3 The Federal budget process 9

Section 2 – Defence Budget 2004–05 PBS Explained 13

2.1 Overview [PBS Chapter 1] 14

2.2 Resourcing [PBS Chapter 2] 14

2.3 Capital Budget [PBS Chapter 3] 27

2.4 Planned Outcome Performance [PBS Chapter 4] 35

2.5 People [PBS Chapter 5] 73

2.6 Management Reforms and Efficiencies [PBS Chapter 6] 83

2.7 Defence Materiel Organisation [PBS Chapter 7] 86

Section 3 – Defence Management 91

Section 4 – White Paper Update 99

Section 5 – Defence Remuneration 109

Section 6 – The Cost of War 123

Section 7 – Improving Defence Budget Transparency 131

Section 8 – ASPI Top 24 Projects 135

Section 9 – The Financial Statements Explained 173

About the Australian Strategic Policy Institute 191

Glossary 193

SEE ERRATUM AT THE END OF THIS DOCUMENT

DIRECTOR'S INTRODUCTION

Within the last twelve months ASPI has published no less than three Policy Reports exploring various aspects of defence spending. To some, this might seem an inordinate focus on mere dollars at a time when war and terrorism fill the pages of our newspapers. But an informed defence policy debate cannot ignore the financial consequences of the options being considered. Now, more so than ever, it's important that every defence dollar is spent to best effect.

Consistent with this view, we have produced this, our third, annual Defence Budget Brief. Our aim remains to inform discussion and scrutiny of the Defence budget and the policy choices it entails. As was the case last year, we will be producing a short Defence Budget Summary. Last year's summary, entitled *Sinews of War*, devoted a lot of space to the history of Australian defence spending over the last fifteen years. With that background firmly established, this year's summary *Your Defence Dollar* will focus more on explaining and detailing this year's Defence budget.

This brief has been the result of intensive cooperative work by many people, mostly over the past two weeks. These include Ms Kate Freebody and associates from FreebodyCogent who provided invaluable assistance on accounting matters. Mr Dougal McInnes wrote the chapter on Defence remuneration and Mr Jock Tulloch who provided a range of support including work on the financial statements section. A special thanks goes to Rocco Fazzari for producing such a creative and topical cartoon for the cover.

And once again our colleagues from the Australian Defence Magazine have done a great job of capturing informative snapshots of the top 24 Defence projects. Many others have helped by providing comments, offering advice, and checking facts. Our thanks go out to them all.

Also, Defence was kind enough to look over a preliminary draft of this brief and provide valuable comments. This helped clarify some important points and resulted in improved accuracy in many areas. Of course this does not in any way imply that Defence endorses this document or even supports its conclusions.

My colleague Dr Mark Thomson, who is the Manager of ASPI's Budget and Management Program, has once again pulled together the brief in the short time available. To his energy, organisation and flair belongs the credit for this remarkable achievement. As always, responsibility for the judgements contained herein lie with Dr Thomson and me alone.

Lastly we should acknowledge that we at ASPI are not disinterested observers of the Defence budget. Our funding from Government is provided through Defence at the rate of six thousand one hundred and sixty-six dollars and sixty-seven cents ($6,166.67) per day. Details can be found in our Annual Report.

Hugh White
Director

EXECUTIVE SUMMARY

In this year's budget speech the Treasurer didn't get around to national security until tax, family and retirement savings had had their turn. That doesn't mean that security was ignored – far from it. There was $755 million extra this year to counter the threat of terrorism although most of this fell outside of the Defence portfolio. But Defence didn't do badly as we show below.

How much are we spending?	**$16.3 billion in 2004-05**
	$725 million more than last year
	1.9% of GDP

Total Defence Funding for 2004-05 will be $16.3 billion, which is an increase of $725 million on 2003-04. This will continue to rise across the next four years with a budget of $18.3 billion planned for 2007-08. As a percentage of GDP the 2003-04 budget represents 1.9% of GDP. This will probably slowly fall over the next few years given the prediction of continuing strong GDP growth.

Ups and Downs	**$815 million extra for logistics over 4 years**
	$654 million extra for personnel over 4 years
	$300 million extra for estate upkeep over 3 years
	$132 million extra for another year in Iraq
	$884 million less for capital investment over 4 years
	$287 million saved in retired capability over 4 years

The four major funding boosts in this year's budget are:

- $815 million over 5 years in increased logistics funding. Adding this to last year's boost gives a total of $1,960 million for logistics over six years. This is to allow the ADF to properly maintain its equipment and meet current preparedness targets and operational tempo.

- $654 million additional spending on personnel over four years. This does not fund any extra personnel. Rather, it improves the conditions of current ADF members. It includes $243 million to expand the rental assistance scheme, $113 million to improve Defence provided accommodation, $80 million supplementation for overall personnel expenses including remuneration and $21.4 million to continue a range of existing initiatives to improve conditions for ADF members and their families. Another $196 million has been provided to cover increased Defence Housing Authority costs, although this will be budget neutral for the Government.

- An additional $300 million has been provided over three years to fund the upkeep of Defence's almost $10 billion worth of facilities.

- $132 million to fund another year in Iraq and an extra $20 million to allow a force of roughly 100 ADF personnel to remain in East Timor next financial next year and $16 million to fund coastal surveillance.

In addition, Defence will get $47 million more for intelligence, $17 million to help reduce the size of the PNG defence force and $13 million to assist with security at the 2006 Commonwealth Games. In addition, a total of $594 million over 4 years has been provided to maintain the buying power of the Defence budget against price and foreign exchange variations. Yet it wasn't all good news. Defence will have its funding reduced by $1.17 billion over the next four years as follows:

- $884 million of funding for capital investment has been reprogrammed (deferred) to beyond 2007-08. Taking account of previous deferrals and the reprogramming of $700 million in unspent investment funds, this brings the total of delayed investment to $2.23 billion. This reflects a revised investment program that takes account of the failure to spend investment funds over the last two years.

- $287 million has been lost due to the decision to retire two FFG frigates early and withdraw two mine hunting vessels from service.

What's the big picture?	**There continues to be a slow slide in Defence spending away from capital investment for the future, and towards personnel and operating costs today.**

The 2000 White Paper set out an ambitious ten-year plan for the ADF. It now appears that Defence cannot invest and deliver new capability as quickly as planned, and more money is needed to maintain the existing force.

It's important to note that the capital investment program was *not* cut to provide funds for use elsewhere in the budget. Instead, the Government reluctantly reprogrammed major capital equipment spending because it had become clear that the original schedule of expenditure would not be met.

The increased spending on personnel and logistics that we have seen in the last two years probably reflects a combination of addressing pre-existent shortfalls and funding elevated preparedness targets in response to our strategic circumstances. But it's not because of operational deployments to Iraq and Solomon Islands, they are funded separately.

A new plan for the future	**Following the Defence Capability Review in 2003 the, Government formulated a new Defence Capability Plan. This budget reflects that revised plan.**

This budget reflects decisions taken by the Government following the 2003 Defence Capability Review. There are two key decisions. First, cuts are planned to the current force including the early pay-off of two FFG frigates, the tying up of two mine hunter

vessels, and the early retirement of the F-111 strike aircraft in 2010. Over the next decade these cuts will deliver savings of around $1.3 billion.

Second, a revised Defence Capability Plan has been developed that sets out a new decade long program of investment in major capital equipment. The new plan includes many of the projects from the old plan, as well as some new ones. The total amount of money has remained unchanged, but it has been shifted further forward into the future.

In the short term this will provide a respite for the Defence Material Organisation who were having a lot of trouble meeting the schedule of the original plan. In the longer-term it presents them with a greater challenge because the planned increase in spending becomes steeper and more sustained than previously planned.

Performance	**There are signs that the extra recent funding Defence has received is making a difference in the delivery of capability.**

Over the past five years the ADF has continuously done what was asked in demanding operational environments around the globe. But this has only ever involved a small part of the total force. We are entitled to ask just how ready for action the ADF as a whole is, especially given all the extra funds that have been provided in recent years.

The only real source of information we have are the Defence annual reports, which provide surprisingly detailed data on how well equipped, trained and prepared the ADF is. Here the picture is reassuring. After pretty static and unspectacular results in 2000-01 and 2001-02, performance in 2002-03 posted a solid improvement. Things aren't perfect but they are improving at a good pace. Given that 2002-03 was a year of high operational tempo, it will be interesting to see how 2003-04 measures up.

Defence Management	**Financial management reforms are under way.**
	Big changes in the Defence Materiel Organisation.

Defence is working to improve the basics of its financial management systems and processes. Initiatives range from more modern approaches to 'back-office' functions to the development of costing systems that will improve the visibility of just how spending links to the delivery of capability. But all this will take time to make a big difference, if only because Defence's management information systems are in very poor shape. There are investment funds put aside to fix these systems but it will be several years at least before they can be implemented.

One area where change is occurring quickly is in the Defence Material Organisation. To start with, it's going to be made quasi-autonomous as a 'prescribed agency' with separate financial reports. And there's going to be greater scrutiny of project proposals before approval. Perhaps most importantly, the aim is to make the organisation more business like and responsive. This had better work. Later this decade the planned level of investment in military equipment will ramp up quickly and DMO will be expected to deliver the goods. On past performance this will not be

easy. The looming big projects for Navy's air warfare destroyers and large amphibious ships will be a big test of both DMO and Australian industry.

What's next?	**As the ADF consolidates after several years of high operational tempo, it's time to look at just how efficiently capability is being delivered.**

Since the White Paper the Government's focus has been two-fold. First to make sure that the ADF is ready and able to deploy at short notice to a wide range of theatres – be it East Timor, Afghanistan or Iraq. Second, to build the ADF of tomorrow through investment in new military equipment. This second goal has been somewhat thwarted, but the reform of DMO has been put in place to correct that.

The first goal of a combat ready ADF has been pursued through comprehensively funding shortfalls in logistics and other areas to make sure that the ADF has what they need. The same has occurred with regards to personnel through a wide range of initiatives to improve recruitment and retention. Fortunately, this appears to be working. There is no doubt that the ADF of today be a much better prepared force than five years ago. And it should be, given the amount of money that's been spent.

All this has happened somewhat quickly over a period of relatively high operational tempo. Understandably, the focus has been on guaranteeing the effectiveness of the ADF rather than worrying too much about efficiency. This is quite a change from the 1990's where the emphasis was firmly on the latter.

But for the moment at least things are quietening down. The ADF will use this as an opportunity to catch up on disrupted peacetime training and review their doctrine in light of lessons learnt in the field. Concurrent with this, it's timely to look at the funding of the force and see just how efficiently capability is being delivered. There's a mechanism for this built into the Commonwealth's budget framework called an 'Output-Price Review' or more simply a price check. The responsibility for this lies with the Department of Finance, although they seem to have lost enthusiasm for the task.

Given the recent increases to personnel and operating costs, now seems as good a time as any to pick one of Defence's twenty-eight capability outputs and look closely at what's being delivered for the money. Who knows what will be found? The only thing worse than paying too much for capability, is paying too little and winding up with an ineffective hollow force.

SECTION 1 – BACKGROUND

1.1 Strategic Context for the Budget

This year, after two years in the limelight, Defence has stepped back to something more like its traditional place on Budget night. In both 2002 and 2003, Peter Costello's budget speech began with defence and security, and he spoke about them at length before turning to the economy and other issues. In 2002 he spent over a third of his speech on Defence and security. In 2003 they had something closer to a quarter. But in this year's Budget speech, the Treasurer mentioned defence and security only in passing until around the middle, where, sandwiched between retirement savings and health care, they received together about a page of the eleven-page speech.

Aware but not obsessed

This reversion to a more typical lower profile for Defence on Budget night refects both political and strategic realities. Politically, it suggests that after three years as *the* hot button issue, Defence is no longer the area that the government wants to project as its overriding budget priority. Budget speeches are carefully crafted political documents, so we can infer that Defence's sharp demotion reflects the Government's sense, based no doubt on polling, that the voters are now less interested in hearing their leaders talk about security issues than they were over the last two years.

This in turn reflects a deeper trend. Politics and policy have now adapted to the world after September 11 2001. We are not returning to a pre-9/11 'normality', but we are establishing a new post-9/11 normality, and getting things more clearly into balance. In some ways this applies not just to new realities after 9/11, but to the lessons taught by events in East Timor in 1999 about the nature of our regional strategic environment and the demands that it might make of Australia's armed forces and wider national capacities.

The Government's slogan, 'alert but not alarmed' never quite took root in Australia's national consciousness. But we have made our own accommodation with the more violent world we seem to find ourselves in. That state of mind might be better expressed as 'aware but not obsessed'.

Coming home

One reason for this is that, at least for the time being, Australia's military commitments overseas are falling to their lowest levels since before Interfet was deployed to East Timor in 1999. In East Timor itself our troop deployment is falling to a little over 100 as the UN passes responsibility for security to the East Timorese themselves. In Solomon Islands the ADF component is being wound back, with the task of reconstruction firmly in the hands of police and other civil agencies. And in Iraq and the Gulf the Government seems committed to sustaining the current levels of deployment, but not to contemplate any substantial increase, while the Opposition is committed to bringing our forces home by Christmas.

Iraq of course remains a major focus of public attention and concern. But if anything it has served to remind people that armed force is not necessarily the most effective response to many security challenges, especially the complex challenges of terrorism. And the Bush Doctrine seems to have been overtaken by reality. The expectation, raised by the Bush Administration in 2002, that the War on Terror would entail a series of major military operations against the Axis of Evil, and that Australia would be called upon to join these operations, has been dimmed by the experience of Iraq. The recognition that the US itself lacks the military capability, especially in land forces, and perhaps also the political will, to undertake more operations on this scale suggests that Iraq, rather then being the new paradigm, is an exception, and perhaps an aberration, in US strategic policy.

Australia's strategic attention was already returning to our own neighbourhood when, a few weeks after last year's budget, the Government committed Australia, including the ADF, to a major regional operation in Solomon Islands.

Sustained spending

None of this means that Defence and Security has not been generously treated in the year's budget. The Government has more than fulfilled its long-term commitment to sustained and substantial growth in Defence spending, and thrown in a bit more besides. And it has provided more big funding increases to intelligence and domestic security agencies. Indeed these agencies have been the main focus of new budget measures, with proportionately very large increases in intelligence budgets in particular. This reflects the Government's recognition that intelligence is the key to an effective long-term campaign to reduce the chances of a successful terrorist attack against Australia or Australians.

Likewise the AFP has been generously treated in the budget, in recognition that in meeting the demanding security challenges of Australia's immediate neighbourhood – in Solomon Islands and PNG, for example – it is the AFP that is often on the front line. Today a higher proportion of the AFP is deployed overseas on operations than of the ADF.

The Government spent two years reviewing how Australia's long-term defence capability needs would be affected by the war on terror. The results were released in a Defence Capability Review late last year, and in a revised Defence Capability Plan published in February this year. Some important new capabilities were added to the plan, and some older ones were retired early, but overall the review process concluded that Australia's defence capability needs had not been transformed by 9/11.

The Government still sees Australia needing to develop and maintain two key kinds of capability: a set of high-technology air and naval forces to defend Australia and provide Australia's strategic weight in the maritime strategic theatre of the Western Pacific, and a set of light, highly-deployable land forces for operations offshore, especially in our immediate neighbourhood. These are both long-term priorities, and the real measure of the adequacy of the Governments defence budgets will be the extent to which they are achieved.

1.2 Defence Organisation and Management

Commonwealth Outcomes and Outputs Framework

The Defence budget is set out according to a framework of outcomes and outputs. This framework was introduced by the Commonwealth in 1999, and is applied to all Commonwealth agencies. It works like this:

- **Outcomes** are the results or benefits that the Commonwealth aims to deliver to the community through the work of its agencies. They are specified for each agency, and are meant to express the purpose or goal of each agency's activities.
- **Outputs** are the goods and services that each agency produces to achieve its outcomes.

Under the framework, the performance of agencies is measured to assess both how much output they are generating, and the extent to which that output is actually delivering the outcomes intended. So the aim is to show not only how much an agency is *doing*, but how much it is actually *achieving.*

The outcomes and outputs framework is not just an accounting device. It is intended to provide a structure for management decision-making and resource allocation throughout Commonwealth agencies. So the way the framework is applied in an agency like Defence is very important to its management and performance.

The Defence Outcomes

The key to the effective application of the framework is the specification of the outcome or outcomes. Prior to the 2003-04 budget the Government had set down only one outcome for Defence, that being: *The Defence of Australia and its National Interests.*

Since then, the Government has maintained seven outcomes for Defence:

1. Command of Operations in Defence of Australia and its Interests;

2. Navy Capability for the Defence of Australia and its Interests;

3. Army Capability for the Defence of Australia and its Interests;

4. Air Force Capability for the Defence of Australia and its Interests;

5. Strategic Policy for the Defence of Australia and its Interests; and

6. Intelligence for the Defence of Australia and its Interests.

And a seventh outcome covering primarily superannuation payments for current and former Australian Defence Force (ADF) personnel, and housing subsidy provided under the Defence Force (Home Loans Assistance) Act 1990:

7. Superannuation and Housing Support Services for Current and Retired Defence Personnel.

Defence Outputs

The presentation of Defence outputs has changed a number of times since the outcomes and outputs framework was introduced in 1999, and a survey of past output structures can be found in the 2002-03 ASPI Defence budget brief. In 2003-04, what were previously termed Sub-Outputs were almost one-for-one elevated to the status of Outputs grouped under the revised Outcomes. This was a very positive step forward in providing visibility of how the Defence budget is spent. Table 1.2.1 lists the current Outcomes, Outputs and their net costs for 2004-05.

Table 1.2.1: Defence Outputs and Sub-Outputs 2004-05

Outcome	Output	Cost $m
1. Defence Operations	1.1 Command of Operations	358
	1.2 Defence Force Military Operations and Exercises	326
	1.3 Contribution to National Support Tasks	9
	subtotal	**693**
2. Navy Capabilities	2.1 Capability for Major Surface Combatant Operations	1,425
	2.2 Capability for Naval Aviation Operations	508
	2.3 Capability for Patrol Boat Operations	288
	2.4 Capability for Submarine Operations	858
	2.5 Capability for Afloat Support	223
	2.6 Capability for Mine Warfare	404
	2.7 Capability for Amphibious Lift	372
	2.8 Capability for Hydrographic and Oceanographic Operation	247
	subtotal	**4,326**
3. Army Capabilities	3.1 Capability for Special Forces Operations	332
	3.2 Capability for Mechanised Operations	864
	3.3 Capability for Light Infantry Operations	1,018
	3.4 Capability for Army Aviation Operations	624
	3.5 Capability for Ground-based Air Defence	182
	3.6 Capability for Combat Support Operations	488
	3.7 Capability for Regional Surveillance	160
	3.8 Capability for Operational Logistic Support to Land Forces	504
	3.9 Capability for Motorised Infantry Operations	584
	3.10 Capability for Protective Operations	540
	subtotal	**5,287**
4. Air Force Capabilities	4.1 Capability for Air Combat	1,959
	4.2 Capability for Combat Support of Air Operations	557
	4.3 Strategic Surveillance & Response Operations	1,228
	4.4 Capability for Air Lift	976
	subtotal	**4,620**
5. Strategic Policy	5.1 Strategic & International Policy, Activities & Engagement	195
	5.2 Military Strategy and Strategic Operations	48
	subtotal	**243**
6. Intelligence	6.1 Intelligence	**435**
	Total	**15,605**
7. Superannuation and Housing Support Services for Current and Retired Defence Personnel		**2,337**

Performance Targets and Measurement for Outcomes and Outputs

A key purpose of the outcomes and outputs framework is to provide a basis for setting targets and measuring performance. Recent output performance is detailed in Section 2.4 of this brief. In a positive move, the level of detail disclosed by Defence has increased significantly over the last two years.

Defence's Outputs and its Organisational Structure

The traditional concept of Defence's organisational structure is that it consists of three Services – Army, Navy and Air Force – and the Department of Defence. This impression is reinforced by the output structure, focused as it is on Army, Navy and Air Force capability outputs. But, in fact, the Defence organisation is not organised like this at all. It is divided into sixteen 'Groups'; these are the entities between which the Defence budget is divided. The arrangement of these Groups is set out in Figure 1.2 at the end of this Section.

These Groups and their executives are responsible for spending Defence's money and doing its business. Consequently, it is within the group structure that financial accountability occurs. The breakdown of the price of the Defence Outputs across the sixteen groups for 2003-04 and 2004-05 is given in Table 1.2.2. No prior comparable data is available.

Table 1.2.2: Defence Group contributions to the price of the Defence Outcome

	2003-04 $ million	2003-04 % of total		2004-05 $ million	2004-05 % of total
Output Executives					
Headquarters Australian Theatre	137	0.9%		85	0.54%
Navy	1,286	8.9%		1,254	8.03%
Army	2,370	16.4%		2,293	14.69%
Air Force	1,389	9.6%		1,364	8.74%
Intelligence	311	2.2%		303	1.94%
Strategic Policy	136	0.9%		144	0.92%
Subtotal	***5,629***	***39.0%***		***5,442***	***34.87%***
Owner Support Executives					
Defence Personnel Executive	702	4.9%		689	4.41%
Defence Science and Technology	292	2.0%		287	1.83%
Vice Chief of the Defence Force	51	0.3%		52	0.33%
Chief Finance Officer*	338	2.3%		338	2.16%
Chief Information Officer	25	0.2%		24	0.15%
Secretary/CDF Force	4	0.0%		4	0.02%
Public Affairs and Corporate	13	0.1%		12	0.07%
Inspector General	11	0.1%		11	0.07%
Subtotal	***1,436***	***9.9%***		***1,416***	***9.07%***
Enabling Executives					
Defence Materiel Organisation	4,841	33.5%		4,683	30.0%
Corporate Services and Infra.	2,580	17.9%		2,615	16.75%
Subtotal	***7,421***	***51.4%***		***7,298***	***46.76%***
Portfolio	-35	-0.2%		1,448	9.27%
TOTAL	**14,452**	**100.0%**		**15,605**	**100.0%**

* Chief Finance Officer Group centrally manages Defence's Fringe Benefits Tax (FBT). The revised FBT estimate for 2003-04 is $310.4m.

The Groups are divided into three categories:

- **Output Executives Groups** are (mostly) responsible for delivering Defence's outputs to the government as customer;
- **Owner Support Executives Groups** are responsible for protecting the Government's interest as the owner of Defence, including ensuring its long-term viability; and
- **Enabling Executives Groups** are responsible for providing business services such as asset management to the other two types of groups.

The most interesting thing about the breakdown in Table 1.2.2 is that the Output Executives (who are responsible for delivering Defence's Outcomes and Outputs) control less than 40% of the budget, almost half the money going to the two Enabling Executives. Note that in 2004-05 a total of $1.4 billion remains in a portfolio fund yet to be allocated.

Unfortunately, spending in one group generally contributes to a number of different Outcomes/Outputs, so that there is no one-to-one mapping of the Groups into the Outcomes or Outputs. Table 1.2.3 gives the allocation of the individual Outcome costs to the groups.

Table 1.2.3: Defence Group contributions to the price of the Defence Outcomes for 2004-05

	Outcome Price $m						
	1	**2**	**3**	**4**	**5**	**6**	**Total**
Output Executives							
Headquarters Australian Theatre	85	0	0	0	0	0	**85**
Navy	10	1,235	0	0	0	9	**1,254**
Army	_	0	2,293	0	0	0	**2,293**
Air Force	11	20	34	1,289	6	4	**1,364**
Intelligence	0.8	7	13	8	0.4	273	**303**
Strategic Policy	0.3	0.4	0.4	0.4	142	0.3	**144**
Subtotal	***106***	***1,263***	***2,341***	***1,297***	***149***	***286***	***5,442***
Owner Support Executives							
Defence Personnel Executive	30	148	305	172	15	19	**689**
Defence Science and Tech	33	72	48	95	19	21	**287**
Vice Chief of the Defence Force	2	14	17	14	2	2	**52**
Chief Finance Officer	8	83	160	78	5	6	**338**
Chief Information Officer	1	6	8	6	1	0.8	**24**
Secretary/CDF	0.2	1	1	1	0.2	0.1	**4**
Public Affairs and Corporate	0.7	3	4	3	0.5	0.4	**12**
Inspector General	0.5	3	4	3	0.5	0.4	**11**
Subtotal	***74***	***330***	***547***	***372***	***43***	***49***	***1,416***
Enabling Executives							
Defence Materiel Organisation	198	1,804	844	1,814	9	15	**4,683**
Corporate Services and Infra.	113	562	1,146	719	24	52	**2,615**
Subtotal	***310***	***2,366***	***1,990***	***2,533***	***32***	***67***	***7,298***
Portfolio funds	203	366	409	419	18	34	**1,448**
TOTAL	**694**	**4,326**	**5,287**	**4,620**	**243**	**435**	**15,605**

ADF command structure

It is important not to confuse the day-to-day management of the Department of Defence with the command of military operations. The former occurs through the diarchy and group/output arrangements discussed earlier, the latter is exercised through a formal command chain and dedicated headquarters structure. In this parallel arrangement, units are temporarily re-assigned from the Services to be commanded on operations and exercises as required.

In early 2003 the ADF command arrangements were revised through the creation of Joint Operations Command under the Chief of Joint Operations who also happens to be the Vice Chief of the Defence Force. In this rearrangement, Headquarters Australia Theatre became part of the Joint Staff. Figure 1.2.1 refers.

Figure 1.2.1: ADF command structure

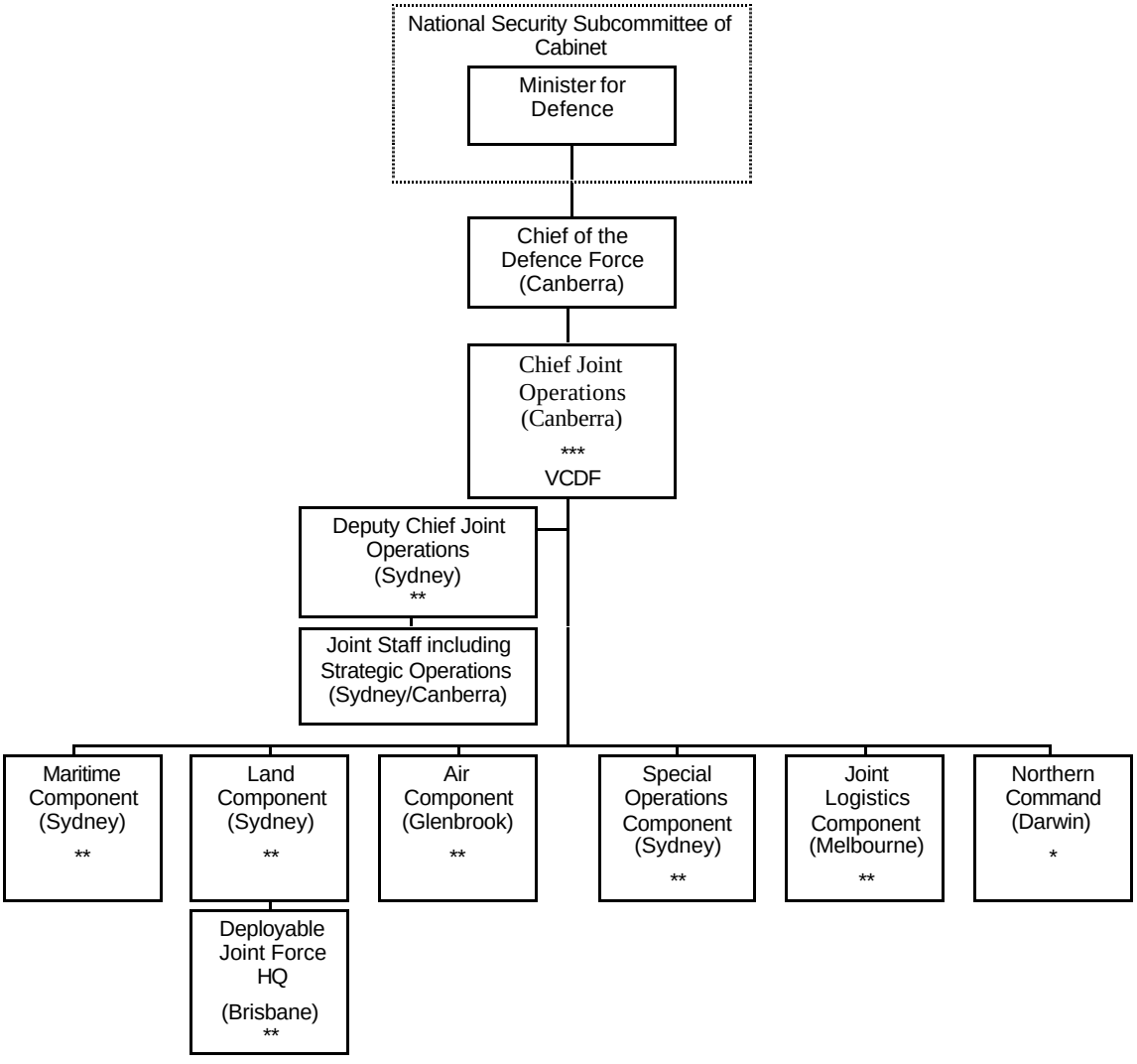
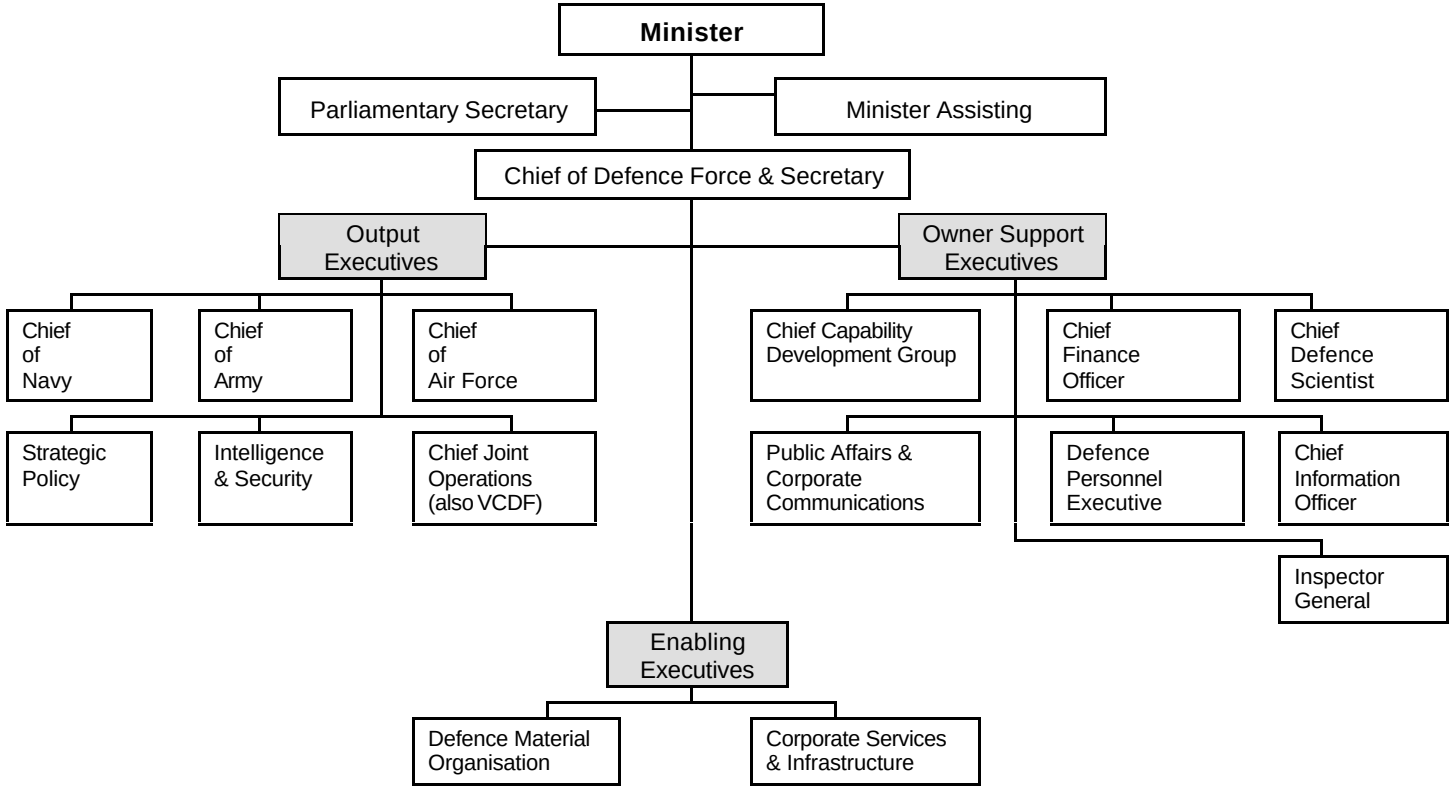


Figure 1.2.2: Defence organisational structure



1.3 The Federal Budget Process

The word "budget" derives from the French, *bouge*, meaning a leather pouch or bag. From this etymology we presumably get the phrase "money bags." In Australia, the annual federal budget allows the Government of the day to mange Australia's money bags which have grown remarkably since Federation. In 1901 the Budget totalled around $22.6 million in historical dollars (Deface spending was $1.9 million out of this total). Today, the federal budget is around $193 billion (Defence totalling $16.3 billion).

So who are the King's men counting all the money? And in which Canberra counting houses are decisions made about how, where and why these billions of dollars are spent? Two recent events give important context when answering these questions.

Firstly, to ensure the public is better informed about the Federal Budget and to open up the Government's fiscal strategy to public scrutiny, the 1998 *Charter of Budget Honesty Act* legislated the requirement to publicly release a host of mid-year statements and periodical reports. An extract of the Charter outlining the principles of sound fiscal management invariably appears in Budget Paper Number 1 each year. And secondly, from the 1999-2000 financial year, the traditional cash-based Budget was replaced by an accrual Budgeting system that takes account of the Government's full financial position, not just expenditure against revenue in any year. The Government has committed to periodically review the Budget framework to assess its effectiveness, which to date has resulted in the 1999 Vertigan Report and the 2002 Budget Estimates and Framework Review.

Yet, an understanding of these reforms does not explain the actual construction of the Budget. A good starting point in this regard is the bottom-line revenue and expenditure dichotomy. In the 2004-05 Budget, total revenue was $193.2 billion – taxes making up almost 95 per cent – and total expenditure was $192.3 billion. (By contrast, in 1993-94 expenditure was $117 billion and revenue $100 billion in then year dollars). The delivery of a balanced set of books has become a policy priority in recent times and the balance between spending and saving is paramount.

Of course, each financial year there are many more pleas for spending than the politically sensitive suggestions for collecting money. The key agencies in this balancing act are Treasury and the Department of Finance and Administration (Finance). Whereas Treasury has a wide economic role in advising cabinet on fiscal strategy generally and on revenue policy in particular, Finance advises Government on expenditure priorities, coordinates Agency financial estimates and oversees the majority of Budget processes. In short, Finance is the government's Chief Finance Officer; Treasury the government's economic adviser and banker.

A Budget Co-ordination Committee (BCC) assists the planning and management of the Budget. Recommended by the Vertigan Report, membership is from the Department of Prime Minister and Cabinet, Treasury and Finance. Following consultation with the Cabinet Secretariat, Ministerial offices and agencies, the BCC agree on a "whole-of-government" approach, including deadlines and detailed operating arrangements for agencies to be put forward for Cabinet endorsement.

Against this backdrop, the Budget process can be condensed into ten actions. However, like any bureaucratic script, there are always differing roles, interpretations and dramas in each Budget performance.

October: Budget Bids
The Budget cycle begins with the Ministers for the 16 budget portfolios writing to the Prime Minister with initial bids for new policy, advice of financial pressures and possible savings in their respective portfolios.

October: Updating of Estimates
Forward estimates from the current financial year are updated to provide an accurate baseline of figures for the upcoming Budget, taking account of any spending or savings measures agreed since the Budget and changes in economic parameters such as the estimated rate of growth in GDP. These figures are reported in the Mid Year Economic and Fiscal Outlook (MYEFO) in November.

November-December: Senior Ministers' Review
A team consisting of the Prime Minister, Deputy Prime Minister, the Treasurer and the Minister for Finance meet to establish policy priorities and strategy and to agree on any Budget initiatives which come forward for consideration. This sets the overall policy framework for the Expenditure Review Committee. The substance of this policy framework becomes manifest in the final Budget priorities, which in 2003-04 included: Reducing personal income tax; Strong defence; Enhancing Australian security; Investing in Education; and Sustaining first rate health services.

January: Portfolio Budget Submissions (PBS)
Against these Ministerial policy priorities, each Commonwealth department prepares a draft PBS for Ministers. These submissions detail the new policy proposals for each agency in the Budget and forward estimates period.

Circulation of the Portfolio Budget Submissions
Each draft PBS, like any Cabinet Submission, is circulated to departments and agencies with a relevant interest. For example, the Department of Defence may view any Customs proposals that affect border protection arrangements. Treasury, Finance and Prime Minister and Cabinet provide comments on all draft PBS. Final PBS are submitted and circulated to ERC members through the Cabinet Secretariat, usually by late February.

March: Expenditure Review Committee (ERC)
Created in its present form as a standing ministerial sub-committee under Hawke, and reinstated under Howard, the ERC considers expense proposals and funding levels. At present, membership of the committee consists of the Prime Minister, the Treasurer, the Ministers for Finance and Administration, Trade, Environment and Heritage, and the Assistant Treasurer. The ERC meets over several weeks, discussing each PBS with the relevant portfolio minister(s) and recommends to Cabinet new policy proposals that are to be included in the Budget. The ERC may also commission work on its own reviews and initiatives from a department. The ERC also relies on information from Finance in the form of "Green Briefs"- information on PBS that form the agenda for each ERC discussion, and "scoresheets" - daily briefings on the Government's financial position that reflect the impact of evolving ERC decisions.

Revenue Decisions
Revenue proposals are typically less common than expenditure proposals and are made by Cabinet or by senior Ministers as authorised by Cabinet.

March to May: Budget Documentation
Agencies prepare explanations of their respective Budgets; statements of the risks involved; and a "measures descriptions" which are published in Budget Paper Number 2. These measures reflect the successful new policy priorities that were first raised in November, and outlined in the draft PBS in January, as well as additional strategies as determined by the ERC and any revenue decisions. To varying extents, policies and initiatives can be either released ahead of the Budget, or withheld until Budget night, as the Government prefers. The Budget documents contain the latest estimates flowing from a pre-Budget review that takes into account the most up-to-date information on economic parameters and program activity levels.

Budget Cabinet
Cabinet approves the final package and Budget measures in late April.

May: Budget Day and Night
In a practice instituted under Curtin, journalists are "locked in" at Parliament House with advance copies of the Budget. At 7.30pm the Treasurer delivers his Budget Speech. He commends the Budget to the House, and tables the Budget papers. These include a Portfolio Budget Statement for each Department that forms the basis for public hearings on the estimates by Senate legislation committees. Moreover, *The Charter of Budget Honest Act 1998* requires the Treasurer to table a Final Budget outcome report for the financial year no later than three months after the end of the financial year.

For further information on the budget process see 'The Commonwealth Budget: Process and Presentation (April 2003),' Research Paper No. 2 2002-03, Department of the Parliamentary Library.

SECTION 2 – DEFENCE BUDGET 2004–05 PBS EXPLAINED

The 269 pages of the 2004–05 Defence Portfolio Budget Statements (PBS) sets out the Government's plan for the expenditure of over $16.3 billion by Defence in the coming financial year.

This guide attempts to explain and, where possible, analyse the information in the PBS. In doing so we skim over those parts of the PBS that are relatively clear, and focus on those areas where explanation might be useful. Fortunately this task has been made easier by ongoing improvements that make this year's PBS more clear and comprehensive than any before.

Some of the material is unavoidably technical due to the disciplines and complexities of accounting. However, it is not necessary to read this Section as a whole or in sequence to gain insight. Every attempt has been made to enable the reader to jump and look at those items that most interest them. The more technical accounting material has been relegated to Sections 9.)

This brief does not cover in any detail the funds administered by Defence on behalf of the Government for superannuation and housing support services for current and retired Defence personnel.

Most parts of the guide are best read with the PBS at hand. Copies can be down-loaded from the web at <http://www.defence.gov.au/budget/>.

Section 2.1: Overview [PBS Chapter 1]

The overview chapter of the PBS begins by recapping the key points of the government's strategic guidance as set out in the *2000 White Paper* and *Defence Update 2003*. It then devotes a page to listing the major combat elements of the ADF.

By far the most useful part of this chapter is the extensive discussion of progress towards implementing the White Paper, pp 6–17. This is worth a read if you are interested in some of the detailed initiatives that are under way in terms of capability, personnel, management and funding. We address the more interesting of these issues in Sections 2.5, 3 and 4 of this brief.

The first chapter of the PBS concludes with a wiring diagram of the Defence organisational structure not unlike the one provided in Section 1.2 of this Brief.

Section 2.2: Resourcing [PBS Chapter 2]

This is the part of the PBS where the 'rubber hits the road' in terms of allocating money to get things done. It contains the financial statements, new budget measures and the funding bottom line.

How much money will Defence get?

With the Budget Summary on p.23 of the PBS, we get to the heart of the issue. Table 2.1 of the PBS gives three key figures for the Defence budget:

- **Total Revenue from Government,** being those funds formally *appropriated* to Defence by the Government for departmental purposes. In 2004-05 this amounts to $15,924,966,000.

- **Total Departmental Funding,** being those funds actually *available* to Defence including appropriations and revenue from other sources. In 2004-05 this amounts to $16,347,508,000.

- **Total Defence Resourcing,** being Total Departmental Funding plus those funds appropriated administratively through Defence for superannuation and defence housing subsidies. In 2003-04 this amounts to $18,684,408,000.

Of these three figures, Total Departmental Funding is the most useful. It represents the funds available to Defence to deliver the six departmental Outcomes and maintain the ongoing program of investment in new equipment and facilities. It is also the figure commonly used to measure movements in Defence's funding and is therefore the one we shall focus on for most of this brief. It does not include the administered funds covered by Outcome 7. To streamline the discussion we shall henceforth refer to Total Departmental Funding simply as 'Defence funding' where no ambiguity occurs.

Several other measures of the Defence budget arise within the complexities of the Commonwealth finance framework. Three that can be useful when trying to understand Treasury budget papers are explained on p. 39 and 40 of the PBS. These shall not concern us further except for the Underlying Cash Balance Impact that is

relevant to calculating both the percentage of GDP and percentage of Government payments.

The mechanism through which Defence receives its funds is somewhat complex, so a detailed explanation has been provided in conjunction with the discussion of the financial statements in Section 9 of this brief.

How much has the Budget grown?

Table 2.2.1 displays Defence funding for the past five, and next four, financial years. Also shown are both the nominal and real year-to-year percentage growth rates.

Table 2.2.1 Total Defence Funding – real and nominal growth

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
Funds (nominal)	12,445	12,648	14,501	14,738	15,623	16,348	16,511	17,295	18,310
Growth (nominal)		1.6%	14.6%	1.6%	6.0%	4.6%	1.0%	4.8%	5.9%
Funds (real)	14,474	14,453	15,824	15,762	16,274	16,348	16,187	16,623	17,253
Growth (real)		-0.1%	9.5%	-0.4%	3.2%	0.5%	-1.0%	2.7%	3.8%

In calculating the real growth rate the nominal dollar values of the individual years have been converted to a single base year using the deflator used by the Department of Finance to maintain Defence buying power in real terms. Since 2001-02 this has been the implicit Non-Farm GDP Deflator (NFGDPD). Specifically, we have used the historical Defence deflator for the first two years, and the actual and Treasury-projected NFDGPD up to 2004-05. Beyond that we used the deflator implied in Table 3.5 of the PBS, there being no official estimates past 2004-05.

What happened to the 3% real growth promised by the White Paper?

There are two reasons why the Table 2.2.1 does not display the promised 3% per annum real growth that the Government committed to at the time of the 2000 White Paper:

First, the planned White Paper program of capital investment has stalled. In response, the Government has reprogrammed around $2.2 billion of funding from the early years of the decade into the years after 2007-08. This inevitably reduces the rate of growth in the Defence budget in the early part of the decade – but increases it in the period that follows.

Using the long-term funding figures in Table 1.1 of the PBS for revised White Paper funding, the compounding real rate of annual growth between 2001-02 and 2010-11 is 2.7% per annum (which is roughly nominal growth of 4.8% minus 2% out-turning inflation). Funding beyond 2010-11 is yet to be decided by the Government.

Second, the average 3% real growth factor was built upon the then planned pre-2000 schedule of Defence spending and a lot has happened to Defence funding since then. The one-off funds allocated for operations in Afghanistan and Iraq, as well as the boosts to ADF capabilities for the War on Terror and domestic security have all worked to increase near-term spending and thereby depress year-on-year real growth.

Consider for example 2001-02, where very significant growth arose due to the initial White Paper funding, the commencement of the war on terror, large foreign exchange supplementation growth and, importantly, a recouping of funding for costs incurred the previous financial year. These factors tend to exaggerate the actual growth from the previous year and serve to reduce the year-on-year growth from 2001-02 to 2002-03 to below what would have otherwise been the case.

What is the Defence share of GDP?

Table 2.2.2 gives Defence funding as a percentage of GDP calculated in two different ways. The first column shows Total Departmental Funding as a percentage of GDP and the second column shows the Underlying Cash Balance Impact of Defence funding as a percentage of GDP. The latter accords with government financial statistics conventions used by the Australian Bureau of Statistics and may provide a better measure for international comparison.

In terms of Total Defence Funding, spending is declining as a proportion of GDP because current GDP growth is strong at 3.75%, and is only projected to moderate to 3.5% in the forward estimates. There is insufficient data to see what's happening to the Underlying Cash Balance Impact but it's probably also in slow decline.

Table 2.2.2: Defence Spending as a Percentage of GDP

Year	Total Departmental Funding % of GDP	Underlying Cash Balance Impact % of GDP[1]
2000-01	1.89%	1.86%
2001-02	2.03%	1.85%
2002-03	1.96%	not available
2003-04	1.92%	not available
2004-05	1.90%	1.78%
2005-06	1.82%	not available
2006-07	1.80%	not available
2007-08	1.82%	not available

[1] Using data from2004-05 Budget Overview page 27 and 2004-05 PBS page 40.

What is the Defence share of Commonwealth payments?

Defence spending as a percentage of total Commonwealth payments is shown in Table 2.2.3, again in terms of both Total Departmental Funding and Underlying Cash Balance Impact. In terms of the former, the percentage drops and then rises at the end of forward estimates period. If current supplementation for operations were excluded from the calculation, the underlying trend would probably show that Defence's share of payments is growing.

This may change as competition for funds from other departments increase, especially in the future as Australia's aging population begins to place greater demands on health and social security. But this is a problem for the coming decades, not the forward estimates period.

Table 2.2.3: Defence Spending as a Percentage of Commonwealth Payments

Year	Total Departmental Funding % Commonwealth Cash Payments	Underlying Cash Balance Impact[1] % Commonwealth Cash Payments
2000–01	8.17%	8.04%
2001–02	8.87%	8.05%
2002–03	8.74%	not available
2003–04	8.65%	not available
2004–05	8.52%	7.98%
2005–06	8.25%	not available
2006-07	8.30%	not available
2007-08	8.39%	not available

[1] Using data from2004-05 Budget Overview page 27 and 2004-05 PBS page 40.

The 2004-05 Budget Measures and Adjustments [PBS p. 23 – 29]

Changes to this year's Defence budget are set out in the PBS. The changes fall into two categories: budget measures and budget adjustments. The formal distinction between budget measures and budget adjustments is that the former are detailed in the Treasury budget papers and the later are not. In practice, the distinction is variable, with identical items classified differently from one year to the next.

There are twenty-two budget measures and seven budget adjustments in this year's budget as detailed on page 24 to 36 of the PBS. These are reproduced in Table 2.2.5 over the page.

Does it all add up?

In principle, if we take the forward estimates from the PAES and add the new budget measures and adjustments, we should get this year's budget figures. Of course, this requires taking account of shifts to own-source revenues and capital receipts which also contribute to Total Defence Funding (see Section 9 of this brief). Table 2.2.4 does this calculation on the basis of the measures and adjustments disclosed in the 2004-05 PBS. It all adds up. This is also true for the changes made in the 2003-04 PAES. This is an improvement on recent years where differences have arisen.

Table 2.2.4: Changes to Total Departmental Funding (million $)

	2004-05	2005-06	2006-07	2007-08	Total
2003-04 PAES	**16,155**	**16,345**	**17,299**	**-**	**-**
Budget Measures	497	413.7	317.4	576.4	1,804.5
Budget Adjustments	-332.5	-252.8	-327.0	-83.0	-975.3
Shift in Own Source Revenue	2	5	5	-	-
Shift in Capital Receipts	26	0	0	-	-
Implied 2004-05	16,348	16,511	17,304	-	-
2004-05 PBS	**16,348**	**16,511**	**17,295**	**18,310**	**829.2**
Difference	0	0	0	-	-

Note: the $25.5 m shift in capital receipts in 2004-05 funds a budget measure for the cost of property sales in that same year.

Table 2.2.5: 2004-05 Budget Measures and Adjustments (million $)

	Type	04-05	05-06	06-07	07-08	Total
Investment and Force Structure						
Reprogramming of Capital Investment	BA	-74.0	-303.0	-374.0	-133.0	**-884.0**
Defence Capability Review savings	BM	0.0	-80.0	-97.4	-109.1	**-286.5**
Defence Procurement Review	BM	17.5	5.0	5.0	5.0	**32.5**
Adjustment to Capital/Operating Mix	BA	_	_	_	_	_
Logistics						
Logistics – continuation of funding	BM	_	_	_	205.3	**205.3**
Logistics – additional funding	BM	142.1	146.7	158.4	163.1	**610.3**
Personnel						
Military Personnel – supplementation	BM	6.8	57.0	-6.5	22.7	**80.0**
Personnel initiatives – continuation	BM	_	_	10.6	10.8	**21.4**
Personnel – rental assistance	BM	_	59.3	91.1	92.9	**243.3**
Personnel – living-in accommodation	BM	2.0	12.5	37.1	61.6	**113.1**
Defence Housing Authority expenses	BM	108.0	88.0	_	_	**196.0**
Estate						
Estate upkeep	BM	_	90.0	100.0	110.0	**300.0**
Property Sales - costs	BM	57.3	_	_	_	**57.3**
Point Nepean Community Trust	BM	5.0	_	_	_	**5.0**
Comcover Premium increase	BA	11.7	_	_	_	**11.7**
Deployments						
Iraq	BM	124.6	3.0	4.0	_	**131.6**
East Timor	BM	16.0	4.1	_	_	**20.1**
Coastal Surveillance – continuation	BM	16.0	_	_	_	**16.0**
Regional & Domestic Security						
Funding to intelligence agencies	BM	10.3	12.2	12.3	12.6	**47.4**
PNG Defence Force downsizing	BM	14.6	2.7	_	_	**17.3**
2006 Commonwealth Games	BM	0.6	11.4	1.0	_	**13.0**
Critical infrastructure protection	BM	1.7	1.8	1.8	1.8	**7.1**
Regional consequence mgt training	BM	_	_	_	_	_
Regional training and exercises	BM	_	_	_	_	_
Enhanced regional cooperation	BM	_	_	_	_	_
Price and Exchange						
Price Indexation	BA	220.7	223.5	230.3	243.0	**917.5**
Foreign Exchange Adjustments	BA	-324.1	_	_	_	**-324.1**
Transfers & Adjustments						
DVA Transfer of Military Compo	BA	-168.3	-174.4	-184.1	-193.9	**-720.7**
Other Adjustments	BA	1.5	1.1	1.1	1.1	**4.8**
Total Measures		**522.5**	**413.7**	**317.4**	**576.4**	**1,830.2**
Total Adjustments		**-332.5**	**-252.8**	**-327.0**	**-83.0**	**-994.8**
Total		**190**	**160.9**	**-9.3**	**493.6**	**835.4**

BM = Budget Measure
BA = Budget Adjustment

Extra Budget Measures of $1.8 billion Over Four Years

The Defence Minister's budget press releases announced that 'Defence would get an extra $1.8 billion in new budget measures over the next four years'. While this is accurate, it is not the full story.

There are indeed some $1.8 billion of new budget measures (see Table 2.2 in the PBS). But it's important not to confuse this with the net change in Defence funding. Measures and funding mean different things in the arcane world of Government finances. This year the difference takes the form of three big budget adjustments:

First there's $594 million in adjustments for price (+$918 million) and foreign exchange rate variations (-$324 million). These simply account for altered buying power, rather than changes due to doing something more or something less. It therefore makes sense that they are not included in the 'headline figure' for changes to the Defence budget.

Second, there's an adjustment of -$721 million reflecting the shift of responsibility for military compensation to the Department of Veteran's affairs. Once again, there's no reason to include this in the headline figure because the money is just shifting from one agency to another so there's no new spending.

Thirdly, there's the 'reprogramming' (read deferral) of $884 million in previously budgeted capital investment to beyond the forward estimates period. This means that investment spending will be reduced across the next four years and increased in the years beyond. If this had been counted as a budget measure it would have almost cut the quoted figure of $1.8 billion in half.

What are the budget initiatives? [PBS p. 25 – 36]

In terms of the big numbers the story is simple. In addition to the adjustments outlined already, Defence gets an additional $816 million for logistics, $656 million for personnel related spending, an extra $300 million for the upkeep of defence estate properties, $168 million in supplementation for operations and $85 million for improved domestic and regional security. On the other hand, they lose $287 million due to the withdrawal of capability as a result of the 2003 Defence Capability Review.

The descriptions of the initiatives given in the PBS are as clear and comprehensive as last year's which was far better than its predecessors. So in what follows we have tried not to repeat material, but to compliment it with additional information and commentary.

Investment and Force Structure

The largest initiative in the 2004-05 Budget is the reprogramming of $884 million of funds previously committed to in the capital investment program across four years. This comes on top of $642 million rescheduled last year, and $700 million of investment funds acknowledged as being unspent from the previous two years. This amounts to $2,226 million of planned capital investment that has been deferred. The PBS details the rescheduling on page 77. The inescapable impact of this rescheduling is that $2,226 million worth of previously planned equipment acquisitions will now arrive years late.

The good news, if there is any, is that the capital program was *not* cut to provide funds for use elsewhere in the budget. Instead, the Government reluctantly rescheduled major capital equipment projects because it has become clear that the original schedule of expenditure will not be met. This was done through the 2003 Defence Capability Review (DCR) that underpinned the revised 2004-2014 Defence Capability Plan (DCP-2004) which was published in February 2004.

The DCR also made changes to the force structure that result in savings reflected in this budget of $286.5 million over the next four years. This includes the paying off of two FFG frigates, the laying-up of two newly acquired mine hunting vessels, and the early retirement of the F-111 fleet at the end of this decade.

We examine the consequences of these DCR in Section 4 of this brief.

There's a budget measure of $32.5 million over four years to fund the implementation of the recommendations of the 2003 Defence Procurement Review. This is an important initiative, which we discuss in Section 3 of this brief in the context of Defence management and reform. Finally, there is a budget-neutral adjustment that repartitions funds between capital and operating categories (see Section 2.3 of this brief).

Logistics

There are two measures for increased logistics funding in this budget. The first provides an extra $205.3 million in 2007-08. This continues last year's boost of $1,145 million to the end of the current forward estimates period. As a result, a total of $1,350 million has been provided over 6 years to help the ADF 'sustain current levels of operational tempo and to meet specific preparedness targets'. This funding covers a range of platforms including the F/A-18 fighter aircraft, C-130J transport aircraft, Collins class submarines and explosive ordnance.

The second measure provides an additional $610.3 million over four years for 'enhanced maintenance, refits and/or planned upgrades'. This measure will fund work on ADF platforms including: HMAS Success, AP-3C maritime patrol aircraft, Anzac frigates, PC-9 training aircraft, Army and Naval aviation, C-130H transport aircraft, as well as Army surveillance and battlefield combat support systems. Notwithstanding the mention of upgrades in the budget measure, this funding is purely to maintain current capabilities rather than further develop them. The latter would be classified as either minor or major capital as opposed to logistics.

According to the PBS, this funding resulted from a *"Defence-wide review of logistics funding aimed at ensuring the ADF's platforms and equipment are resourced to help sustain performance at the current levels of preparedness"*. Given the that this is the second boost to logistics in two years the question must be asked: does this funding represent the full logistics shortfall determined by that review, or are there further logistics shortfalls that will need to be addressed in the future?

In any case, taken together, these two measures add up to $1,960 million over 6 years. The magnitude of the boost averages over $404 million per annum from this year onwards, or in the vicinity of 20% of expenses attributed to repair & overhaul and inventory consumption in the 2002-03 annual report. This is a significant boost by any measure. This can be put in perspective by looking at historical logistics related spending. Table 2.2.6 lists spending on those areas which can be *directly* identified as

logistics related within Defence's expenses. (There are probably further logistics related expenses elsewhere that cannot be easily identified.) Clearly, recent years have seen a big increase in these areas of logistics expenses.

Table 2.2.6: Logistics related expenses 1998-99 to 2002-03

	1998-99	1999-00	2000-01	2001-02	2002-03
Inventory Supplies (non capital)				130	302
General Consumables	122	297	93		
Inventory	700	618	574	677	773
Repair and overhaul	474	691	809	1,051	1,226
Total	**1,296**	**1,606**	**1,476**	**1,858**	**2,301**

Source: Defence Annual Reports

Looking back, we can now assess the impact of the additional funding of $101 million that was provided for logistics in 2002-03. Comparing the 2001-02 and 2002-03 annual reports, there seems to be a reduction in the extent to which logistics shortfalls are mentioned as a problem. Moreover, as is discussed in Section 2.2 of this brief, there has been a very marked improvement in performance across all of the capability outcomes. And all this occurred during a period of high operational tempo. This same improvement is also reflected in recent PBS and PAES.

Personnel

Back in 2001-02 the Government allocated $500 million over five years (from within the Defence budget) to deal with high priority personnel issues that were revealed in the development of the White Paper. The funding went to Reserves, Cadets and initiatives designed to improve retention and recruitment. As we discuss in Section 2.5 of this brief, these measures appear to have worked with strong improvements in both Reserve and permanent ADF recruitment and retention.

This year, there's an additional $665 million of spending over four years on personnel related issues including:

- An expansion of the rental assistance program by $243.3 million over three years to allow single ADF members to live 'off base' in private rental accommodation. This will increase the number of members receiving rental assistance from 4,500 to 10,600 by 2006. On the basis of the figures given, this amounts to a net cost of around $15,000 per person per annum or $290 per week for each ADF member receiving the benefit. But about half of this will go in Fringe Benefits Tax thereby reducing the actual payment to members by 50%.

- Taking figures at face value, this initiative will reduce the demand for accommodation on Defence bases by between 4,500 and 6,100 rooms. (The former takes into account the roughly 1,600 members in private accommodation who do not receive rental assistance.) Presumably, the $243.3 million represents a net cost after the offset of not having to maintain this significant chunk of property.

- A further step to improve accommodation for ADF members, via $113.1 million over four years to be spent on the renewal and repair of Defence-provided

accommodation for members without dependents. Defence is currently exploring the use of private financing initiatives to help provide improved accommodation.

- An additional $196 million has been provided so that Defence can meet increased rental costs associated with commercialising Defence Housing Authority (DHA). However, this is expected to be budget-neutral from a whole-of-government perspective once increased dividends and tax equivalent payments from DHA to the government are taken into account. The measure provides $108 million in 2004-05.

- An extra $80 million over four years to supplement increasing ADF personnel costs. This is in addition to the 2% supplementation provided by the 2000 White Paper for all Defence personnel that commences this year with a payment of $236 million (total $1,048 million over the next four years). Overall, this means that Defence is now receiving supplementation for 2.5% real annual growth in military personnel expenses and 2% real per annum growth for civilian personnel.

  In contrast, most other agencies only get price index adjustments for personnel expenses. They are expected to make up the difference between inflation and wages growth (and there always is one) through productivity gains.

- A $21.4 million continuation of personnel initiatives to improve conditions for ADF members and their families over 2 years commencing in 2006-07. This includes the provision of childcare places and support to spouses. This continues part of the $100 million per annum in personnel initiatives related initiatives commenced back in 2001-02. This $500 million five-year long program was funded from within the Defence budget. It's unclear what this measure implies about the continuation of the remaining ($79 million per annum) in initiatives; do they continue to be funded from within the Defence budget or were they one-off limited duration initiatives. And if the remaining initiatives are not being continued, where is the money being redirected to within the budget past 2005-06?

Estate

Aside from a single payment of $5 million to establish the Point Nepean Community Trust and $57.3 million to cover the cost of selling Defence property, there's an extra $300 million over three years from 2005-06 to help meet the cost of maintaining the Defence Estate. Defence has buildings valued at $9.8 billion dollars. An extra $100 million per annum represent 1% of this amount. In comparison, Defence currently spends around $310 million dollars a year on facilities operations excluding utilities, and around $400 million on capital facilities projects.

Defence will also receive $11.7 million in 2004-05 to cover a Comcover premium increase that, among other things, provides insurance on parts of the estate.

Deployments

The PBS provides an extensive discussion of the supplementation provided to cover the net additional cost of operational deployments. Briefly, additional funding has been provided for one more year in Iraq ($132 million) and around one more year in East Timor ($20.1 million), as well as a one-year extension of the elevated ADF

contribution to coastal surveillance ($16 million). See Section 6 of this brief for more on the cost and composition of ADF deployments.

Domestic & Regional Security

The Commonwealth budget once again delivered big money for domestic security. In total, $755 million has been provided over five years in a package of measures entitled *Investing in Australia's Security* which is spread across a large number of portfolios – not just Defence. This means that since the 2002-03 budget, around $3.1 billion has been committed over seven years for national security initiatives across agencies. This year's extra funding includes; $270.1 million to strengthen Australia's intelligence capabilities including ASIS and ASIO; $207.1 million for protective security measures including funding for air marshals through the Attorney General's department and critical infrastructure protection in a number of portfolios. And an extra $87 million has been provided to enhance security capacity and cooperation in our region. This includes $36 million for the Australian Federal Police (AFP) to develop a rapid deployment capability and $26.3 million so that they can establish a Jakarta Centre for Law Enforcement Cooperation.

Within this funding, Defence gets $47.4 million over four years to create 229 new intelligence positions, and $7.1 million over four years for critical infrastructure protection. In addition, they'll get $17.3 million over four years (plus $6.7 million in 2003-04 of which Defence will absorb $3 million) to assist with the downsizing of the PNG defence force. And finally, there's $13 million over three years to fund Defence's contribution to security at the 2006 Commonwealth Games. (This is part of an overall $272.5 million contribution from the Commonwealth Government to the staging of the games.)

There are also three self-funded measures for Defence in the budget for which no funds are provided:

- $0.7 million over four years to extend counter-terrorism consequence management training with regional countries.
- $1.6 million over four years to expand the Department of Defence's regional training and exercise program.
- $0.8 million over four years to enhance cooperation with regional counterparts on regional counter-terrorism issues.

Because Defence is only a small part of the overall set of initiatives that the Government has put in place for the South Pacific this budget, we've included a box overleaf that outlines the total package.

South Pacific – a new policy and new money

The Commonwealth budget contains a significant focusing of aid and resources to the island states of the South Pacific. This follows last year's move to become much more actively engaged in that part of the world. The aims of this new focus are to pursue security initiatives in the region and to help strengthen governance in the South Pacific. To quote the foreign minister: "…in terms of our own interests, stable neighbours are important to our own security…"

Aid to the Pacific Island states (excluding PNG) has more than doubled, to now $383 million. $202 million of this is continued support to Solomon Islands in the Regional Assistance Mission to Solomon Islands (RAMSI) and the continuing bilateral aid program.

There is also an additional $102 million in aid for Papua New Guinea, bringing the total in bilateral aid to PNG to $435.6 million. This increase will largely be absorbed by the Enhanced Cooperation Program (ECP), which seeks to help PNG address its law and order, governance and service delivery issues, and will cost $1.1 billion over 5 years. The ECP was agreed by the Australian and PNG Governments at the end of last year, although the main deployment has not yet occurred.

There has also been a marked commitment on the part of Government agencies to the South Pacific. The Department of Finance and Administration and the Treasury both have personnel deployed in the Pacific, and there is now a Pacific and Assistance Division within Treasury and a Pacific Support Branch within Finance.

This budget allocates $11.4 million over four years in funding to improve security and good governance in the Pacific. This funding will create a South Pacific Section in the Attorney-General's Department, as well as develop a Financial Intelligence Support Team in Fiji which will provide legal and strategic policy advice to South Pacific states on anti-money laundering and counter-terrorist financing international obligations.

The Australian Federal Police have also, in addition to the amount for their continued role in RAMSI and prospective role in the ECP, received $20.3 million over four years to work with Southwest Pacific law enforcement counterparts to combat transnational crime.

Aid to Vanuatu and to Fiji has also been significantly increased—Vanuatu with an increase of $8.2 million to around $31 million, and Fiji with an increase of $5.1 million up to an estimated $25 million.

Price and Exchange

Defence will receive an additional $917.5 million over four years as a price adjustment (corresponding to about 1.3%), and will hand back $324.1 million in 2004-05 for foreign exchange movements. Presumably, the latter simply reflects the greater value for the Australian dollar relative to US and other currencies.

Transfers and Adjustments

From 1 July 2004 the Department of Veteran's Affairs (DVA) will take responsibility for all forms of ADF compensation. Since Defence will no longer be liable for compensation claims from ADF members the funding associated with the

administration and payment of benefits has been transferred to DVA. This amounts to $721 million dollars over four years.

Other miscellaneous adjustments totalling $4.8 million over four years have been made.

Use of Cash Reserve [PBS p. 38]

On the basis of projected unspent capital investment funds, it looked as though around $1,340 billion was going to be in the Cash Reserve at the end of this financial year. But $700 million of unspent capital funds ($200 million from 2002-03 and $500 million from 2003-04) was withdrawn and 'reprogrammed' to beyond the forward estimates. This will leave an opening balance of $640 million at the start of the next financial year.

Most of this $640 million accumulated unexpectedly back in 2001-02. It was not planned to happen. It's mostly unspent operating expenses but probably contains in the vicinity of $200 million in unspent investment funds. The story of how so much unspent money came to be is told in the ASPI Policy Report *Sinews of War* and the financial intricacies are detailed in last year's ASPI budget brief.

Following a Government decision, this money has been designated as a reserve fund to cover Defence's future unfunded personnel liabilities. This includes things like annual and long service leave that are slowly drawn down by personnel over time. Each year Defence adds money to the Reserve to cover future liabilities, and withdraws money to pay current entitlements that reduce the liabilities. However, from 2005-06 onward, the payments will cease but the withdrawals will continue as employee liabilities reduce.

The accidental way in which this reserve fund was formed, and the fact that it is insufficient to cover the full value of employee liabilities ($1,955 million), reflects the ambiguity of how liabilities are handled by Commonwealth agencies under accruals. By and large this should not be a problem. It's unlikely that everyone will, for example, go on long service leave at the same time. It should be the case that expenses incurred for accumulating personnel liabilities (which generate cash revenue in the funding arrangement) do not vary too much from the annual discharging of liabilities.

In any case, the Cash Reserve is notional money. There is no bank account with $640 million dollars sitting idle. So no resources are wasted. The only problem is that transfers into and out off the Cash Reserve make it hard to track the actual level of Defence funding from year to year. You've got to wonder if it's worth the effort.

Revised Financial Performance [PBS p. 41-44]

On pages 41 to 44 the PBS details the changes to the previous estimate (2003-04 PAES) and budget estimate (2004-05 PBS) for the 2004-05 financial statements. This is useful. There is only one point worthy of note. In the cash flow statement on page 44 the previous estimate figures given that are different to those in the 2003-04 PAES. In particular: the net GST refund has increased by $0.3 million, suppliers expenses have reduced by $108 million and inventory purchases have increased by $107

million. Clearly, this just represents a reclassification of spending from the former to the latter category.

Budgeted Financial Statements [PBS p.45–70]
PBS pages 45–70 gives the budgeted financial statements for 2004-05 along with the forward estimates and projected result for 2003-04. The statements are explained in detail in Section 9 of this Brief.

Projected 2003-04 financial performance
It's worth making a few points about the 2003-04 financial year as it draws to a close in light of the additional estimates and the projected result. The data referred to can be found in either the PBS or Section 10 of this brief. The key points are as follows:

- An operating deficit of $810 million is projected for 2003-04 compared with an additional estimate surplus of $128 million (See Table 10.x). This is mainly the result of; projected employee expenses exceeding budget estimates by $287 million, projected suppliers expenses exceeding budget estimates by $275 million and additional depreciation of $265 million. These is no projected change in cash expenditure for employee expenses but these is a projected rise of $119 million for suppliers and inventory relative to additional estimates.

- There is a projected shortfall of $731 million in Specialist Military Equipment investment compared with the revised estimate. As best we can make out, this probably includes an $88 million reduction due to foreign exchange and a $37 million projected shortfall other capital. While the projected $500 million shortfall in major capital equipment expenditure accounts for around another $425 million. Finally, the ongoing reclassification of capital to operating expenses probably accounts for the remaining $180 million.

- This has resulted in a transfer of $500 million of unspent major capital investment funds to the cash reserve prior to the reprogramming of $700 million in planned investment to beyond the forward estimates. (Care must be taken in comparing the projected and budgeted figures because of large foreign exchange correction in the additional estimates.)

- During 2003-04 the Cash Reserve is projected to fall from $870 million to $641 million reflecting a drawdown of $229 million. This is being accomplished by depositing $711 million and withdrawing $943 million. This is recorded in the cash flow statement as transfers into, and out of, the Official Public Account.

Finally, it's worth saying something about the presentation of the 2003-04 additional estimates statements to clear up any potential confusion. The 2003-04 PAES clearly foreshadowed the $500 million shortfall in spending on major capital equipment. However, this was not reflected in either the cash flow statement or the reconciliation of the cash reserve. The reason was that the shortfall was recorded as 'portfolio fund held' within the capital program (2003-04 PAES page 71). Because the cash flow and capital budget statements only record the bottom line from capital program, the shortfall is invisible. The reason for this approach was that the 2003-04 PAES were locked down at MYEFO before the projected shortfall in major capital equipment spending became apparent.

.

Section 2.3: Capital Budget [PBS Chapter 3]

Capital Budget [PBS p.77–96]

The Capital Budget section of the PBS describes Defence's plans for capital investment in new equipment, upgrades, facilities and other non-military capital items. It's formally described in accounting terms in the Capital Budget Statement in Table 2.15 in the PBS although that is not very revealing.

Capital Investment Program

Last year Defence began disclosing details of their capital investment program. They have done so again this year in Table 3.3 page 79, which we have reproduced in part in Table 2.3.1.

Table 2.3.1: The Capital Investment Program ($ million)

	2003-04 Projected	2004-05	2005-06	2006-07	2007-08
Not Yet Approved Major Capital Equipment (DCP)	10	100	286	1,196	1,830
Approved Major capital Equipment	2,459	2,813	2,863	2,266	1,955
subtotal	**2,469**	**2,913**	**3,149**	**3,462**	**3,785**
Capital Facilities Approved & Unapproved	421	469	404	349	343
Other Capital	518	473	427	458	443
Foreign Exchange Provision			312	313	345
Total Capital Investment Program	**3,408**	**3,854**	**4,292**	**4,581**	**4,925**

Source: 2004-05 PBS Table 3.3

There are four components to the Capital Investment Program:

Not Yet Approved Major Capital Equipment: This is the remaining unapproved projects from the 2004 Defence Capability Plan. It's made up of all the Major Capital Equipment projects that have not yet received final approval from Government that are scheduled to be approved in each year. Major Capital Equipment projects are of more than $20 million value and predominantly involve the purchase of military equipment. In the past this was called the 'Pink Book'. The preparation of these projects for approval is the responsibility of the newly created Chief of the Capability Development Group.

Approved Major Capital Equipment: Projects already approved by Government and under way. In the past this was called the 'White Book'. The delivery of these projects is the responsibility of the Defence Materiel Organisation.

Capital Facilities: Approved and unapproved Capital Facilities Projects including everything from new barracks to upgrades of existing facilities. These projects are responsibility of the Infrastructure Division in the Corporate Services and Infrastructure Group.

Other Capital: including Minor Capital Equipment (projects costing less than $20 million), repairable items, non-capital facilities, plant and equipment, and software and intangibles.

Operating Component of Capital Investment

These four items together make up the Total Capital Program. But not all of this money actually represents capital investment. There's also an *Operating Component of Capital Investment* that includes those funds treated as expenses in the process of acquiring the capital equipment or facilities. This includes, project office costs, studies, research and development, travel, professional service providers and other overheads.

The introduction of the operating component of capital investment has resulted in the formal reclassification of funds previously identified as capital into operating costs by that amount. This makes no difference at all to the money available for projects or overall Defence funding, but it will change future projections of the capital budget and give rise to an increase in Output prices.

Last year, the operating component of capital investment program was around 5% of the total value. This year, further work has been done to determine the operating component of the investment program resulting in an upward adjustment of around the $200 million per annum on top of last year's figure. This brings it up as a percentage of the total to around 10% of the total.

However, the operating component of capital investment is not evenly spread across the four components of the capital program. The percentage for overall (approved and unapproved) Major Capital Equipment is around 13.5%, for Capital Facilities is 4% and for Other Capital is 0%.

The identification of the operating component of capital investment will provide a better representation of how project funds are spent. It is important not to confuse this with the operating costs of the Defence Materiel Organisation and Infrastructure Division. Those costs are quite separate.

Relationship with the Capital Budget

It's important not to confuse the Total Capital Investment Program [PBS Table 3.3] with the Total Capital Payments given in the Capital Budget in Table 2.15 of the PBS. The difference is the operating component of capital that can be found in Table 3.3 of the PBS. The two quantities are reconciled in Table 2.3.2 below.

Table 2.3.2: Total Capital Investment Program [1] Total Capital Payments

	2003-04 Projected	2004-05	2005-06	2006-07	2007-08
Total Capital Investment Program a	3,408	3,854	4,292	4,581	4,925
Operating Component of Capital b	338	370	377	444	459
Total Capital Payments a-b	**3,070**	**3,484**	**3,915**	**4,137**	**4,466**

Capital Sales and Receipts [PBS page 96]

The capital budget is funded in part through the proceeds from sales of property, plant and equipment and other capital receipts. On a year by year basis some or all of this money is returned to the Government through a capital withdrawal. This is taken into account in determining the appropriations necessary to deliver Total Defence Funding.

In recent years, the Government has set ambitious goals for the sales of Defence assets that have not been met, mainly in the area of property sales. However, in 2002-03 the Government planned to sell $660 million worth of buildings and property and achieved a credible $578 million against that target even after the Government decided not to proceed with the sale of the Russell Office complex. That is, they did better than expected. In 2003-04, the estimate for total asset sales was $306 million. This is expected to be met.

Table 2.3.3 show the recently planned and achieved assets sales (including both property and other assets) within the Defence Capital Budget.

Table 2.3.3: Capital Budget Asset Sales ($ million)

	Planned	Achieved	Shortfall
DRP to June 2000	–	77	–
2000–01	820	87	733
2001–02	1023	199	824
2002–03	700	632	68
2003–04	306	306	0
2004-05	230		

Source: Defence Annual Report and 2003-04 PBS,
Note: 2003-04 result projected only.

The results for 2002-03 for 2003-04 are a significant achievement compared with previous years. The target of only $230 million in sales for 2004-05 represents the diminished number of properties going up for sale compared with recent years.

Where does the Defence Capability Plan fit in? [PBS Page 80]

The 2004 Defence Capability Plan (DCP) details the planned future Major Capital Equipment projects that had not yet received formal Government approval at the time of publication in February 2004.

The Not Yet Approved Major Capital Equipment Program represents those projects from the DCP which are yet to be approved, and the Approved Capital Equipment Program includes the projects in the DCP that have been approved plus many pre-existing projects. The PBS refers to the Not Yet Approved Major Capital Equipment Program as the DCP although this needs to be understood in terms of the above explanation.

What's all this about reprogramming and rescheduling? [PBS page 77]

Projected spending on Major Capital Equipment for 2002-03 was $200 million below estimates. In response, the Government deferred $642 million from the capital

investment program across the forward estimates at the time of the 2003-04 budget. Then followed the Defence Capability Review that produced a new DCP, which further deferred major capital equipment spending of $884 million across the forward estimates to beyond 2007-08. Once again, the aim was to create a deliverable investment program. The reduction in the targets for major capital equipment investment in the revised DCP was not before time. This year, the projected shortfall has grown to $500 million.

In total, some $2.2 billion of previously planned investment has been cut from the early years of this decade and reprogrammed to the period 2008-09 to 2013-14. This is detailed in Table 3.1 of the PBS. A full discussion of the resulting changes to the DCP appears in Section 4 of this brief. The danger is that the deferred spending is at least two elections and an economic cycle away. The Government cannot guarantee that the reprogrammed dollars will be there when the time comes, but it's the strongest commitment they can make.

The reasons for the continuing struggle to deliver the capability goals of the White Paper include:

- The White Paper set ambitious goals for the delivery of new capability well above anything previously achieved.

- The DMO has been undergoing a major restructure involving the amalgamation of the previously separate logistics and acquisition organisations, concurrent with the establishment of geographically dispersed System Program Offices around the country.

- The Government is now reviewing individual projects one at a time rather than in an annual omnibus submission. This must add time to the process, although it has the added benefit that projects are much more closely scrutinised.

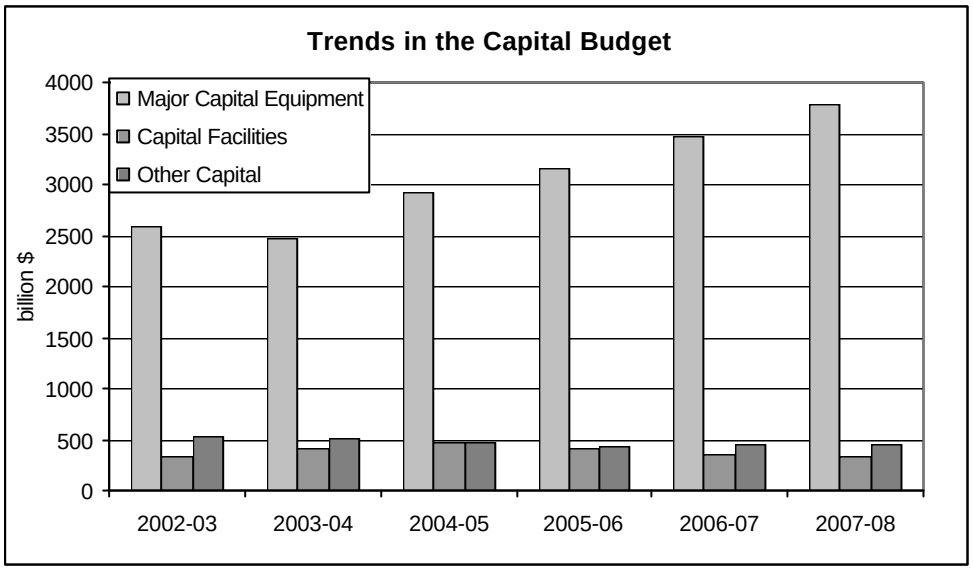
- Finally, it must be acknowledged that some measure of responsibility for the delivery of capability resides with those contracted to deliver it.

What are the trends in the Capital Program?

The trend across the forward estimates is for a steady increase in the Capital Investment Program from $3.8 billion in 2004-05 to $4.9 billion in 2007-8 in nominal dollars. Within these amounts expenditure on Capital Facilities and Other Capital falls slowly while the total spending on major capital equipment grows, Figure 2.3.1. Clearly, even after the reprogramming of capital investment funds, there is still significant growth in spending on major capital equipment planned. This will not be an easy task for DMO given recent performance. It represents a mountain the new DMO chief Steve Gumley will have to climb.

In preparing, Figure 2.3.1 we have excluded the reserve provision for foreign exchange so as to enable a comparison with the current year 2003-04 in which the Australian dollar is relatively healthy.

Figure 2.3.1 Planned trends in the Capital Budget



Source: 2004-05 PBS Table 3.3

The Unapproved Approved Major Capital Program
The Defence Capability Plan [PBS page 80]

The 2004 Defence Capability Plan sets out the projects planned for approval during 2004-05. These are listed overleaf in Table 2.3.4. This differs from the list of projects given in the 2003-04 PBS [Table 3.4, page 81] in two ways. First there are two projects whose study phase is planned for this year (Air 7000 Phase 1 and Land 146 Phase 1). We assume that their omission from the PBS was because the study phase will not be very costly. Second, there are two projects with substantial costs that the DCP has listed with a 2004-05 year of decision that are not in the PBS.

We do not know why these last two projects have been omitted from the 2004-05 PBS. After all, it's been less than four calender months since the release of the revised DCP.

The Approved Major Capital Program [PBS page 81]

With the changes to the Defence Materiel Organisation following the 2003 Review of Defence Procurement, responsibility for the delivery of the approved major capital equipment program has transferred to that (soon to be) quasi independent agency. This is dealt with in Chapter 7 of the PBS and Section 2.7 of this brief.

An interesting table is provided on page 82 of the PBS [Table 3.5]. It shows how the gross planned expenditure patterns in the approved major capital program are 'slipped' to produce the actual expected spending in the budget and forward estimates years. First the planned spending is converted from constant real dollars to nominal out-turned dollars. In this case the adjustment uses a 2% deflator in each year. Then the gross planned expenditure is 'slipped' using a formula that successively cuts 20% of the total spending from a given year and apportions that across the future years. This anticipates that on an annual basis only 80% of the planned expenditure will actually occur. This is entirely separate from the reprogramming of the investment program discussed earlier.

Table 2.3.4: Defence Capability Projects to be approved in 2004-05

Project Number	Project Title	Cost million $	ISD
AIR 5276 Phase 8B	AP-3C Electronic Support Measure – Acquisition	$75 to $100	2007-09
AIR 5276 Phase 5B	P-3C Orion Electro-optic Enhancement	$30 to $50	2009-11
AIR 5409 Phase 1	Bomb Improvement Program	$50 to $75	2008-10
AIR 5418 Phase 1	Follow-on Stand-off Weapon Capability	$350 to $450	2007-09
Air 7000 Phase 1	Multi-mission Unmanned Aerial Vehicle (Study phase)	$750 to $1000	2009-11
AIR 9000 Phase 5A	Chinook Upgrade – Early Engine Replacement	$30 to $50	2007-09
JP 2068 Phase 2A	Defence Network Operations Centre – Defence Network Management System	$20 to $30	2006-08
JP 2068 Phase 2B	Computer Network Defence	$30 to $50	2006-08
JP 2077 Phase 2B	Improved Logistics Information Systems	$100 to $150	2007-09
JP 2080 Phase 2B	Defence Management Systems Improvement	$50 to $75	2005-07
JP 2089 Phase 2	Tactical Information Exchange Domain	$75 to $100	2006-08
JP 2090 Phase 1B	Combined Information Environment (Data Links)	$30 to $50	2006-08
JP 2095 Phase 1	Aviation Fire Trucks	$10 to $20	2007-09
LAND 146 Phase 1	Combat Identification for Land Forces (Study Phase)	$200 to $250	2008-10
SEA 4000 Phase 2	Air Warfare Destroyer – Design Activity	$50 to $75	N/A
SEA 1448 Phase 2B	Anzac Anti-Ship Missile Defence Upgrade – Fire Control Radar	$75 to $100	2008-10

Source: 2004-14 DCP and 2004-05 PBS page 81.

Where did the money for the extra AEW&C come from?

This years budget announcement that the Government will exercise its option to increase its purchase of AEW&C aircraft from 4 to 6 at an additional cost of $326 million. As we explained in last year Budget Brief, this was a bargain waiting to be taken. It delivers a 50% increase in the number of aircraft for less than 10% of the total price. The reason is that the original contract included sufficient radar and mission equipment for 6 aircraft.

The option with the manufacturer Boeing was for US $175 million. The figure of A$326 million probably results from inflation (~ 14%) since the time of the contract and the impost of an operating expenses component of 13.5% which is common across all major capital equipment projects. With an exchange rate of 70c to the dollar this all works out.

So where did the money come from? Since this purchase was not included in the make up of the 2004-14 DCP there are two alternatives. Either spending has been cut

from one or more of the projects in the major capital equipment program, or the extra spending will be accommodated through slippage (delay) in the overall program. Whatever the mechanism, this was a project worth making room for.

Facilities Projects [PBS pp.82–94]

The PBS lists 64 approved Capital Facilities Projects of which 15 are major projects of more than $6 million value and 39 are medium projects of between $25,000 and $6 million value. Expenditure in 2003-04 is planned to be $469 million compared with $421 million in 2003-04.

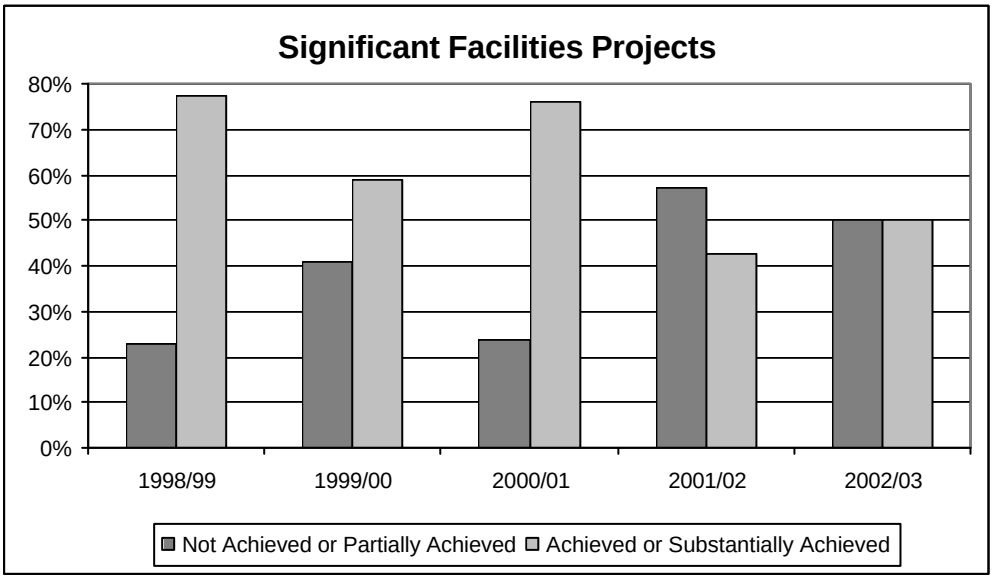
In the 2004–05 Budget the Government has foreshadowed eleven new major capital works projects for parliamentary consideration. These are listed in Table 3.7 of the PBS.

The PBS in Table 3.6 lists the 15 major facilities projects currently approved. The largest of which are barracks redevelopments in Townsville ($171 million) followed by the development of facilities for the AEW&C aircraft capability at Williamstown ($129 million), the redevelopment of HMAS Albatross at Nowra ($110 million) with the RAAF Townsville redevelopment coming in fourth ($72.5 million).

Defence's program of approved and yet-to-be-approved facilities projects is called the Green Book. It can be found on the Defence web site. The PBS provides financial information on all facilities projects by electorate [PBS Table 3.6 & 3.8].

The Defence Annual Report reports on the achievement or otherwise of significant facilities. The results for the last five years appear in Figure 2.3.2. The performance over the last two years has not been nearly as good as that delivered in the previous three years. It's not known why this is the case.

Figure 2.3.2 Recent achievement in significant facilities projects



Other Capital Purchases [PBS page 95]

Table 3.10 in the PBS lists spending on Other Capital Equipment for the next four years. It's estimated to fall from $518 million in 2003-04 to $443 million in 2007-08. Spending is divided between Minor Capital, Repairable Items, and Other Plant and Equipment.

2.4 PLANNED OUTCOME PERFORMANCE [PBS CHAPTER 4]

Under the outputs and outcomes framework explained in Section 1.2 of this Brief, the Government 'buys' Outputs from Defence to achieve designated Outcomes. Chapter 4 of the PBS describes these transactions between the Government as customer for Defence's Outputs, and Defence as supplier of those outputs.

The ~~Price~~ Cost of Outcomes and Outputs

The heart of the Defence Budget is the statement of the costs of Outputs on p.100 of the PBS. It used to be that the concept of 'price' was used within the Outcomes and Outputs framework to capture an element of businesslike competitiveness in the relationship between Government and agency. In this budget the notion of *price* has been abandoned in favour of simply assigning a *net cost* to each Outcome/Output. Where no confusion arises we will henceforth refer to previous year's *prices* as *net costs,* or simply as *costs.* In practice, the net cost is built up from past forward estimates corrected for budget measures and other funding adjustment. In 2004–05 net cost is built upon the forward estimate given in the 2003–04 PAES.

Because Defence's organisational structure is not aligned with the Outcome/Output framework, the net costs are ultimately attributed quantities derived from the actual physical Group budgets that correspond with the organisational structure. The Outcome/Output net costs therefore depend on both the actual expenses incurred within Defence Groups and on the costing methodology used to apportion this money to the Outcomes/Outputs.

Defence has put a lot of effort into improving the Output costing methodology that underpins the classified Defence Management and Finance Plan that underpins the PBS. Development is ongoing and resulted in a very substantial shift in the costs attributed to some Outputs in the 2003-04 PAES.

There is a subtle accrual aspect to the Outcome/Output net costs. The various expenses that go into making up the prices include items that translate directly into cash expenditure, like employee salaries and allowances, and other items like depreciation that do not. Nevertheless, the full net cost is paid in cash through the Output appropriation. As a consequence, those expenses that do not translate directly into cash expenditure generate residual cash that is available for other purposes such as investment in new capital equipment or facilities. This is why the total of the capital budget and the prices of outputs exceed total Defence funding. A fuller discussion of the Defence funding framework appears in Section 9.

For the purpose of comparison we have collected the Output/Outcome costs from the past five years in Table 2.4.1 along with the newer costs from the 2004-05 PBS (see also PBS Tables 4a, 4b and 4c). In effect, what were previously considered Outputs prior to 2003-04 were redefined as Outcomes in that year's budget, and what were previously sub-Outputs became Outputs at the same time. Some care must be taken in making comparisons between years. Variations in net cost are obscured by changes in definition between 2000–01 and 2001–02, as well as the ongoing refinement of the attribution rules used to construct the net costs. In addition, the net costs post 2001-02 are exclusive of the capital use charge of around $4 to $5 billion that was previously levied on Defence. This explains the drop in net cost after that date.

The costs for the years 2002-03 through 2007-08 are directly comparable up to the uncertainty introduced by the ongoing refinement of the Outcome/Output costing methodology. The variations between 2003-04 and 2004-05 are detailed within each Outcome/Output section of the PBS [p.100 to 197], along with a comprehensive listing of the expenses for each Outcome and Output for the budget year and forward estimates. This is done in far greater detail than ever before, including through Table 4e [p.104] which lists variations common across the Outcomes. The 2004-05 PBS also lists the Group fiscal contributions to the Outcomes in Table 4d on page 103. (We reproduce this table in Section 1.2 of this Brief were we explain the relationship between the Groups and Outcomes/Outputs.)

Table 2.4.1: Defence Outcome Net Costs 1999–2000 to 2007–08, million $

#	99-00	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08
1	1,102	1,353	807	869	810	694	538	548	542
2	4,421	5,216	5,796	3,568	4,211	4,326	4,272	4,468	4,746
3	4,576	4,758	5,392	4,981	5,280	5,287	5,289	5,477	5,724
4	4,551	5,676	5,526	4,158	4,445	4,620	4,494	4,628	4,875
5	193	719	209	179	220	243	231	238	256
6	371		339	317	413	435	432	449	456
Total	**15,214**	**17,722**	**18,069**	**14,073**	**15,379**	**15,605**	**15,255**	**15,808**	**16,600**
7				*2,229*	*2,017*	*2,337*	*2,437*	*2,437*	*2,637*

Outcome Statements
The PBS has a separate section beginning on page 106 devoted to each of the Outcomes. This generally includes, for each output:

- A list of the Outputs within that Outcome followed by a couple of introductory paragraphs describing in broad terms what the Outcome includes and does.
- A 'Planned Performance' statement that explains some of the more significant activities or developments in the Outcome over the coming year including key milestones in the development of new capabilities.
- A section outlining the 'Key Risks and Limitations' to the delivery of the outputs in the coming year.
- A section describing the 'Risk Mitigation' to address these risks and limitations.
- A net cost summary for the various Outputs within that Outcome covering the budget year and forward estimates (that is; the next four years).
- A table listing the expenses which go into making up the Outcome net cost for the next four years.
- An extensive list of the variations to the net cost of the Outcome for the budget year.

Output Statements
Within each Outcome statement are a series of Output statements, which generally include:

- A brief description of the capability delivered by that Output including an outline of the force elements included therein (which can be considered as a quantity target).
- A statement of performance targets which varies from Outcome to Outcome but tends to include includes things like overall preparedness goals, flying hours sometimes major capital equipment goals.
- A detailed Net cost of Output table that breaks down the various expenses that go into making up the net cost of the Output over the next four years.

What do the Net Costs tell us?

The current level of detail provided in the PBS at the Output level represents a very substantial improvement on that provided prior to the 2003-04 PBS. In principle at least, as further data accumulates, this could support an analysis of trends in the efficiency of output delivery and provide warning signs of emerging cost pressures. However, the ongoing refinement of the Output costing methodology has introduced so much volatility into the accumulated data that no meaningful time-series information exists at present.

Despite the fact that the Output framework is now into its fifth year, Defence is still working to understand the net cost of the outputs it nominally sells to the Government. The latest refinement of Output costing methodology in the 2003-04 PAES destroyed any hope that earlier data was useful. For example, the net cost of ground based air defence grew by 89.5% and that for regional surveillance grew by 70%, while the net cost of Navy's major surface combatants decreased by 15%.

Until such time as Defence's Output costing methodology stabilises, the Output costs will represent little more than a highly artificial by-product of the Commonwealth's budgeting framework. It's not surprising then that, in reality, both Defence and the department of Finance remain as focused as ever on the cost of inputs like personnel, facilities and logistics, with only scant regard to the notion of the overall cost of outputs.

Two things will have to change before this ceases to be the case. First, Defence will need to develop the business processes and management information systems to properly track the cost of its activities. Steady progress is being made in this direction although results will occur over several years rather than months. Second, the Department of Finance needs to get serious about using the Output-Cost framework and begin to hold Defence to account for both the accuracy of output costs and the efficiency of output delivery (as opposed to the austerity of input consumption). The first sign of the latter occurring will be when Finance resurrects its shelved plans for a Defence Output-Cost review.

Curiously, the Output costs are nowhere tabulated in a single place within the PBS. This is unfortunate because such a presentation permits an interesting comparison of the various net costs as Table 2.4.2 shows. Note that the old Air Force Outputs of Maritime Patrol and Strategic Surveillance have been amalgamated to form the new Strategic Surveillance & Response Operations Output. This further obscures what's going on in Air Force beyond that which occurred when Strike Reconnaissance and Tactical Fighter were brought together into the new Air Combat Output.

Table 2.4.2: Net cost of Defence Outcomes and Outputs ($ million)

Outcome	Output	Net cost			% [4]
		02-03 [1]	03-04 [2]	04-05 [3]	
1. Defence Operations	1.1 Command of Operations		375	358	2.3%
	1.2 Military Operations and Exercises		426	326	2.1%
	1.3 National Support Tasks		9	9	0.1%
	Total Defence Operations	**869**	**810**	**693**	**4.4%**
2. Navy Capabilities	Capability for:				
	2.1 Major Surface Combatant Operations		1,362	1,425	9.1%
	2.2 Naval Aviation Operations		486	508	3.3%
	2.3 Patrol Boat Operations		275	288	1.9%
	2.4 Submarine Operations		878	858	5.5%
	2.5 Afloat Support		218	223	1.4%
	2.6 Mine Warfare		391	404	2.6%
	2.7 Amphibious Lift		366	372	2.4%
	2.8 Hydrographic and Oceanographic Ops		233	247	1.6%
	Total Navy Capabilities	**3,568**	**4,211**	**4,326**	**27.7%**
3. Army Capabilities	Capability for:				
	3.1 Special Forces Operations		335	322	2.1%
	3.2 Mechanised Operations		866	864	5.5%
	3.3 Light Infantry Operations		1,035	1,018	6.5%
	3.4 Army Aviation Operations		593	624	4.0%
	3.5 Ground-based Air Defence		176	182	1.2%
	3.6 Combat Support Operations		496	488	3.1%
	3.7 Regional Surveillance		150	160	1.0%
	3.8 Operational Logistic Spt to Land Forces		522	504	3.2%
	3.9 Motorised Infantry Operations		577	584	3.7%
	3.10 Protective Operations		530	540	3.5%
	Total Army Capabilities	**4,981**	**5,580**	**5,287**	**33.9%**
4. Air Force Capabilities	Capability for:				
	4.1 Air Combat		1,889	1,959	12.6%
	4.2 Combat Support of Air Operations		571	557	3.6%
	4.3 Strategic Surveillance & Response Operations		1,052	1,128	7.2%
	4.4 Air Lift		933	976	6.3%
	Total Air Force Capabilities	**4,158**	**4,445**	**4,620**	**29.6%**
5. Strategic Policy	5.1 Strategic & International Policy		173	195	1.3%
	5.2 Military Strategy and Strategic Operations		47	48	0.3%
	Total Strategic Policy	**176**	**220**	**243**	**1.6%**
6. Intelligence	6.1 Intelligence	**317**	**413**	**435**	**2.8%**
	Total Capability Outcomes	**14,073**	**15,379**	**15,605**	**100%**
7. Superannuation and Housing Support Services for Current and Retired Defence Personnel		**2,594**	**2,016**	**2,337**	**-**

[1] The 2002-03 Defence Annual Report did not report down to the current Output level, despite 2002-03 Output net costs appear as projected results in the 2003-04 PBS.
[2] Projected result from 2004-05 PBS.
[3] Budget estimate from 2004-05 PBS.
[4] Percentage of total cost.

Planned Performance
There are three broad performance measures that have been employed at the Output level in the last two Defence Annual Reports; preparedness, core skills and quantity. These same performance measures are employed in the 2004-05 PBS. We explore these three measures below. It's important to note that some sub-outputs, especially those in Outcome 1, have additional specific performance targets beyond these generic ones, and we make no attempt to describe the administered Outcome 7.

Preparedness
Preparedness refers to the readiness and sustainability of the ADF to undertake operations, be it national support tasks, peacekeeping or war. The process by which preparedness targets are set bears recounting.

To begin with, the Government's White Paper and Strategic Update set out the broad strategic tasks that the ADF needs to be prepared to undertake – for example 'contributing to the security of our immediate neighbourhood. Using this as a basis, Defence develops what is called *Australia's Military Strategy* which includes for each strategic task a series of *Military Response Options* which define the broad operational objectives without specifying how they are to be accomplished – for example 'maintain sea lines of communication to the north of Australia'. These Military Response Options then form the basis of the annual *Chief of the Defence Force's Preparedness Directive.*

The *Chief of the Defence Force's Preparedness Directive* in turn forms the basis of another document, *Commander Australian Theatre's Operational Preparedness Requirement* which defines *Operational Preparedness Objectives* down to the force element group (sub-output) level. But this is not the end of the process. Resource considerations are then taken into account with the setting of *a Directed Level of Capability* and for each Output along with a cost agreed between the Secretary, Chief of the Defence Force and the responsible output executive (eg Chief of Army).

The final result is a series of targets for each sub-output. They are classified. But, for example, the light infantry Output might be required to 'be prepared to deploy a battalion at 90 days notice to assist in a regional peacekeeping operation and to maintain the deployment for 12 months' (this example is purely illustrative).

Core Skills
Preparedness targets set for Outputs are driven by Military Response Options with an anticipated warning time of less than 12 months. To take account of possible longer-term tasks and the requirement to retain broad expertise in the three Services, an enduring performance target for nearly all the Outputs is to 'achieve a level of training that maintains core skills and professional standards across all warfare areas'.

The assessment of what is to be achieved, and whether it has been achieved, is ultimately based on the professional military judgement of the Service Chiefs. A key consideration is whether planned training has been completed or not.

Quantity
Most of the Outputs include one or more 'quantity' measures that try to capture some aspect of *how much* capability will be delivered. Each of the three Services uses a different type of measure.

Navy
The basic measure of quantity used by Navy relates in some sense to the availability of ships and their crew to undertake a mission. From 1990-91 to 1998-99 the measure used was the average number of vessels available over the year, from 1999-00 to 2000-01 it was the number of vessel days at Minimum Level of Capability (MLOC) and in 2001-02 it was the numbers of vessel days Fully Mission Capable (FMC). Last year yet another measure has been introduced, the planned number of Unit Ready Days (URD) defined as follows: *Unit Ready Days are the number of days that a force element is available for tasking, by the Maritime Commander, within planned readiness requirements.*

This looks similar to the previous definition of Fully Mission Capable but we're told that it is a new measure, and we therefore caution against comparison between the two quantities.

Army
With the exception of Army Aviation, the quantity measure used by Army is the presence of adequate quantities of trained personnel and equipment within an Output. Not quantified targets are released publicly. In practice we get a qualitative assessment in the Annual Report.

Airforce
The quantity measure used by Airforce and Army Aviation is the number of flying hours undertaken by the Output. These measures have been applied consistently for over a decade and constitute a useful diagnostic tool given the established baseline.

Recent Performance

The last three Defence Annual Reports have maintained a largely consistent format of reporting against performance targets at the sub-Output level which equates to the current Outputs. This makes year by year comparisons possible. Table 2.4.3 summarises the results from the 2002-03 Annual Report and tracks the changes from the year before. Defence uses a four-point performance scale for preparedness and core skills: Achieved, Substantially Achieved, Partially Achieved and Not Achieved. To facilitate presentation we have mapped the numerical 'quantity' results according to the key at the bottom of the table.

Between 2000-01 and 2001-02 performance remained largely static. But in the latest data, aggregate performance against targets improved substantially. Comparing 2001-02 and 2002-03, there were improvements in 25 areas, and declines in only 6. The remaining 17 areas remained static. Nevertheless, problems remain in some areas with 21% of Outputs only partially meeting their preparedness targets, 28% only partially meeting their core skills targets and 12% only partially meeting their quantity targets.

Navy's already good performance remained largely unchanged while both Army and Air force posted solid improvements compared with the last two years. Defence Operations, Strategic Policy and Intelligence continued to meet their targets.

Thus, notwithstanding the high operational tempo in 2002-03 including a major deployment to Iraq, Defence managed to deliver big improvements in their delivery of outputs.

Table 2.4.3: Output Performance from the 2002-03 Defence Annual Report

Output	Preparedness	Core Skills	Quantity
1. DEFENCE OPERATIONS			
1.1 Command of Operations	Achieved ↔		
1.2 Military Operations	Achieved ↔		
1.3 National Support Tasks	Achieved ↔		
2. NAVY			
2.1 Major Surface Combatants	Achieved ↔	Substantially ↔	Substantially ↓
2.2 Naval Aviation	Achieved ↔	Partially ↓	Substantially ↔
2.3 Patrol Boats	Achieved ↔	Achieved ↔	Substantially ↓
2.4 Submarines	Partially ↔	Substantially ↔	Substantially ↑
2.5 Afloat Support	Substantially ↓	Achieved ↔	Achieved ↑
2.6 Mine Warfare	Achieved ↑	Achieved ↔	Achieved ↑
2.7 Amphibious Lift	Achieved ↔	Partially ↔	Achieved ↑
2.8 Hydrographic	Substantially ↔	Partially ↔	Achieved ↔
3. ARMY			
3.1 Special Forces	Achieved ↑	Substantially ↑	Achieved ↔
3.2 Mechanised Ops	Partially ↔	Partially ↔	Substantially ↑
3.3 Light Infantry Ops	Achieved ↑	Substantially ↔	Achieved ↔
3.4 Army Aviation Ops	Achieved ↔	Substantially ↔	Substantially ↑
3.5 Ground-Based Air Defence	Substantially ↑	Substantially ↔	Partially ↔
3.6 Combat Support Ops	Substantially ↔	Substantially ↔	Substantially ↑
3.7 Regional Surveillance	Achieved ↔	Achieved ↔	Achieved ↔
3.8 Operational Logistics Spt	Substantially ↔	Substantially ↔	Substantially ↑
3.9 Motorised Ops	Partially ↔	Partially ↔	Substantially ↔
3.10 Protective Ops	Partially ↓	Partially ↔	Partially ↔
4. AIR FORCE			
4.1 Air Strike Reconnaissance	Partially ↔	Partially ↔	Achieved ↑
4.2Tactical Fighter Ops	Achieved ↔	Substantially ↑	Achieved ↑
4.3 Strategic Surveillance	Substantially ↑	Substantially ↑	Achieved ↑
4.4 Maritime Patrol	Substantially ↑	Substantially ↔	Substantially ↓
4.5 Air Lift	Substantially ↑	Substantially ↑	Substantially ↔
4.6 Combat Spt of Air Ops	Achieved ↑	Substantially ↑	Partially ↔
5. STRATEGIC POLICY			
5.1 Strategic Engagement	Achieved ↔		
5.2 Military Strategy & Cmd	Achieved ↔		
6. INTELLIGENCE	Achieved/ Substantially Achieved ↑		

Improved since 2001-02: ↑	Static since 2001-02: ↔	Declines since 2001-02: ↓
Quantity: Above 95% = Achieved, 95% to 75% = Substantially, Below 75% = Partially		

Source: 2001-02 and 2002-03 PBS

Risks and Limitations

The risks and limitations identified in the 2004-05 PBS contain three consistent themes across most of the Outcomes:

- The recent **high tempo of concurrent operations** has drained logistics stocks, disrupted training especially in specific war fighting areas, and prevented exercises with allies needed to maintain interoperability.

- All three services report **personnel shortages** in specific skill areas.

- **Logistics shortfalls** including ammunition remain a concern.

Yet, in all three cases, the situation is described in far less dire terms than in previous years. It's probably fair to say those recent initiatives to improve logistics and address personnel shortages are taking effect. Moreover, the declining number of personnel and platforms deployed on operations is allowing reconstitution of forces to occur. In all cases, mitigation measures are in place to address the risks and limitations

Overall, there is a consistent picture developing. Over the last three years the problems identified in the PBS have been getting less severe, and last year's Annual Report showed a decided improvement in performance. It appears that the very substantial extra funding provided to Defence in the last few years in making a difference.

All of the Outcomes have specific and unique problems that are raised in the PBS, often to do with capability shortfalls that are awaiting major capital investment projects to redress them. Unfortunately, it's unavoidable that some of these problems will take years to fix.

Finally, Air Force identified their high dependence on enabling support from DMO and Corporate Services within their key risks and limitations. This says something interesting about the effectiveness of the current matrix management arrangements in Defence, especially when the mitigation strategy is to; '... work closely to develop meaningful agreements, which clearly set out the level of support required...". So what's the arrangement now; meaningless and unclear?

Output Summaries

To augment the information provided in the PBS at the Output level, we have prepared 1 page Output summaries that seek to draw together relevant background information including on recent performance. In doing so, we have not sought to reproduce in full the material in the PBS but to compliment it.

An important part of the summaries is a graphical comparison of current targets with past performance. Unfortunately, it has not always been possible to include all the available data on flying hours and sea days within the summaries so the data has been restricted to key platforms where necessary.

Output 1.1 Command of Operation (Defence Operations)

Force Structure & Role

- ***Joint Operations Command (JOC) (previously HQ Australian Theatre*)** at Potts Point Sydney has the job of planning, commanding and controlling military and National Support tasks as well as joint and combined operations. The collocated *Australian Theatre Joint Intelligence Centre* supports them in this task.
- The ***1st Joint Movements Centre*** coordinates the deployment, supply and redeployment of ADF forces on operations and exercises.
- ***HQ Northern Command*** in Darwin acts as a subordinate HQ to HQAST for operations to the north including support to the civil authorities and surveillance.
- The ***ADF Warfare Centre*** in Williamtown develops joint doctrine and plans, conducts and evaluates joint training for HQAST.
- The ***Joint Task Force Headquarters*** and support elements (when established for operations) provide a divisional level operational command capability.

New command arrangements were announced in early 2004 including the appointment of the Vice Chief of the Defence Force (VCDF) as Commander Joint Operations Command. In this role, the VCDF is responsible for the planning and conduct of ADF campaigns, operations and other activities (see Section 1.2 of this Brief).

JOC works with and through the four component commands; Maritime HQ at Potts Point Sydney, Land Command at Victoria Barracks Sydney, Air Command at Glenbrook and Special Forces Command at Potts Point Sydney. It is planned that the component commands along with the 1st Joint Movements Centre and Australian Theatre Joint Intelligence Centre will be collocated at Bungendore (West of Queanbeyan, NSW) by 2007 in a $300 million purpose-built facility.

Issues

- The PBS lists geographical dispersal of command elements as a difficulty.
- Most of the risks and limitations listed for Outcome 1 centre on managing the impact of high operational tempo on the ADF.

Performance Targets

- Australian operational concepts are developed to support ADF planning against credible contingencies.
- The Joint Operations Command provides guidance for joint force preparedness in accordance with the Chief of the Defence Force's direction.
- Command of ADF forces is effective and the Government's strategic objectives for operations are achieved.
- Phased implementations of new ADF operational command arrangements will commence.

Past Performance (Annual Report):

	Net Cost	Preparedness	Core Skills	Quantity
2000-01		Achieved	Not Reported	Achieved
2001-02	**-**	Achieved	Not Reported	Substantially Achieved
2002-03	$527 million*	Achieved		
2003-04	$375 million			
2004-05	$358 million			

* estimate only

Output 1.2 ADF Military Operations and Exercises (Defence Operations)

Force Structure & Role

As for Command of Operations (Output 1.1) plus forces specifically assigned for the purpose of the operation or exercise. As the title suggests this is the actual conduct of operations and joint ADF combined (international) exercises.

Issues

- The ADF is currently involved in three operations contributing to the security of the immediate neighbourhood and six contributing to wider interests. This includes significant operations in Iraq, East Timor and Solomon Islands.
- There are two ADF joint exercises and forty-two combined exercises planned for 2004-05 including eleven with the United States.
- Most of the risks and limitations listed for Outcome 1 centre on managing the impact of high operational tempo on the ADF.

Performance Targets

- ADF operations meet Government direction.
- Forces identified in the Australian Theatre Operational Preparedness Requirement for operational tasks maintain required preparedness levels.
- ADF forces are effectively deployed and sustained.
- The Program of Major Service Activities is reviewed regularly and modified where required.
- The major ADF exercises commitments for 2004-05 are met.

Past Performance (Annual Report):

	Net Cost	Preparedness	Core Skills	Quantity
2000-01		Achieved	Not Reported	Substantially Achieved
2001-02	**-**	Achieved	Not Reported	Achieved
2002-03	$326 million*	Achieved		
2003-04	$426 million			
2004-05	$326 million			

* estimate only

Output 1.3 Contribution to National Support Tasks (Defence Operations)

Force Structure & Role

As for Command of Operations (Output 1.1) plus forces specifically assigned for the purpose of national support in non-combat roles. This ranges from the ongoing routine allocation of Patrol Boat and P3C Maritime Patrol Aircraft time, to the allocation of specific capabilities at short notice in a national support emergency. National Support tasks include security, ceremonial, civil maritime surveillance, search and rescue, bush fire response and support to the Army / ATSIC community assistance program.

ADF support to the civil surveillance program, in consultation with Coastwatch, includes 250 flying hours by P-3C surveillance aircraft, and 1,800 Fremantle-class patrol boat days. Other qualitative performance targets are listed in the PBS.

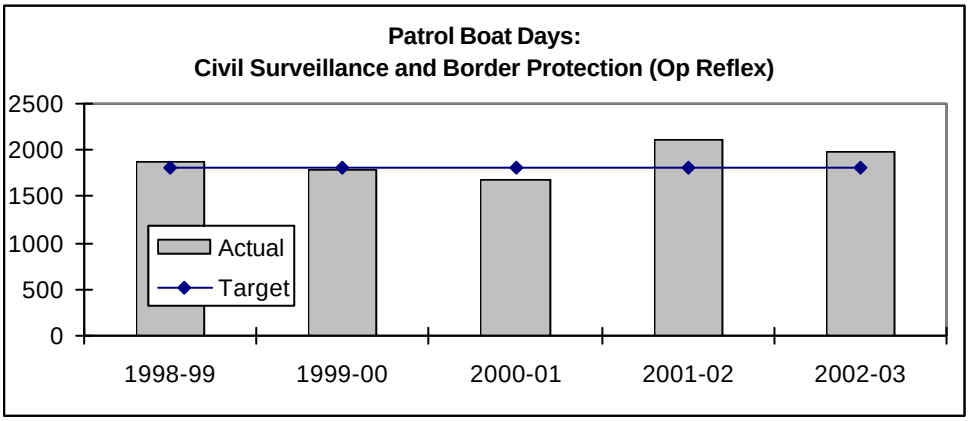
In both 2001-02 and 2002-03 the ADF's contribution to the civil surveillance program were displaced by border protection operations (Op Relex) which nevertheless resulted in a higher overall rate of effort.

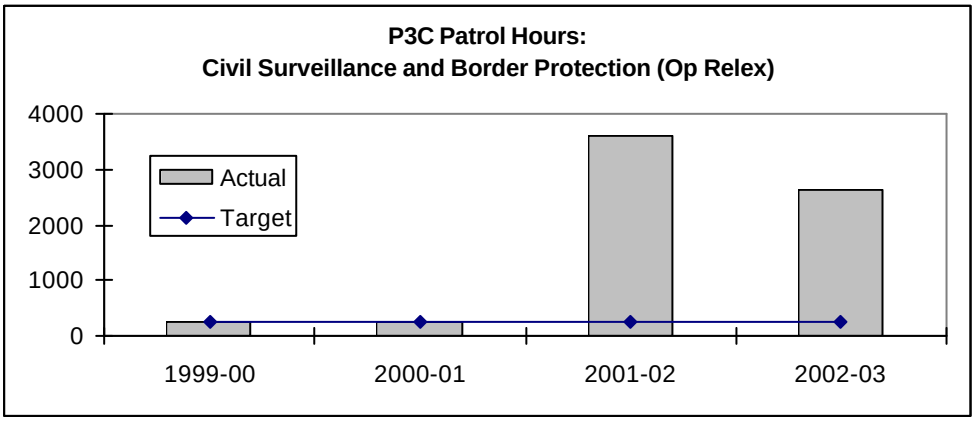
There are currently twelve extant national support tasks including Operation Reflex II to deter unauthorised boat arrivals across Australia's northern approaches.

Past Performance (Annual Report):

	Net Cost	Preparedness	Core Skills	Quantity
2000-01		Achieved	Not Reported	Substantially Achieved
2001-02	-	Achieved	Not Reported	Achieved
2002-03	$16 million*	Achieved		
2003-04	$9 million			
2004-05	$10 million			

* estimate only





Output 2.1 Major Surface Combatant Operations (Navy Capabilities)

Force Structure & Role

Six 1980's US-designed Oliver Hazard Perry class ***Guided missile frigates (FFG)*** plus six increasing progressively to eight by 2007, newer ***Anzac class frigates (FFH)***. Both vessels carry Harpoon anti-shipping missiles (Anzac are being fitted), anti-submarine torpedoes and eventually Evolved Sea Sparrow surface-to-air missiles. Only the FFG are equipped with the more capable Standard surface-to-air missile. The Anzac class have a 5" gun useful for shore bombardment (as recently seen in the Gulf) while the FFG has a less capable 3" gun. Both classes of vessel can embark a Seahawk anti-submarine helicopter although the current availability and capability of these aircraft is less than desired. The Anzac class still awaits the delivery of the delayed Seasprite helicopter.

The Anzac and FGG are Navy's fighting ships. They have the role of controlling sea-lanes, attacking hostile ships and submarines, escorting shipping, protecting land forces and contributing to high intensity operations in coalition operations. They are sometimes tasked to undertake lesser roles like civil surveillance and border protection.

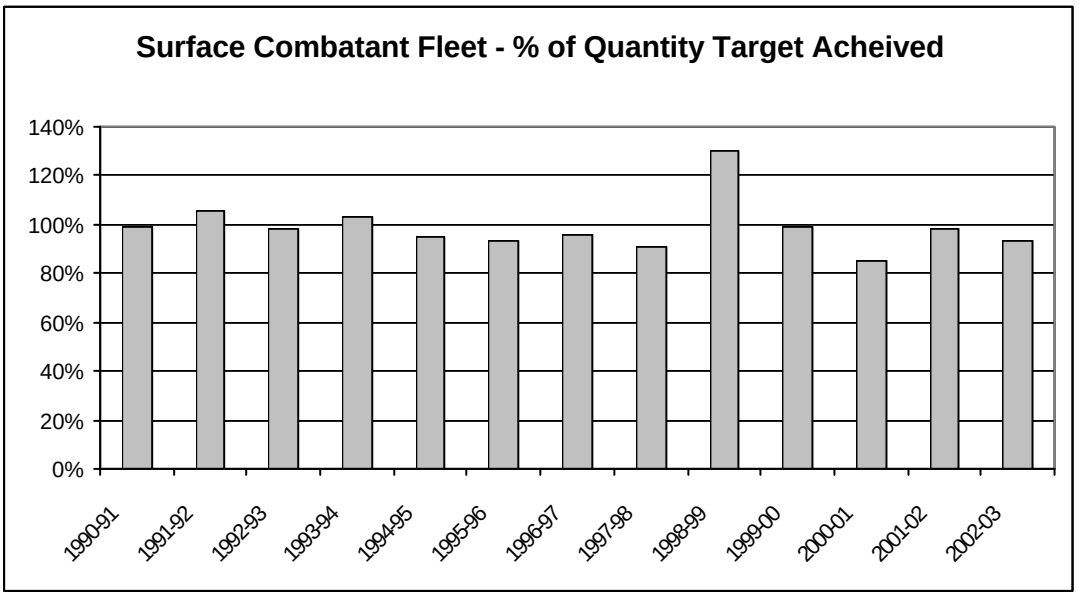
Issues

- The PBS lists personnel shortages, logistics shortfalls and the reconstitution of capability in light of the current high operational tempo as risks. The lack of a dedicated air-warfare capability is also highlighted as a limitation as are declining anti-submarine warfare skills.
- In recent years, the high tempo of operations has made it difficult to maintain some specific skills and maintain collective training that, in turn, has had an adverse medium-term effect on core-skills.
- Two oldest two of the FFG frigates are going to be withdrawn from service as a cost cutting measure in the next several of years once the last of the Anzac enter service.
- In 2002-03 the major surface combatants achieved 1,910 Fully Mission Capable (FMC) days against a target 2,246 FMC days (93%). The target for 2003-04 is 1,690 URD and for 2004-05 is for 1,704 URD.

Past Performance (Annual Report):

	Net Cost	Preparedness	Core Skills	Quantity
2000-01		Achieved	Substantially Achieved	86%
2001-02	-	Achieved	Substantially Achieved	98%
2002-03	$1,277 million*	Achieved	Substantially Achieved	93%
2003-04	$1,363 million			
2004-05	$1,425 million			

* estimate only



Note: Differing and incompatible quantity measures used over time have been converted percentages.

Output 2.2 Naval Aviation Operations (Navy Capabilities)

Force Structure & Role

The RAN has sixteen 1980's US designed ***Seahawks helicopters*** that can be embarked on the Anzac and FFG class frigates. They are configured for anti-submarine and surface search/targeting although the later role is increasingly less practiced. There are seven 1970's UK designed ***Sea King helicopters*** used for troop lift and logistics tasks including from the Navy's amphibious and afloat support vessels. Ten, rising to eleven, ***Super-Seasprite helicopters*** are being accepted progressively with limited operational capability. Thirteen ***Squirrel light helicopters*** are used for training and short-term operations at sea. In addition thirteen Australian designed ***Kalkaras unmanned aerial targets*** provide a training capability.

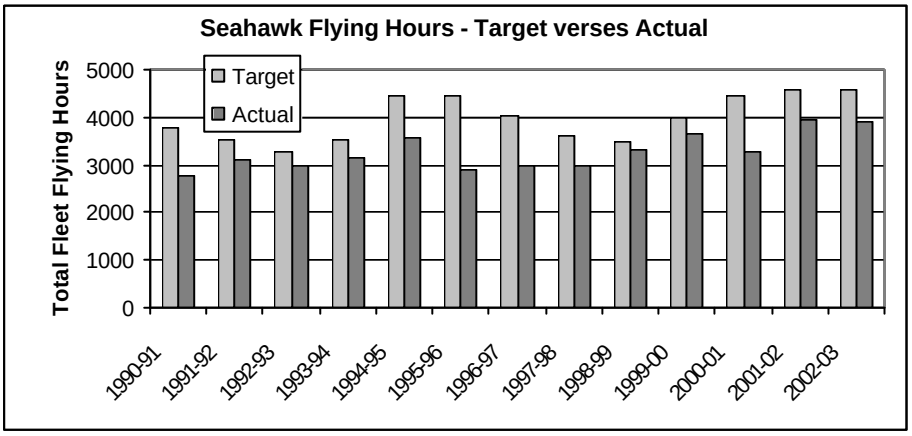
Issues

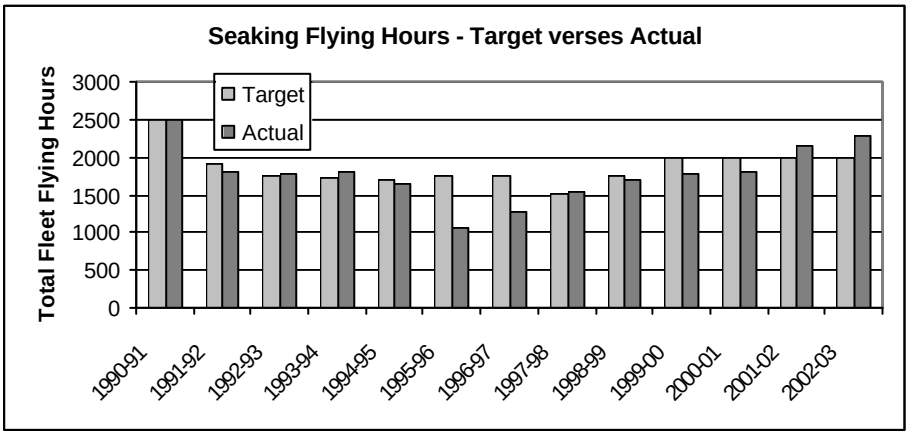
- The Seahawks have been a problem capability for the last decade. Currently, personnel shortages and maintenance backlogs limit both flying hours and the number of aircraft that can be embarked on vessels.
- Operational commitments adversely impacted the maintenance of core-skills in 2002-03.
- The operational acceptance of the Seasprite helicopters will commence in 2005-06.

Past Performance (Annual Report):

	Net Cost	Preparedness	Core Skills	Quantity**
2000-01		Achieved	Achieved	79%
2001-02	-	Achieved	Achieved	92%
2002-03	$393 million*	Achieved	Partially Achieved	94%
2003-04	$486 million			
2004-05	$508 million			

* estimate only **Sea King plus Seahawk percentage of planned flying hours achieved.





Output 2.3 Patrol Boat Operations (Navy Capabilities)

Force Structure & Role

Fifteen 1980's vintage Australian built, UK designed, ***Fremantle class patrol boats***. These 42m vessels are mainly tasked in support of Coastwatch's civil surveillance program (see Output 1.3). Although, they can be used for the insertion and extraction of army patrols on the coast including Special Forces.

The patrol boat fleet also plays an important role in training junior officers by providing an opportunity for early independent command, and is an essential element in the ADF's engagement with South West Pacific nations.

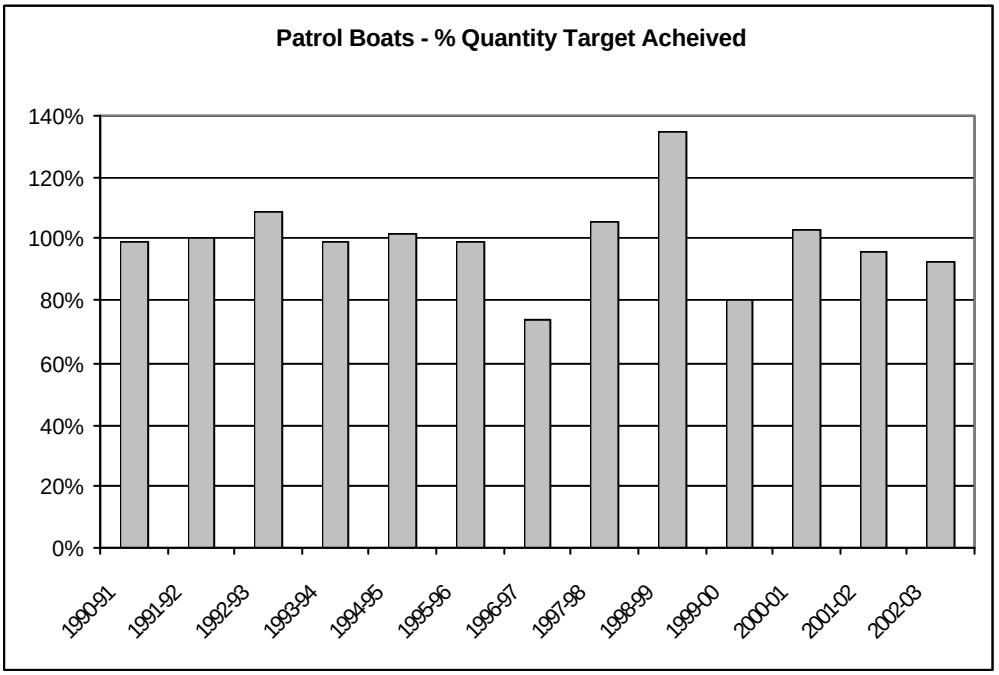
Issues

- The vessels are getting old following the decision in 2000 to cancel a planned life-of-type extension. During 2002-03 unscheduled maintenance reduced vessel availability although 93% of the set target was still achieved. Hull and system related defects will continue to pose a risk until the vessels are replaced.
- A $500 million contract has been awarded to deliver replacement vessels over the period April 2005 to April 2007. The new vessels will have improved sea-keeping, sensors, armaments and habitability.
- In 2002-03 the patrol boats achieved 2,513 Fully Mission Capable (FMC) days against a target of 2,709 FMC days (93%). The target for 2003-04 is 4,871URD and for 2004-05 is for 4,737 URD.

Past Performance (Annual Report):

	Net Cost	Preparedness	Core Skills	Quantity
2000-01		Partially Achieved	Achieved	103%
2001-02	-	Achieved	Achieved	96%
2002-03	$240 million*	Achieved	Achieved	93%
2003-04	$275 million			
2004-05	$289 million			

* estimate only



Note: Differing and incompatible quantity measures used over time have been converted to percentages.

Output 2.4 Submarine Operations (Navy Capabilities)

Force Structure & Role

The RAN now has all six of ***Collins class submarines***. Their primary roles are to attack enemy shipping and to counter the threat of adversary submarines. In addition, they can collect intelligence and insert and extract Special Forces. The Collins Class is equipped with Harpoon anti-ship missiles and the US Mk 84 heavyweight torpedo.

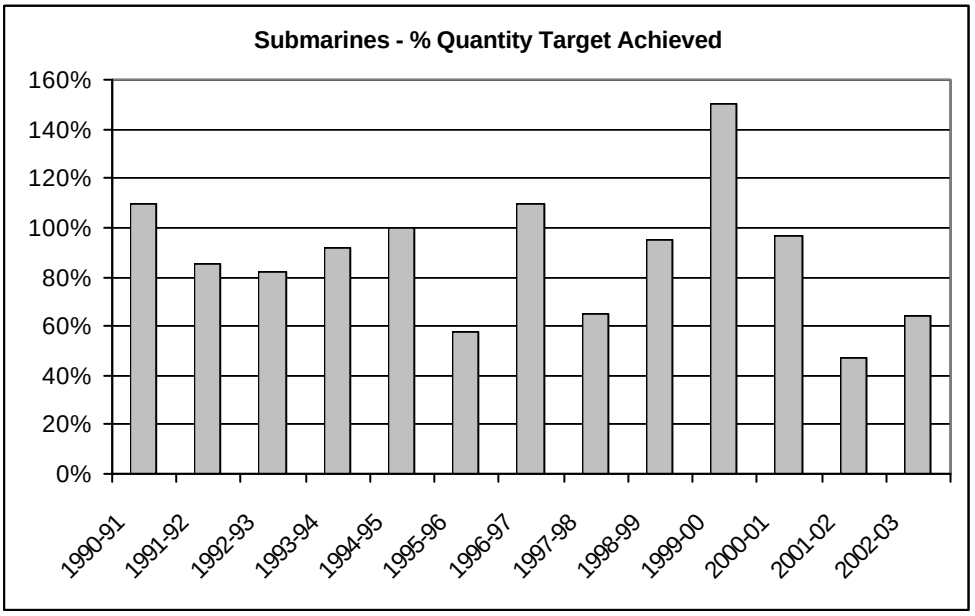
Issues:

- The delay in the introduction of the Collins class into service as the Oberon class payed off disrupted both submariner training and the retention of skilled personnel. This is now being corrected.
- Around a billion dollars of additional work is planned in order to bring the vessels up to the required operational standard. This includes a new combat system to replace the current interim arrangements and replacement torpedoes. These are technically challenging projects that are not without risk.
- A long-term $3.5 billion contract is now in place for the maintenance of the Collins class with the Australian Submarine Corporation.
- In 2002-03 availability was adversely impacted by longer than expected maintenance periods and a failure of flexible hoses which had class-wide implications. In addition, preparedness was only partially maintained in 2002-03 due to work to enhance and improve the capability of the vessels.
- In 2002-03 the submarines achieved 390 Fully Mission Capable (FMC) days against a target of 500 FMC days (78%). The target for 2003-04 is 945 URD and for 2004-05 is for 948 URD.

Past Performance (Annual Report):

	Net Cost	Preparedness	Core Skills	Quantity
2000-01		Partially Achieved	Substantially Achieved	97%
2001-02	-	Partially Achieved	Substantially Achieved	47%
2002-03	$650 million*	Partially Achieved	Substantially Achieved	64%
2003-04	$878 million			
2004-05	$858 million			

* estimate only



Note: Differing and incompatible quantity measures used over time have been converted to percentages.

Output 2.5 Afloat Support (Navy Capabilities)

Force Structure & Role:

HMAS Westralia: a 1970's UK-made 40,800 tonnes full displacement single hulled Oiler-Tanker, and

HMAS Success: a 1980's French designed, Australian-made 17,900 tonnes full displacement Underway Replenishment Tanker.

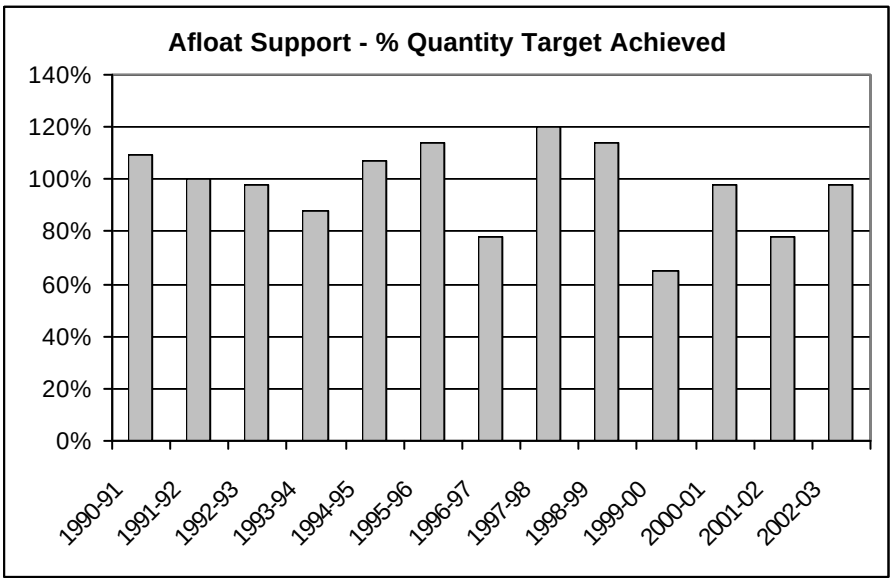
The role of the afloat support force is to refuel and re-supply Navy vessels at sea and provide logistics support to land operations.

Issues:

- The failure to meet the preparedness target in 2002-03 was due to concurrent maintenance on both vessels in mid 2003.
- The Defence Capability Review in late 2003 announced that HMAS Westralia will be replaced by a converted commercial vessel later this decade.
- Unscheduled maintenance on *Westralia* during 2003-04 will keep the vessel out of service for the entire year.
- In 2002-03 *Westralia* achieved 305 Fully Mission Capable (FMC) days against a target of 343 days (89%) and *Success* achieved 320 Fully Mission Capable (FMC) days against a target of 294 days (109%).
- The target for *Westralia* in 2003-04 is 310 URD and for 2004-05 334 URD. The target for *Success* in 2003-04 is 303 URD and for 2004-05 273 URD.

Past Performance (Annual Report):

	Net Cost	Preparedness	Core Skills	Quantity
2000-01	-	Substantially Achieved	Substantially Achieved	Replenishment Ship: 98% Oiler-Tanker Ship: 97%
2001-02	**-**	Achieved	Achieved	Replenishment Ship: 30% Oiler-Tanker Ship: 100%
2002-03	$200 million (estimate only)	Substantially Achieved	Achieved	Replenishment Ship 109% Oiler-Tanker Ship 89%
2003-04	$218 million			
2004-05	$223 million			



Note: Differing and incompatible quantity measures used over time have been converted to percentages.

Output 2.6 Mine Warfare (Navy Capabilities)

Force Structure & Role:

6 Coastal Mine Hunters – 720 tonnes displacement, plastic hulled, Italian designed and Australian made in the late 1990's. The ships employ sonar to search for mines which can then be destroyed using a remote controlled mine disposal vehicle or otherwise.

2 Auxiliary Mine Sweepers – 1980's converted tugs that physically sweep for mines.

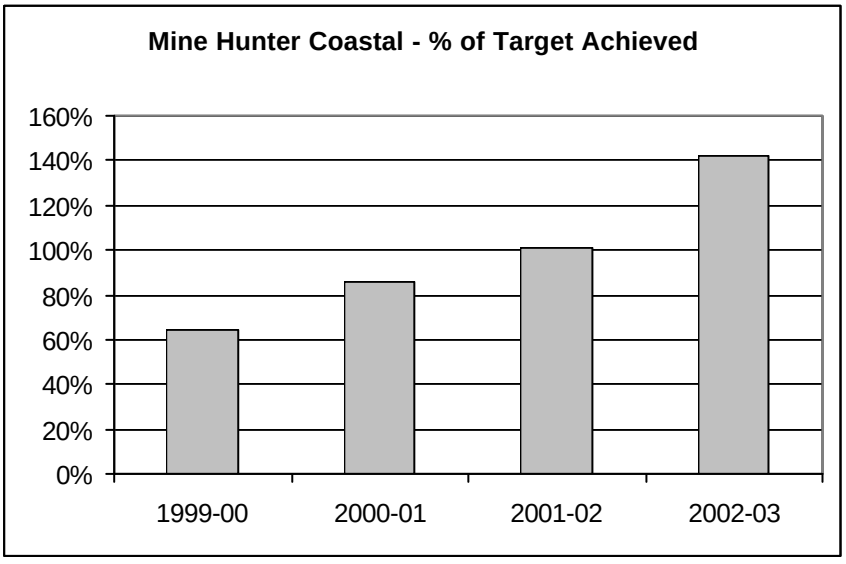
2 Clearance Diving Teams – one on each coast at Sydney and Perth capable of clearing mines and other ordinance, clandestine survey and obstacle clearance, and submerged battle damage repairs.

Issues:

- All 6 Coastal Mine Hunters are now in service, the over performance during 2002-03 was due to an increase in the operational test and evaluation program. The steady increase in the performance of the Coastal Mine Hunters reflects increasing success in bringing them into operational service.
- Due to resource constraints, 2 of the Coastal Mine Hunters will be taken out of service at some point in the next few years.
- The 2002-03 Annual Report said that the auxiliary mine sweepers were not fully mission capable throughout the entire year, despite plans for 195 FMC days. As a result they were used in a variety of support roles.
- The clearance diving teams achieved 100% of their target of 646 FMC days.
- The targets for 2003-04 are Coastal Mine Hunters 1,721 URD, Auxiliary Minehunters 732 URD, and Clearance Diving Teams 732 URD,
- The targets for 2004-05 are Coastal Mine Hunters 1,902 URD, Auxiliary Minehunters 730 URD, and Clearance Diving Teams 730 URD.

Past Performance (Mine Hunter Coastal):

	Net Cost	Preparedness	Core Skills	Quantity
2000-01	-	Partially Achieved	Substantially Achieved	Achieved: 86% 543 MLOC days 2 vessels
2001-02	-	Substantially Achieved	Achieved	Achieved: 101% 392 FMC days 4 vessels
2002-03	$308 million (estimate only)	Achieved	Achieved	Achieved: 142% 997 FMC days 6 vessels
2003-04	$391 million			
2004-05	$404 million			



Note: Differing and incompatible quantity measures used over time have been converted to percentages.

Output 2.7 Amphibious Lift (Navy Capabilities)

Force Structure & Role:

2 Landing Platforms Amphibious (LPA), HMAS Manoora and HMAS Kanimbla: refurbished in the late 1990's from 2 second hand 1970's US Landing Ship Tank vessels. They displace 8,450 tonnes and can carry 450 troops along with vehicles and landing craft. In addition, they have been fitted with medical and command & control facilities, and have the ability to house up to four troop lift helicopters.

1 Heavy Landing Ship (HLS), HMAS Tobruk: a 1980's Australian made vessel capable of carrying 315 soldiers, 18 tanks and 40 armoured personnel carriers. She displaces 5,800 tonnes and can operate any ADF helicopter from her deck.

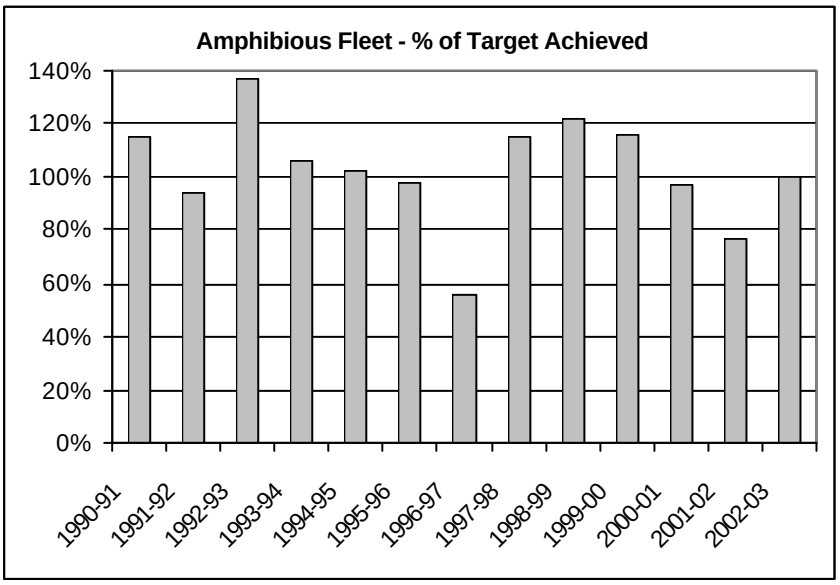
6 Landing Craft Heavy (LCH): a fleet of 1970's craft that can carry a load of up to 180 tonnes a distance of over 1200 nautical mines. Each vessel can carry three Leopard tanks, twenty-three quarter-tonne trucks or thirteen armored personnel carriers.

Issues:

- The LCH completed a life-of-type extension in 2003.
- In 2001-02 and 2002-03 operational tempo prevented the joint training necessary for maintaining core skills. For example, HMAS Tobruk spent 185 days on border protection duty in 2001-02 and one of the LPA was deployed to Iraq in 2002-03.
- Joint amphibious training was identified as a priority for 2003-04.
- Targets for 2004-05 are LPA 609 URD, Tobruk 365 URD and LCH 1,910 URD compared with; LPA 568 URD, Tobruk 294 URD and LCH 2,070 URD in 2003-04.

Past Performance (Annual Report):

	Net Cost	Preparedness	Core Skills	Quantity
2000-01	-	Achieved	Achieved	LPA: 95% 424 MLOC days HMAS Toburk: 98% 256 MLOC days LCH: 97% 1678 MLOC days
2001-02	**-**	Achieved	Partially Achieved	LPA: 96% 485 FMC days HMAS Toburk: 49% 126 FMC days LCH: 73% 1019 FMC days
2002-03	$338 million (estimate only)	Achieved	Partially Achieved	LPA: 106% 601 FMC days HMAS Toburk: 93% 247 FMC days LCH: 99% 1159 FMC days
2003-04	$366 million			
2004-05	$372 million			



Note: Differing and incompatible quantity measures used over time have been converted to percentages.

Output 2.8 Hydrographic & Oceanographic Ops (Navy Capabilities)

Force Structure & Role:

2 Hydrographic Ships: 2250 tonne Leeuwin Class Australian-made hydrographic ships.

4 Survey Motor Launches: 305 tonne Paluma Class Australian-made survey launches.

1 Hydrographic Survey Unit: a deployable survey unit from the Hydrographic Office in Wollongong.

1 Laser Depth Sounder: an airborne depth sounder capability used in shallow water.

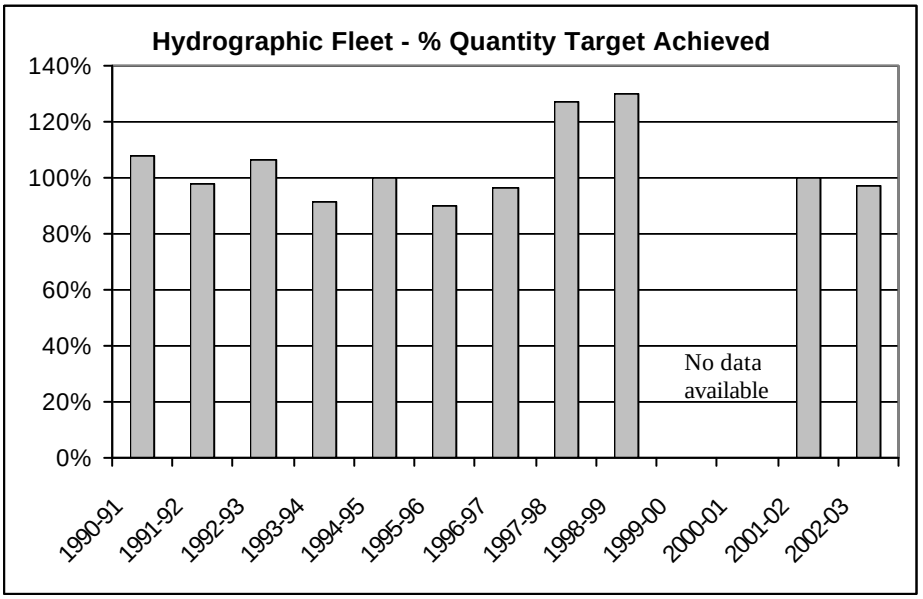
Hydrographic and Oceanographic operations

Issues:

- The 2 Hydrographic Ships and their embarked survey motor boats have not been formally accepted into Naval service and are not scheduled to do so until mid-2005.
- A prototype replacement survey motor boat was underwent trails in 2002-03.
- The Survey Motor Launches no longer fully meet international and Defence feature detection requirements although they remain operational. This will be addressed by the Survey Motor Launch Upgrade commencing in 2004.
- For 2003-04, the Hydrographic Ship target has been reduced to 629 URD, and SM Launches to 629 URD due to extended maintenance periods.

Past Performance (Annual Report):

	Net Cost	Preparedness	Core Skills	Quantity
2000-01	-	Partially Achieved	Not Applied	Partially Achieved (nil data on MLOC days)
2001-02	**-**	Substantially Achieved	Partially Achieved	Hydrographic Ships: 105% 627 FMC days SM Launches 97% 1012 FMC days
2002-03	$165 million (estimate only)	Substantially Achieved	Partially Achieved	Hydrographic Ships: 94% 498 FMC days SM Launches: 99% 913 FMC days
2003-04	$233 million			Hydrographic Ships: Target 732 URD SM Launches: Target 1,459 URD
2004-05	$247 million			Hydrographic Ships: Target 713 URD SM Launches: Target 1,324 URD



Note: Differing and incompatible quantity measures used over time have been converted percentages.

Output 3.1 Special Forces Operations (Army Capabilities)

Force Structure & Role:

One **SAS Regiment** in Western Australia whose roles include special recovery (including domestic and overseas counter terrorism by the west coast Tactical Assault Group - TAG) long-range reconnaissance and offensive operations.

One full time **Commando Regiment 4 RAR** in Sydney including the east coast TAG.

One **reserve Commando Regiment** split between Sydney and Melbourne. Roles include land, sea- and air-borne offensive commando raids.

126 Commando Signals Squadron in Sydney provides a reserve special forces signals capability and **152 Signals Squadron** provides a similar full time capability.

An **Incident Response Regiment** based in Sydney is capable of dealing with nuclear, chemical and biological incidents. This is a reinstatement of a capability developed for the Sydney Olympics.

And this budget funded a **Special Operations Command** in Sydney as well as an additional company for 4RAR plus support elements.

Issues:

- A very high operational tempo has been maintained by the SASR over the last five years resulting in a significant drop in preparedness and core skills according to the 2001-02 Annual Report. However, and despite a continuing high operational tempo in 2002-03 including deployment to Iraq, there were marked improvements in the areas of preparedness and core skills last year.
- The failure to fully achieve core skills in 2002-03 was due to a number of training activities and exercises being foregone due to operations or the development of new capabilities.
- Currently, 4 RAR is continuing the development of its commando capability. The decision in December 2002 to add an additional company to 4 RAR will allow the regiment to concurrently maintain the east coast TAG while still retaining a more-or-less battalion strength unit for deployment.
- The rapid expansion of the Special Forces from within the more slowly growing Army makes it difficult to recruit suitably qualified and experienced personnel without denuding the conventional force. To counter this, Army commenced direct recruiting into the special forces in 2003. This novel approach has proven to be successful.

Performance Target:

Achieve levels of preparedness directed by the Chief of the Defence Force for military response options with a warning time of less than 12 months and achieve a level of training that maintains core skills and professional standards across all warfare areas. The requirement to provide a battalion-sized group within 90 days readiness has been removed from the performance targets this year.

Past Performance (Annual Report):

	Net Cost	Preparedness	Core Skills	Quantity
2000-01		Achieved	Achieved	Achieved
2001-02		Partially Achieved	Partially Achieved	Achieved
2002-03	$458 million (estimate only)	Achieved	Substantially Achieved	Achieved
2003-04	$335 million			
2004-05	$322 million			

Output 3.2 Mechanised Operations (Army Capabilities)

Force Structure & Role:

Based around the Darwin's **1 Brigade** which includes:

The **1 Armoured Regiment** equipped with German-made 1970's Leopard tanks.

The **2 Cavalry Regiment** (Reconnaissance) equipped with 1990's North American designed but Australian modified ASLAV light armoured vehicles.

5/7 RAR mechanised infantry battalion equipped with 1960's US-made M113 armoured personnel carriers.

8/12 Medium Artillery Regiment equipped with US-made 155mm M198 Medium Howitzers and the 105mm L119 Hamel light gun.

In addition, 1st Brigade includes extensive organic logistics and engineer support including 1 Combat Engineer Regiment, 1 Combat Service Battalion and 1 Communications Support Regiment.

Issues:

- In recent years ammunition shortages have compromised the maintenance of core skills and preparedness and this was reflected in the results for 2002-03. However, the 2003-04 PBS was optimistic that this problem is being fixed across Army Outputs.
- Personnel deficiencies in a number of key trades, along with various equipment deficiencies, also adversely affected performance in 2002-03
- An upgrade program will see 350 of the Army's fleet of aging M113 armoured vehicles upgraded with new armour, turret, gun, engine, drive-chain and suspension beginning in 2006.
- The Defence Capability Review has decided to purchase refurbished US Abrahm Tanks to replace the current fleet of Leopards. These are scheduled to enter service between 2007 and 2009 at a cost of between $450 million and $600 million.
- Additional ASLAV light armoured vehicles are being acquired with the first vehicles arriving this year.

Performance Target:

Achieve levels of preparedness directed by the Chief of the Defence Force for military response options with a warning time of less than 12 months, including the provision of a **battalion-sized group within 90 days readiness** and achieve a level of training that maintains core skills and professional standards across all warfare areas.

Past Performance (Annual Report):

	Net Cost	Preparedness	Core Skills	Quantity
2000-01		Partially Achieved	Partially Achieved	Partially Achieved
2001-02		Partially Achieved	Partially Achieved	Partially Achieved
2002-03	$818 million (estimate only)	Partially Achieved	Partially Achieved	Substantially Achieved
2003-04	$866 million			
2004-05	$864 million			

Output 3.3 Light Infantry Operations (Army Capabilities)

Force Structure & Role:

Based around the Queensland based **3 Brigade** which includes:

Three infantry battalions; **1 Royal Australian Regiment** (RAR), **2 RAR** and **3 RAR** (Sydney),

4 Field Artillery Regiment equipped with the 105mm L119 Hamel light gun,

B Sqn 3/4 Cavalry Regiment with a squadron of 1960's M113 armoured personnel carriers and organic engineer and logistics support including 3 Combat Engineer Regiment, 3 Combat Service Battalion and 3 Communications Support Regiment.

The brigade includes a **Parachute Battalion Group** comprising 3 RAR along with airborne medical, artillery and other support elements.

The role of infantry is to seek out and close with the enemy, to kill or capture him, to seize and hold ground, to repel attack, by day or night, regardless of season, weather, or terrain

Issues:

- In 2001-02 the lack of C-130 availability affected the Output's preparedness, as did the unavailability of Navy amphibious assets due to the recent high operational tempo. This problem will be redressed by the priority on amphibious joint training in 2003-04, although preparedness were fully achieved in 2002-03 anyway.
- In 2002-03 most, but not all, training requirements were met due to reduced Blackhawk helicopter support as a result of airframe cracking, a shortage of flying instructors and commitments to East Timor.
- With the major Australian commitment to East Timor drawing to a close this year, this output will benefit from less disruption at the cost of less opportunity for operational experience.

Performance Target:

Achieve levels of preparedness directed by the Chief of the Defence Force for military response options with a warning time of less than 12 months, including the provision of a **three battalion-sized group within 90 days** readiness and achieve a level of training that maintains core skills and professional standards across all warfare areas.

Past Performance (Annual Report):

	Net Cost	Preparedness	Core Skills	Quantity
2000-01		Substantially Achieved	Achieved	Substantially Achieved
2001-02		Partially Achieved	Substantially Achieved	Achieved
2002-03	$1,043 million (estimate only)	Achieved	Substantially Achieved	Achieved
2003-04	$1,035 million			
2004-05	$1,019 million			

Output 3.4 Army Aviation (Army Capabilities)

Force Structure & Role:

Army aviation is based around the **1st and 5th Aviation Regiments** that have components in Oakey & Townsville in Queensland, and Darwin in the Northern Territory.

The force structure includes thirty-five 1970's **designed Black Hawk troop lift helicopters**, forty-two 1970's designed **Kiowa light observation & training helicopters**, twenty-five 1960's designed **Iroquois troop lift and fire support helicopters** and six US designed **Chinook medium lift helicopters**. All the helicopters are of US design.

In addition, two **Twin Otter** and three **King Air fixed wing aircraft** are used for surveillance and command & control support.

The role of Army Aviation is provide troop and logistics transport, surveillance, reconnaissance, aerial fire support and command & control support.

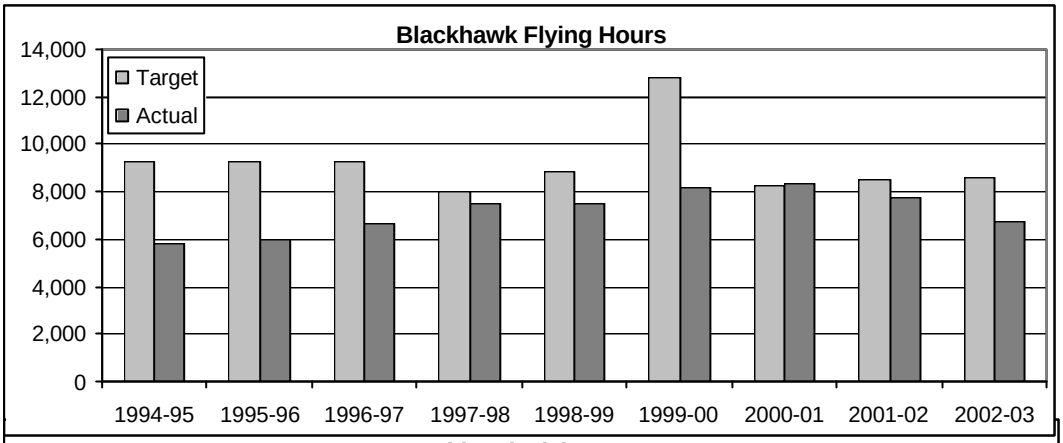
Issues:

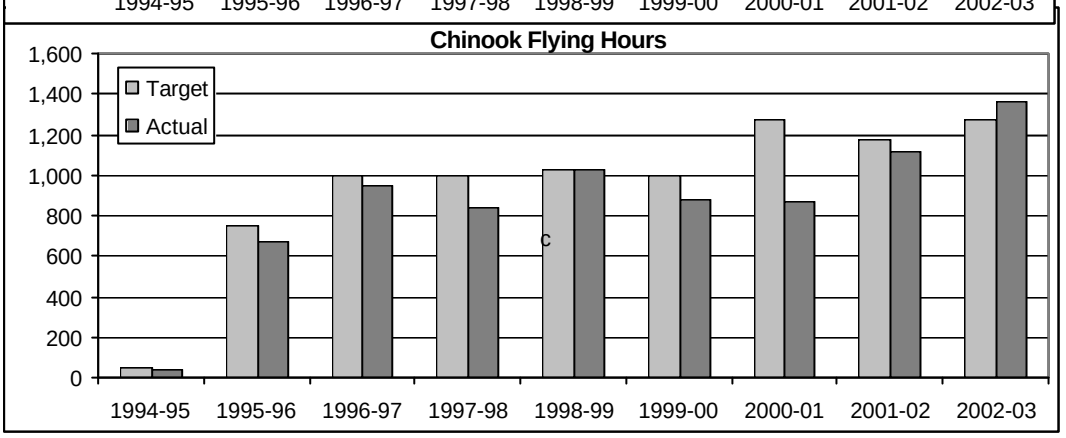
- In 2002-03 concurrent operational activities adversely affected the maintenance of core skills. In particular, training for light infantry operations was impacted.
- Core skills were further affected in 2002-03 due to the insufficient numbers of pilot trainees and a higher than anticipated failure rate at the basic flying school. Initiatives to increase trainee numbers have commenced.
- Some Black Hawk training activities and flying hours were lost in 2002-03 due to pilot shortages and airframe cracking in some aircraft.
- The Chinook fleet exceeded its flying hour target due to deployment of two aircraft to the war in Iraq in 2002-03.
- The Eurocopter armed reconnaissance helicopter will enter service sometime beginning in December 2004, although the 2003-04 PAES has clarified that the aircraft will only be in an interim configuration.
- Twelve additional troop lift helicopters are planned with an in-service-date of 2007. These aircraft will be configured to operate from the Navy's LPA vessels.

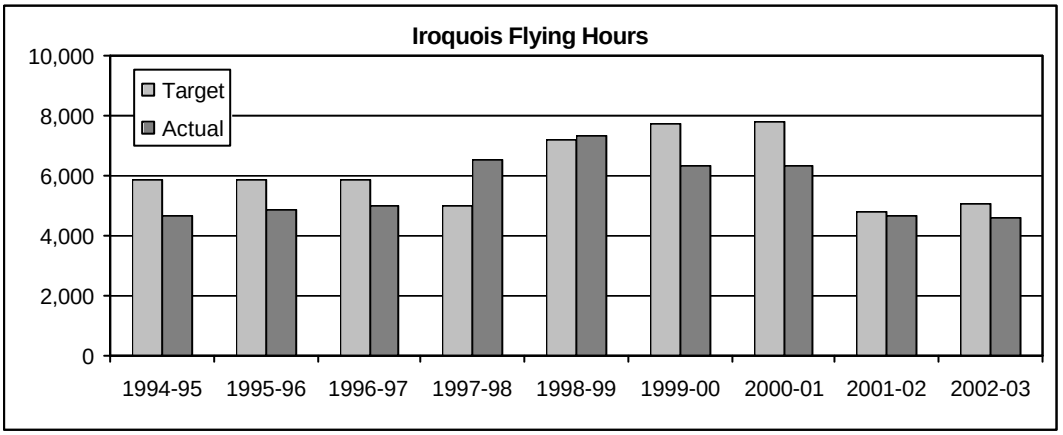
Past Performance: (*% of planned Black Hawk, Chinook, Iroquois & Kiowa flying hours)

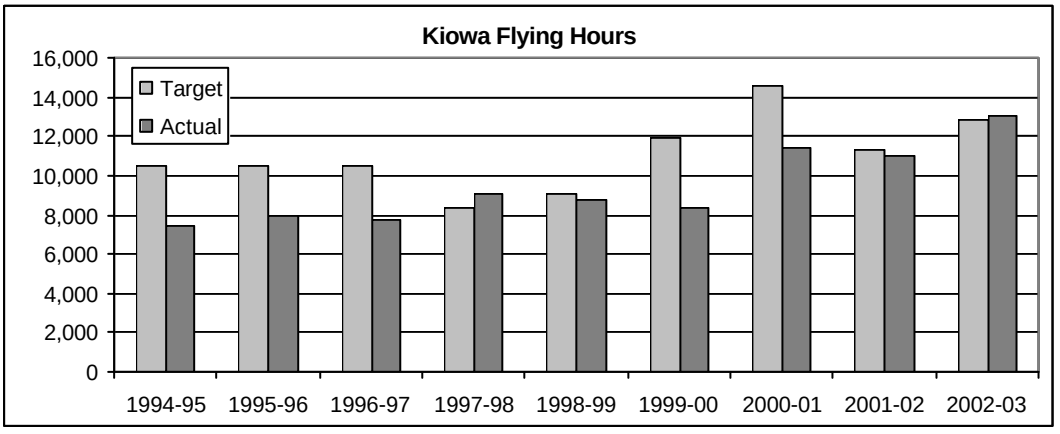
	Net Cost	Preparedness	Core Skills	Quantity*
2000-01		Substantially Achieved	Substantially Achieved	Partially Achieved (91%)
2001-02		Achieved	Substantially Achieved	Substantially Achieved (95%)
2002-03	$454 million (estimate only)	Achieved	Substantially Achieved	Substantially Achieved (93%)
2003-04	$593 million			
2004-05	$624 million			

Flying hour charts appear overleaf.


Blackhawk Flying Hours
Target
Actual
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
1994-95
1995-96
1996-97
1997-98
1998-99
1999-00
2000-01
2001-02
2002-03


Chinook Flying Hours
Target
Actual
1,600
1,400
1,200
1,000
800
600
400
200
0
1994-95
1995-96
1996-97
1997-98
1998-99
1999-00
2000-01
2001-02
2002-03


Iroquois Flying Hours
Target
Actual
10,000
8,000
6,000
4,000
2,000
0
1994-95
1995-96
1996-97
1997-98
1998-99
1999-00
2000-01
2001-02
2002-03


Kiowa Flying Hours
Target
Actual
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
1994-95
1995-96
1996-97
1997-98
1998-99
1999-00
2000-01
2001-02
2002-03

Output 3.5 Ground Based Air Defence (Army Capabilities)

Force Structure & Role:

16 Air Defence Regiment in South Australia equipped with the **Swedish RBS 70** shoulder launched, optically guided, ground-to-air anti-aircraft missile; and the larger towed ground-to-air **Rapier** RF-guided anti-aircraft missile from the United Kingdom. Both weapons were first developed in the 1970's and are classed as short-range systems.

The role of ground based air defence is to shoot down hostile enemy aircraft.

Issues:

- In 2002-03 shortages in personnel and ammunition prevented full achievement of preparedness targets, although performance improved compared with the previous year. Ammunition has been ordered, but long lead time mean that it will take several years for the ammunition problem to be solved. It's planned that recruiting programs will rectify the personnel problem.
- The cancellation of some training activities due to operational deployments adversely affected the maintenance of core skills in 2002-03
- According to the 2002-03 Annual Report, the output had insufficient personnel and ammunition sustainability stocks to fully achieve all capability requirements. This resulted in a significantly reduced but nonetheless credible capability.
- Project Land 19 ($100-150 million) is extending the life, and enhancing the capability, of the existing RBS 70 systems through improved sensors and a night operating capability. The project recently also acquired an RBS simulator to improve training. In the longer term, Land 19 will replace the existing Rapier systems with additional RBS 70 weapons. The in-service date for the new systems is 2005.

Performance Target:

Achieve levels of preparedness directed by the Chief of the Defence Force for military response options with a warning time of less than 12 months, and achieve a level of training that maintains core skills and professional standards across all warfare areas.

Past Performance (Annual Report):

	Net Cost	Preparedness	Core Skills	Quantity*
		Partially Achieved	Substantially Achieved	Partially Achieved
2000-01		Partially Achieved	Substantially Achieved	Partially Achieved
2001-02		Substantially Achieved	Substantially Achieved	Partially Achieved
2002-03	$108 million (estimate only)			
2003-04	$176 million			
2004-05	$182 million			

Output 3.6 Combat Support Operations (Army Capabilities)

Force Structure & Role:

Combat Support Operations includes all non-logistic support to combat operations that is not embedded within Army's brigades. As such, it does not represent any single capability nor formation although most of its components report directly to land HQ.

Accordingly, the sub-output includes a diverse collection of units including

HQ Engineer Support Regiment,

21 Construction Regiment (Sydney),

22 Construction Regiment (Melbourne),

17 Construction Squadron (Sydney),

21 Construction Squadron (Brisbane),

19 Construction Engineer Works Section (Sydney),

1 Topographical Survey Squadron (Enoggera, QLD),

Combat Training Centre (Townsville),

131 Surveillance Target Acquisition Battery (Enoggera, QLD),

110 Signals Squadron - Electronic Warfare (Sydney),

1 Military Police Battalion (Sydney), and

1 Intelligence Battalion

Issues:

- Over the past three years the Output has experienced personnel shortages especially in critical trade areas which are inherent to many of the specialist units. This, along with some equipment deficiencies, resulted in less than full achievement against preparedness, core skills and quantity in 2002-03. The annual report advises that personnel and equipment deficiencies are being addressed.
- Concurrent operations arose in a number of theatres during 2002-03 which prevented some training activities from being undertaken. In addition, a construction squadron supported the ATSIC / Army Community Assistance Program for remote indigenous communities in north-west Western Australia.

Performance Target:

Achieve levels of preparedness directed by the Chief of the Defence Force for military response options with a warning time of less than 12 months, and achieve a level of training that maintains core skills and professional standards across all warfare areas.

Past Performance (Annual Report):

	Net Cost	Preparedness	Core Skills	Quantity
2000-01		Substantially Achieved	Substantially Achieved	Partially Achieved
2001-02		Substantially Achieved	Substantially Achieved	Partially Achieved
2002-03	$386 million (estimate only)	Substantially Achieved	Substantially Achieved	Substantially Achieved
2003-04	$496 million			
2004-05	$488 million			

Output 3.7 Regional Surveillance (Army Capabilities)

Force Structure & Role:

This is the smallest of all the Army outputs being made up of three regional surveillance units which are predominately manned by reserve personnel. These are:

51st Battalion Far North Queensland Regiment which is responsible for conducting reconnaissance and surveillance over 640,000 square km in Far North Queensland and the Gulf country;

The West Australian based ***Pilbra Regiment*** with 1.3 million square km to cover from the Kimberley boundary in the north, to Shark Bay in the south, then east to the NT/SA/WA border; and

North West Mobile Force (NORFORCE) which covers the Northern Territory and the Kimberly region of Northern Western Australia, an area of operations covering nearly one quarter of Australia's land mass – 1.8 million square kilometers.

The three regional surveillance units are also responsible for offshore islands and the Pilbra Regiment has specific responsibility for the oil and gas infrastructure on the northwest shelf.

Issues:

- Nil. Unique among Army sub-outputs the three regional surveillance units achieved their targets for preparedness, core skill and quantity two years in a row.
- During 2001-02 a total of 286 patrol days by Regional Force Surveillance units were delivered compared with a target of 240 patrol days. Figures for 2002-03 were not available.
- During 2002-03 the three regional surveillance units provided support to border protection.

Performance Target:

Achieve levels of preparedness directed by the Chief of the Defence Force for military response options with a warning time of less than 12 months, and achieve a level of training that maintains core skills and professional standards across all warfare areas.

Past Performance (Annual Report):

	Net Cost	Preparedness	Core Skills	Quantity
2000-01		Not Applied	Not Applied	Not Applied
2001-02		Achieved	Achieved	Achieved
2002-03	$108 million (estimate only)	Achieved	Achieved	Achieved
2003-04	$150 million			
2004-05	$160 million			

Output 3.8 Land Operational Logistics Support (Army Capabilities)

Force Structure & Role:

The Logistics Support Force (LSF) is a brigade sized grouping of reserve and permanent ADF units that can sustain a brigade on operations for extended periods while concurrently maintaining a battalion group elsewhere.

It provides supply, fuel, communications, transport, repair, health and psychology capabilities. The LSF has its own **HQ** and includes;

2, 9 & 10 Force Support Battalions,

1, 2 & 3 Health Support Battalions,

130 & 145 Signals Squadrons,

Deployed Force Support Unit,

HQ Force Support Unit,

1 Psychology Unit,

1 Petroleum Coy,

3 Recovery Coy, a logistics support force workshop and detachments on HMAS Tobruk and the two LPA vessels.

The units are geographically dispersed.

Issues:

- Over the last three years the Output has experienced personnel shortages especially in a number of key trade areas. This contributed to not all targets being met in preparedness, core skills and quantity last year.
- Limited reserve stocks also adversely impacted preparedness in 2002-03, and equipment deficiencies did the same for quantity targets.

Performance Target:

Achieve levels of preparedness directed by the Chief of the Defence Force for military response options with a warning time of less than 12 months, and achieve a level of training that maintains core skills and professional standards across all warfare areas.

Past Performance (Annual Report):

	Net Cost	Preparedness	Core Skills	Quantity
2000-01		Substantially Achieved	Substantially Achieved	Substantially Achieved
2001-02		Substantially Achieved	Substantially Achieved	Partially Achieved
2002-03	$448 million (estimate only)	Substantially Achieved	Substantially Achieved	Substantially Achieved
2003-04	$522 million			
2004-05	$504 million			

Output 3.9 Motorised Infantry Operations (Army Capabilities)

Force Structure & Role:

Motorised Infantry Operations are based around the mostly medium readiness 7 Brigade.

It is an integrated reserve-regular formation including a **HQ** in Enoggera Queensland, and including three motorised Battalions;

6 Royal Australian Regiment (Enoggera),

9 Royal Queensland Regiment (Queensland),

25/49 Royal Queensland Rifles (Brisbane and Darling Downs region), and the

2/14 Light Horse Regiment a reconnaissance battalion (Enoggera),

1 Field Regiment (Enoggera) plus engineering and logistics support including;

2 Combat Engineer Regiment, and

7 Combat Services Support Battalion.

Issues:

- The 2/14 Light Horse Regiment is progressively converting from M113A1 vehicles to the made Australian Light Armoured Vehicle (ASLAV) in the 2001-2004 timeframe.
- The 1 Field Regiment is augmenting its 105mm Howitzer Towed Guns with the M198 155mm Towed Howitzer.
- Many of the units in 7th Brigade will eventually be equipped with the Bushmaster Infantry Mobility Vehicle.
- Equipment, ammunition and personnel deficiencies in key areas have compromised preparedness and the maintenance of core skills for three years in a row. Curiously, the 2002-03 Annual Report says that: "Personnel and equipment deficiencies are being addressed through ADF recruiting and retention programs". (Does this mean BYO equipment?)
- Unlike other Army Outputs, it's unclear what measures are in place to address equipment, sustainability and ammunition deficiencies. This must be a concern given the requirement to have a battalion-sized group on 90 days readiness.

Performance Target:

Achieve levels of preparedness directed by the Chief of the Defence Force for military response options with a warning time of less than 12 months, including the provision of a **battalion-sized group within 90 days** readiness and achieve a level of training that maintains core skills and professional standards across all warfare areas.

Past Performance (Annual Report):

	Net Cost	Preparedness	Core Skills	Quantity*
2000-01		Partially Achieved	Partially Achieved	Substantially Achieved (Regular) Partially Achieved (Reserve)
2001-02		Partially Achieved	Partially Achieved	Substantially Achieved (Regular) Partially Achieved (Reserve)
2002-03	$591 million (estimate only)	Partially Achieved	Partially Achieved	Substantially Achieved (Regular) Partially Achieved (Reserve)
2003-04	$577 million			
2004-05	$584 million			

Output 3.10 Protective Operations (Army Capabilities)

Force Structure & Role:

The protective operations sub-output includes all those reserve units not attributed to other sub-outputs. It is structured around 6 infantry brigades each of which has a HQ, two or three infantry battalions, an armoured reconnaissance unit and combat and logistics support units. These are:

4 Brigade in Melbourne,

5 & 8 Brigade in Sydney,

9 Brigade in Adelaide and Hobart,

11 Brigade in Townsville, and

13 Brigade in Perth

Achieve levels of preparedness directed by the Chief of the Defence Force for military response options with a warning time of less than 12 months and achieve a level of training that maintains core skills and professional standards across all warfare areas.

Issues:

- The preparedness of the Protective Operations capability dropped from achieved to partially achieved in 2002-03 due to deficiencies in equipment and personnel in key trades (notwithstanding an overall increase in Army Reserve numbers). I may be that the drop in performance simply reflects the assignment of elevated preparedness targets for the Army Reserve
- In 2002-03 the Army Reserve still had shortages in ammunition which, along with personnel and equipment, adversely affected training and core skills.
- Quantity targets were not met due to personnel shortages at the unit level, although personnel still provided a reinforcement and rotation base for the regular force.
- During 2002-03 the Reserve Ready Response Force was developed. It comprises a company sized Response Forces in each of the six Reserve Brigades, plus the 1 Commando Regiment in Sydney and Melbourne. These units complement the ADF's full-time counter-terrorism capabilities based around the two Tactical Assault Groups and the Incident Response Regiment. This capability has now been demonstrated publicly via exercises.

Performance Target:

Achieve levels of preparedness directed by the Chief of the Defence Force for military response options with a warning time of less than 12 months and achieve a level of training that maintains core skills and professional standards across all warfare areas.

Past Performance (Annual Report):

	Net Cost	Preparedness	Core Skills	Quantity
2000-01		Achieved	Partially Achieved	Partially Achieved
2001-02		Achieved	Partially Achieved	Partially Achieved
2002-03	$569 million (estimate only)	Partially Achieved	Partially Achieved	Partially Achieved
2003-04	$530 million			
2004-05	$540 million			

Output 4.1 Air Combat (Part 1 - Strike Reconnaissance)

Force Structure & Role:

17 F-111C & 7 F-111G Strike Aircraft: 1960's design US-made supersonic bombers plus 5 F-111G in storage and 2 being used for spares. The F-111C and F-111G aircraft provide a long-range strike capability that can bomb targets in adversary territory or in transit to Australia using the Harpoon anti-shipping missile. Only the F-111C is equipped with a precision bombing laser designation capability.

4 RF-111C Strike Reconnaissance Aircraft: for aerial photographic reconnaissance and battle damage assessment.

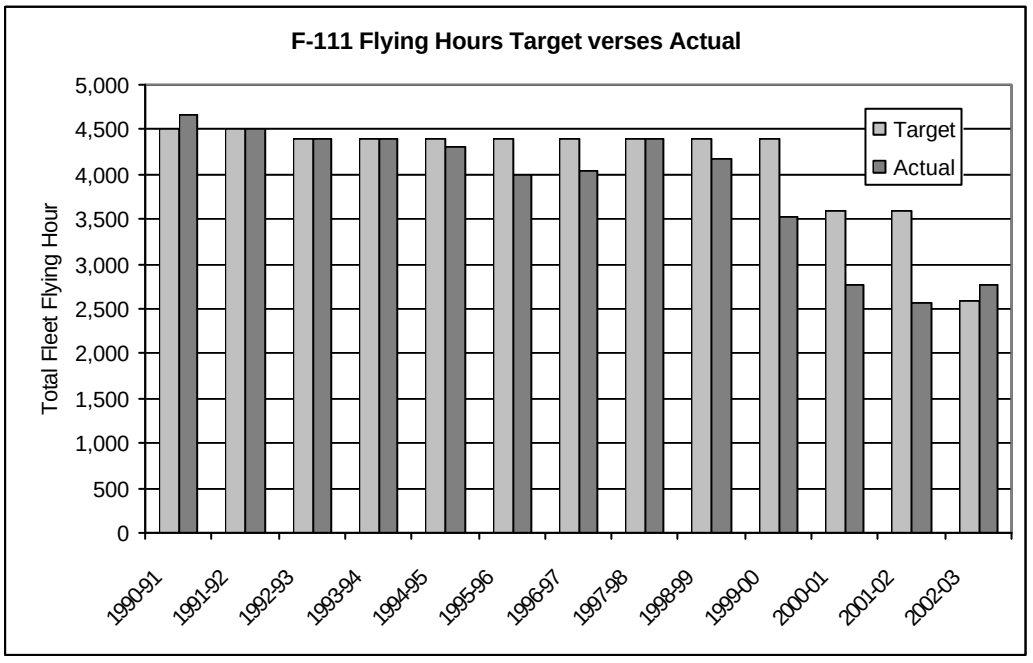
Issues:

- The F-111 fleet has been in service since the early seventies and the RAAF is now the sole operator of the aircraft. Current planning is to retire the aircraft around 2010 assuming that the development of the AP-3C ad F/A-18 fleets goes according to plan.
- Projects to provide improved electronic warfare self-protection and a long-range stand-off missile capability for the fleet are both significantly delayed. A number of planned projects have been scrapped because of the advancement of the retirement date.
- Unanticipated maintenance problems have reduced aircraft availability in the last couple of years. As a result, the planned rate of effort dropped from an historical average of around 4300 hours to only 2600hrs in 2002-03. This prevented the achievement of more demanding training and preparedness targets.
- However, according to the 2002-03 Annual Report, by the end of the year the output was coming close to meeting preparedness targets and core skills were being regained as aircraft availability improved.

Past Performance of the Strike Reconnaissance part of the Air Combat Output:

	Net Cost*	Preparedness	Core Skills	Quantity**
2000-01		Partially Achieved	Partially Achieved	77%
2001-02		Partially Achieved	Partially Achieved	71%
2002-03	$1,856 million (estimate only)	Partially Achieved	Partially Achieved	107%
2003-04	$1,889 million			3,800 hours
2004-05	$1,959 million			3,800 hours

*including both Strike Reconnaissance and Tactical Fighter components



** Quantity refers to % of planned flying hours achieved.

Output 4.1 Air Combat (Part 2 - Tactical Fighter)

Cost: $1,779,583,000 (including both Strike Reconnaissance and Tactical Fighter)

Force Structure & Role:

71 F/A-18 Fighter Aircraft: these 1980's vintage US designed and Australian assembled aircraft provide a capability for; air-defence using short and medium range air-to-air missiles, tactical air support and land strike using laser guided and unguided bombs, maritime strike using the Harpoon anti-shipping missile, and air reconnaissance.

33 Hawk Lead-in-Fighters (LIF): these recently acquired UK made jet trainers provide a training capability for both the F-111 and F/A-18 aircraft. The Hawks replace the now retired Macci jet trainers.

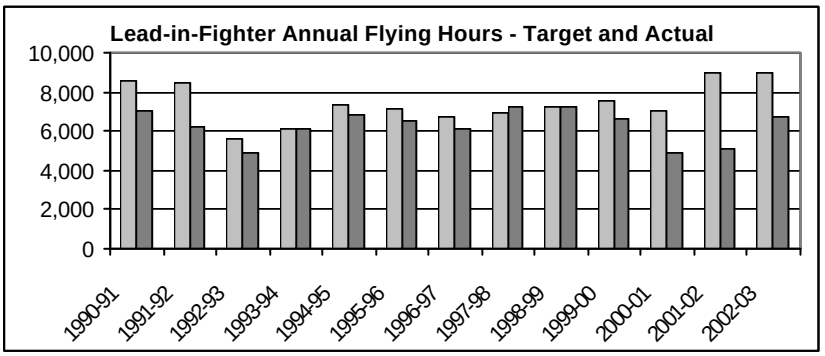
4 PC-9 Forward Air Control aircraft: used to designate targets for the F/A-18 aircraft.

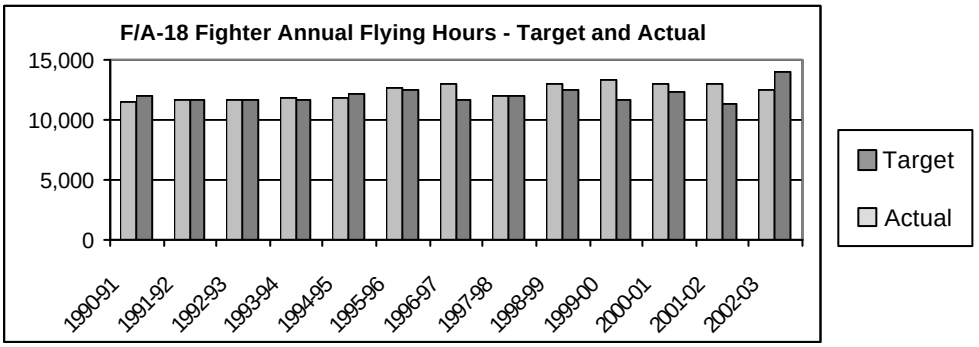
Issues:

- The preparedness of the F/A-18 fleet was amply demonstrated through their involvement in the Iraq war.
- Core skills degraded marginally for Australian based personnel during 2002-03 as a result of high operational tempo.
- Due to operational commitments in 2002-03 the number of F/A-18 hours flown exceeded the target, while the LIF rate of effort fell below the budgeted level (but close to the revised estimate of 7,100 hours) due to ongoing aircraft serviceability issues.

Past Performance of the Tactical Fighter part of the Air Combat Output:

	Net Cost $'000	Preparedness	Core Skills	Quantity	
				F/A-18	LIF
2000-01		Achieved	Partially Achieved	95% 12,331 hrs	70% 4917 hrs
2001-02	-	Achieved	Partially Achieved	87% 11,287 hrs	56% 5057 hrs
2002-03	$1,856 m (estimate only)	Achieved	Substantially Achieved	113% 14,007 hrs	74% 6691 hrs
2003-04	$1,889 m			12,500 hours	8,000 hours
2004-05	$1,959 m			12,500 hours	9,000 hours





Output 4.2 Combat Support of Air Operations (Air Force Capabilities)

Force Structure & Role: Details about this Output are difficult to find beyond that it comprises

2 x Combat Support Wings,

1 x Expeditionary Combat Support Wing,

1 x Combat Reserve Wing,

1 x Health Services Wing and

1 x Air Field Defence Wing.

Its role is to provide 'operations support activities required to support expeditionary air bases within Australia and overseas in a contingencies, and maintain operating bases day-today in Australia'.

Issues:

- Over the last two years personnel and equipment shortages have been a problem but the successful delivery of combat support operations in the Middle East and East Timor during 2002-03 demonstrated the preparedness of this capability.
- During 2002-03 high operational tempo prevented the completion of planned training activities and the maintenance of core skills.
- Personnel numbers have been improving although there were still shortages in some specialist areas according to the 2002-03 Annual report., which also said that most significant equipment shortages have been addressed.

Past Performance (Annual Report):

	Net Cost	Preparedness	Core Skills	Quantity
2000-01		Partially Achieved	Partially Achieved	Partially Achieved
2001-02		Partially Achieved	Partially Achieved	Partially Achieved
2002-03	$435 million (estimate only)	Achieved	Substantially Achieved	Partially Achieved
2003-04	$571 million			
2004-05	$557 million			

Output 4.3 Surveillance and Response Operations, Surveillance component (Air Force Capabilities)

Force Structure & Role:

10 x Air Traffic Radar: including 9 fixed radar and one mobile, for the control of ADF air traffic.

4 x Tactical Air Defence Radar: ground based radar to detect hostile and own aircraft.

JORN Over the Horizon Radar network: Operational over-the-horizon radar network including a radar site at Laverton Western Australia and Longreach QLD and seventeen coastal beacons in the north of Australian and Christmas Island.

The network is operated from the **Jindalee Operational Radar Network Coordination Centre** in Edinburgh SA and can detect both sea and air-borne moving objects.

The capability for strategic surveillance provides sensors and battle space management elements as support for wide-area aerospace surveillance, air defence, airspace control, and battle space management.

Issues:

- According to the 2002-03 Annual Report the reduced reliability of ageing mobile radars precluded preparedness levels from being fully achieved.
- The Tactical Air Defence Radar System project is long overdue but the first of four air defence radars should be delivered during 2003-04.
- The $1.2 billion JORN network commenced operation in May 2003 and achieved 100% of assigned hours.

Past Performance of surveillance component of Surveillance and Response Operations

	Net Cost	Preparedness	Core Skills	Quantity
2000-01		Partially Achieved	Partially Achieved	Partially Achieved*
2001-02		Partially Achieved	Partially Achieved	Partially Achieved*
2002-03	$352 million (estimate only)	Substantially Achieved	Substantially Achieved	Substantially Achieved
2003-04	$1,052 million*			
2004-05	$1,128 million*			
				*Qualitative Assessment by ASPI

* Total net cost of Surveillance and Response Operations Output

Output 4.3 Surveillance and Response Operations, Maritime Patrol Aircraft component (Air Force Capabilities)

Force Structure & Role:

19 P-3C/AP-3C Orion: 1970's vintage US-made maritime patrol aircraft. The figure of 19 includes a number upgraded to AP-3C standard through an ongoing Australian-unique upgrade program. A further 6 of these upgraded aircraft are due for delivery during 2003-04. The P-3C undertake maritime patrol equipped with the Harpoon anti-shipping missile, the Mk46 Lightweight anti-submarine torpedo, 500lb and 2000lb mines, and expendable sonobuoys used to locate submarines. They undertake maritime surveillance, reconnaissance, offensive air support, surface & sub-surface strike, and search and survivor supply.

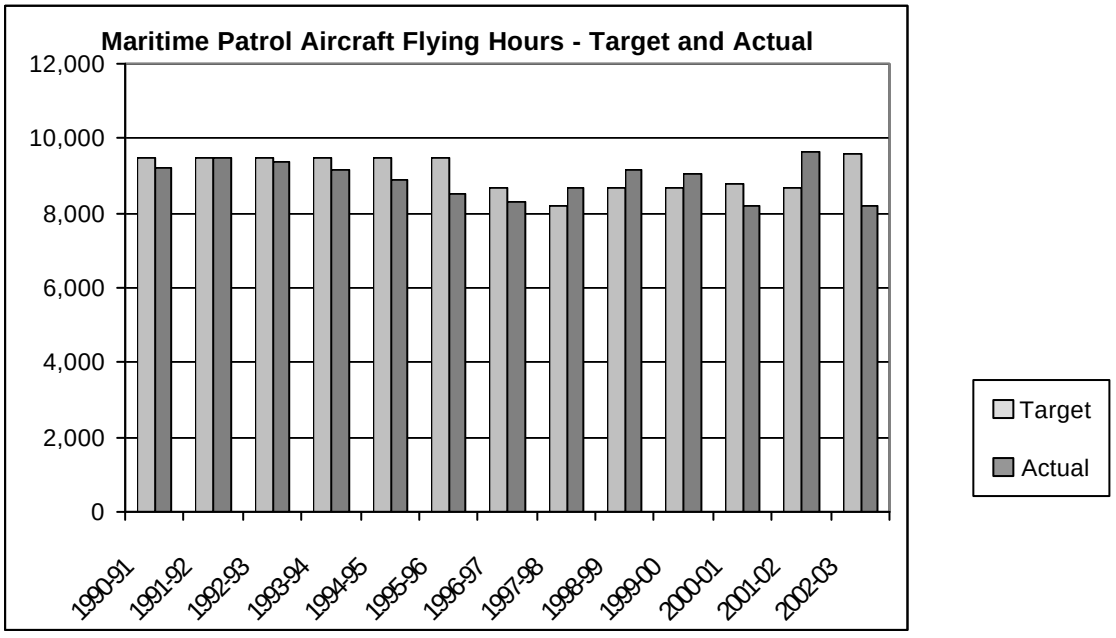
Issues:

- High operational tasking and the transition to the AP-3C disrupted the maintenance of core skills last financial year. These factors also caused the flying hour target to be missed.
- According to the 2002-03 Annual Report, preparedness targets were met or exceeded with the exception of requirements to cater for more complex threat.
- The 2003-04 goal of 9,100 flying hours for 2003-04 represents a return to close to the higher targets set during the mid 1990's. This was revised down to 9000 hours with the retirements of the TAP-3 training aircraft this year.

Past Performance of Maritime Patrol Aircraft component of Surveillance and Response

	Net Cost	Preparedness	Core Skills	Quantity
2000-01		Achieved	Substantially Achieved	93% 8216 hours
2001-02		Partially Achieved	Substantially Achieved	111% 9624 hours
2002-03	$534 million (estimate only)	Substantially Achieved	Substantially Achieved	85% 8172 hours
2003-04	$1,052 million*			9,000 hours
2004-05	$1,128 million*			9,000 hours

* Total net cost of Surveillance and Response Operations Output



Output 4.4 Airlift (Air Force Capabilities)

Force Structure & Role:

12 x C-130J Hercules & 12 x C-130H Hercules: Troop lift and transport aircraft also capable of being used in parachute operations and medical evacuation.

14 x Caribou: Tactical transport aircraft able to operate from short runways.

4 x Boeing 707: Troop transport & air-to-air refueling, previously also used as VIP aircraft.

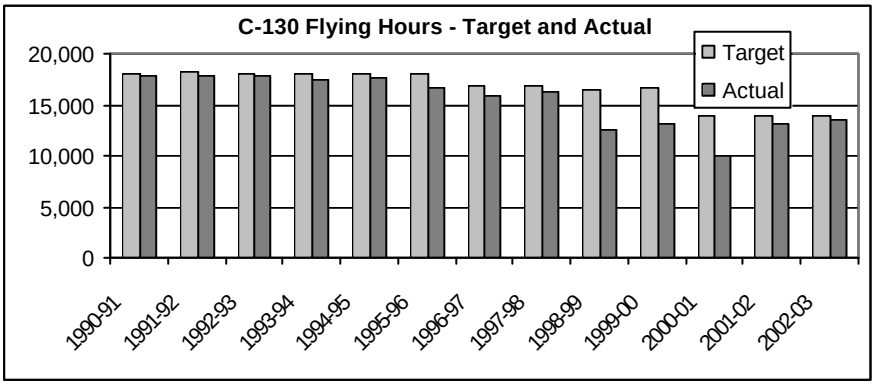
2 x Boeing 737 and 3 x CL604 Challenger: VIP aircraft. Plus navigation training aircraft

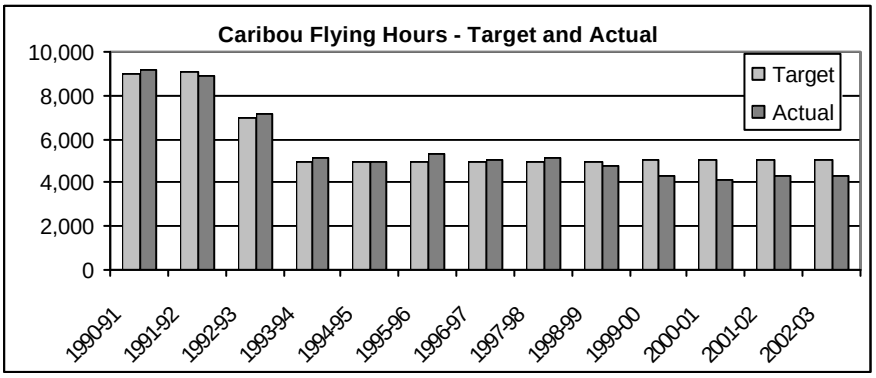
Issues:

- The 2002-03 Annual Report said that while ongoing operations have been maintained some of the more demanding preparedness targets were met with restrictions.
- Some tactical roles for the C-130J are still under development which adversely affected core skills in 2002-03
- The B707 were planned to be withdrawn from service by December 2002 but will now be retained until at least 2007 as an interim air-to-air refueling capability when they will be replaced in that role. Unfortunately, the B707 are aging aircraft with rising operating costs and maintenance demands.

Past Performance:

	Net Cost	Preparedness	Core Skills	Quantity	
				C-130H/J	Caribou
2000-01		Partially Achieved	Partially Achieved	78% 10,054 hrs	82% 4,174 hrs
2001-02		Partially Achieved	Partially Achieved	94% 13,102 hrs	84% 4,289 hrs
2002-03	$982 million (estimate only)	Substantially Achieved	Substantially Achieved	97% 13,622 hrs	85% 4332 hrs
2003-04	$933 million			15,000 hrs	5,080 hrs
2004-05	$976 million			16,000 hrs	5,080 hrs





Output 5.1 Strategic and International Policy, Activities and Engagement

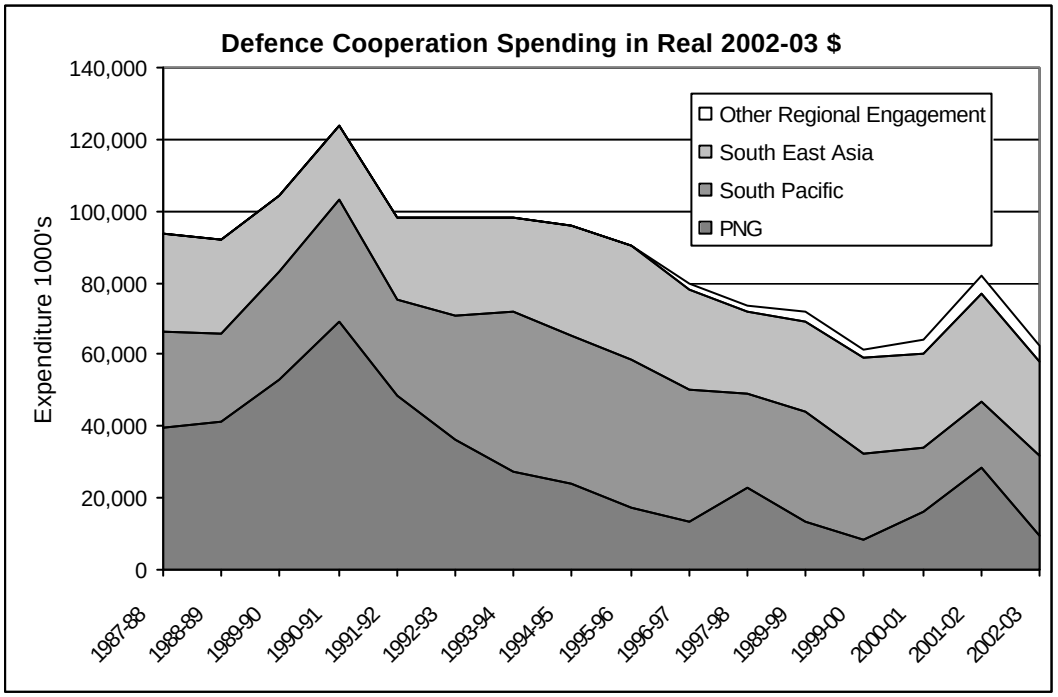
Force Structure & Role:

Includes International Policy Division within Russell Offices and Defence attaches in foreign countries. According to the 2004-05 PBS this Output 'provides strategic and international policy advice to the Government to enable it to make sound judgements on, and develop appropriate response to, changes in Australia's strategic circumstances, and on specific issues as they arise'. It also makes recommendations to Government on international engagement activities and initiatives.

Issues: This Output has had to balance the demands of recurrent crises with the day-today ongoing management of defence international engagement including the more than $62million a year Defence Cooperation Program that funds regional military-to-military activities and cooperation.

Past Performance: In the past two years this Output has achieved all or most of its performance targets, see recent Annual Report for a very extensive narrative.

	2002-03	2003-04	2004-05	2005-06
Net Cost	$156 million (estimate only)	$173 million	$195 million	



Output 5.2 Military Strategy and Command (Strategic policy)

Force Structure & Role:

Includes two Divisions at Russell Offices, one predominantly military charged with strategic command advice to the CDF, and another military-civilian division tasked with the development of strategic policy and guidance. According to the 2004-05 PBS this Output 'provides strategic policy guidance to assist the development of recommendations to the Government on force structure, capability development, preparedness of ADF elements, and operational matters.' It also provides advice to the Government on the command of ADF operations.

Performance Targets:

The performance targets includes ongoing review of Defence capability priorities, timely advice on current and emerging operational issues and effective management of combined operations at the strategic level.

Past Performance: In the past two years this Output has achieved all or most of its performance targets, see recent Annual Reports for a very extensive narrative.

	2002-03	2003-04	2004-05	2005-06
Net Cost	$ 20 million (estimate only)	$47 million	$48 million	

Output 6: Intelligence

Force Structure & Role:

Defence Intelligence Organisation (DIO) at Russell Offices in Canberra undertakes analysis of intelligence information from the full range of available resources. They produce reports, briefs and assessments on an ongoing basis as well as in response to emerging areas of concern. Topics range across military, economic, technical, scientific and political areas.

***Defence Imagery and Geospatial Organisation (DIGO*)** includes a HQ at Russell Offices in Canberra and the Geospatial Information Branch in Bendigo. It acquires, processes and distributes imagery and geospatial intelligence including maps and charts. DIGO also sets technical standards for imagery and geospatial products.

Defence Signals Directorate (DSD) collects and distributes classified foreign signals intelligence (and is prohibited by law from collecting domestic intelligence) and provides information security advice, products and services to the Government and ADF. DSD has its HQ in Russell Offices in Canberra and maintains collection facilities elsewhere.

Defence intelligence collection and analysis activities support ADF operations, Defence policy making including force development, and support wider Government decision making. For more information see http://www.defence.gov.au/intelligence/.

Security is also the responsibility of the Intelligence and Security Group, which is the organisational element that largely aligns with this Output. A Branch is devoted to this task.

Issues: The recent high operation tempo has placed additional pressures on Defence intelligence resources, and the recruiting and retention of skilled personnel remains important. The PBS also mentions substantial investment in intelligence capabilities over the next decade in a variety of areas, and the PBS implies that these initiatives are on track.

Past Performance: In 2001-02 the Intelligence output met somewhere between all and a substantial number of their performance targets. See the most recent Annual Report for an extensive narrative.

	2002-03	2003-04	2004-05	2005-06
Net Cost	$ 342 million	$413 million	$435 million	

Section 2.5: People [PBS Chapter 5]

Overview [PBS p. 201]

The Overview of the 'People' chapter outlines a diverse range of initiatives to improve the management of personnel from a business and planning perspective, and to enhance the development, care, recruitment and retention of personnel.

Most of these initiatives began in 2001-02 when $500 million over five years was allocated to deal with high priority personnel issues. They seem to be making a difference. Recruitment and retention of personnel has been steadily improving over the last couple of years. In this year's budget another $665 million has been allocated to personnel spending as outlined in Section 2.2 of this brief. This new money will address recruitment and retention initiatives ($21.4 million) directly as well as providing improved accommodation ($113 million) and rental assistance ($243 million). In addition, Defence has received supplementation ($80 million) to increase the annual indexation for military personnel expenses from 2% to 2.5%, as well as $196 million to cover Defence Housing Authority expenses and $11.7 million for Comcover premium increases.

How big is the workforce?

In 2004–05 Defence will employ an average of around 52,872 full time military personnel, 17,841 civilians and 20,710 Reservists. Estimated personnel numbers for 2004-05 are given in Table 5.1 of the PBS (as average funded strengths). Until recently, the long-term target was to build a force of around 54,000 permanent ADF personnel by 2010. However, the Government accepted the recommendations of the 2003 Defence Capability Review, which will see some capabilities withdrawn from service in the next decade resulting in a reduced (but as yet undisclosed) personnel target. Recent personnel numbers appear in Figure 2.5.1 along with the estimates for 2004-05.

Table 2.5.1: Workforce Summary

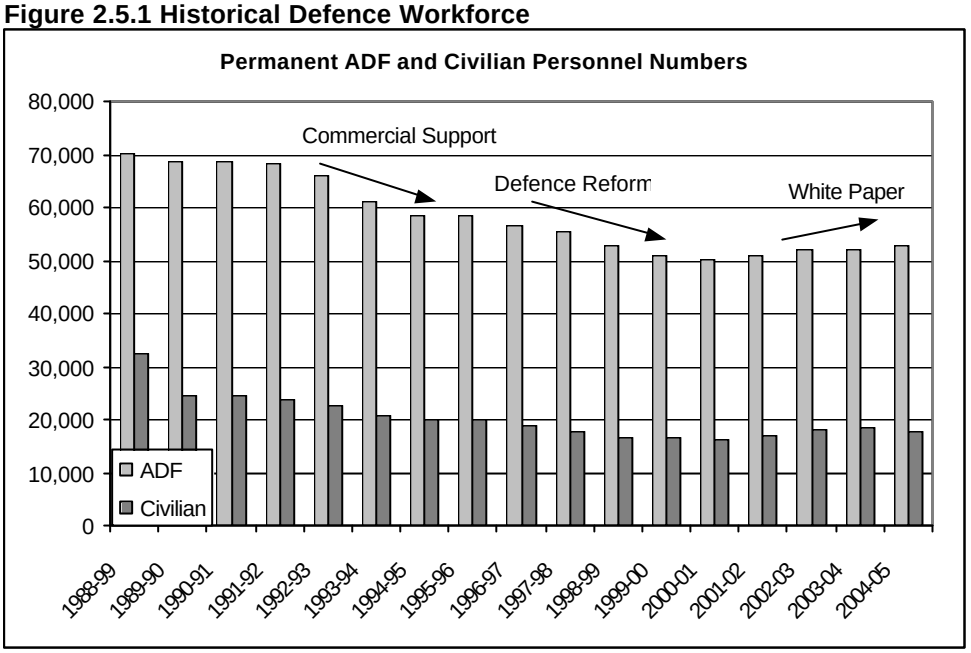
	2000-01 Actual	2001-02 Actual	2002–03 Actual	2003–04 Projected	2004–05 Budget
Navy	12 396	12 598	12 847	13 121	13 167
Army	24 488	25 012	25 587	25 623	26 035
Air Force	13 471	13 322	13 646	13 481	13 670
TOTAL	**50 355**	**50 932**	**52 080**	**52 225**	**52 872**
Reservists	19 835	18 868	19,620	20 864	20 710
Civilian	16 292	16 819	18,385	18 356	17 841

Source: 2001-02, 2001-02, 2002-03 Defence Annual Report & 2004-05 PBS

How did we get to this point?

In the decade following the Force Structure Review in 1991, ADF numbers dropped from around 70,000 to 50,000 permanent personnel, as shown in Table 2.5.1. Over the same period civilian numbers dropped from around 25,000 to 17,000.

Figure 2.5.1 Historical Defence Workforce



Source: Defence Annual Reports, 2001-02 Defence Budget Brief and 2004-05 PBS

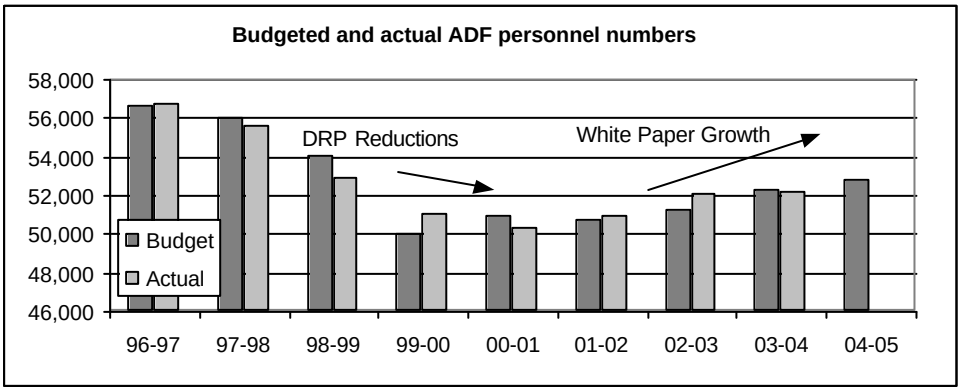
The bulk of these reductions were due to out-sourcing under the Commercial Support and Defence Reform Programs. In fact, the initial goal of the Defence Reform Program was to reduce the strength of the ADF to 43,500 but this was soon revised up to 50,000 thereby arresting the decline. This was done by re-directing DRP savings to buy-back the ADF positions, the goal being in effect to redirect personnel from support areas to the combat force. The 2000 White Paper subsequently set permanent ADF numbers on their current growth path towards 54,000

What are the recent trends?

Permanent ADF Numbers

The good news is that Army and Air Force numbers are more-or-less increasing in line with planned results and Navy has exceeded its target for 2003-04. This latter result is excellent news because Navy has had some trouble in recent years. In terms of the individual Services, Army numbers will increase by 412, Air Force by 189 and Navy by a modest 46 additional personnel from 2003-04 to 2004-05.

Figure 2.5.2 ADF personnel: 1996/97 to 2004/05



Source: 1997-98 to 2002-03 Defence Annual Report, 2001-02 Defence Budget Brief and 2004-05 PBS

The new 2004-05 target of 52,872 is 243 positions above the forward estimate from last year. This probably reflects Defence taking advantage of favourable recruitment and retention to accelerate towards the White Paper target.

Recruitment

Table 2.5.3 shows the percentages of recruitment targets that have been met over the last eight years. Following solid improvements earlier this decade, which saw the overall figure grow from 76% to 93% in 2001-02, performance in 2002-03 dropped back to 84%. While both Navy and Airforce posted historically strong results in 2003-04, Army fell well below its recent good performance.

According to the 2004-05 PBS, both Navy and Airforce enjoyed favourable recruiting during 2003-04. No mention was made concerning Army recruitment, although comments made elsewhere are reassuring.

Table 2.5.3: Percentage of recruitment targets met.

	1995/96	1996/97	1997/98	1998-99	1999-00	2000-01	2001-02	2002-03
Navy	98%	92%	98%	76%	57%	74%	85%	84%
Army	99%	98%	94%	78.5%	83%	79%	100%	79%
Airforce	86%	93%	101%	90.5%	83%	88%	87%	94%
ADF	**96%**	**94%**	**97%**	**80%**	**76%**	**80%**	**93%**	**84%**

Source: Defence Annual Reports 2001-2002 & 2002-2003 and Defence submission to the FAD&T References Committee inquiry into ADF recruitment and retention, May 2001.

Retention

Table 2.5.4 shows the percentages of ADF personnel who separated from full-time military service over the last eight years. It shows that separation rates have fallen steadily over the last three years. In fact, 2002-03 represents the best result across the entire period. The PBS says that Airforce had low separation rates during 2003-04 but makes no comment on that encountered by the other two services.

Some care must be taken with these figures because figures for earlier years were impacted by the deliberate reduction in the size of the ADF that occurred between 1997 and 2001 under the Defence Reform Program. Nevertheless, separation rates in 2002-03 were better than in 1995-96 before the cuts to personnel commenced.

Table 2.5.4: ADF separation rates.

	1995/96	1996/97	1997/98	1998-99	1999-00	2000-01	2001-02	2002-03
Navy	13.0%	11.5%	11.1%	12.6%	13.3%	13.2%	11.5%	11.6%
Army	12.5%	10.4%	10.9%	12.9%	13.0%	13.2%	11.5%	9.8%
Airforce	9.0%	9.0%	10.0%	11.9%	11.6%	15.6%	10.4%	8.1%
ADF	**11.6%**	**10.3%**	**10.7%**	**12.6%**	**12.7%**	**13.8%**	**11.2%**	**9.8%**

Source: Defence Annual Reports 2001-2002 & 2002-2003 and Defence submission to the FAD&T References Committee inquiry into ADF recruitment and retention, May 2001.

Given Australia's recent strong economic performance, including relatively low unemployment, things are looking good. Personnel are remaining in the ADF rather than seeking opportunities elsewhere. And the ADF is having more success in recruitment than it did several years ago, especially in Navy.

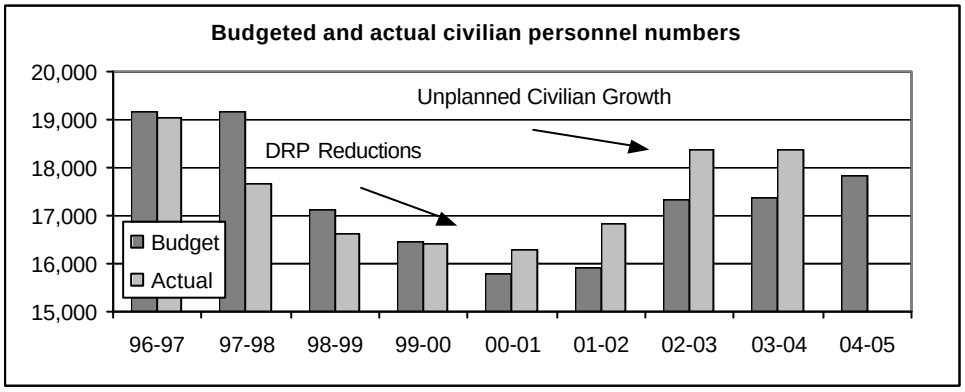
Civilian Numbers

Although civilian numbers fell quickly under the Defence Reform Program they grew back very rapidly in the first two years of White Paper implementation – three time more quickly than military numbers grew. What is more, the growth was largely unplanned, with the rise in 2001-02 exceeding budget estimates by 5.8% and similarly in 2002-03.

However, in January 2003 a civilian hiring freeze was imposed within Defence after it became clear that the projected number of civilian personnel would exceed the revised estimate given less than two months earlier.

Subsequently, in April 2003, the freeze was lifted but direction was given to maintain civilian numbers at current levels. This action to stem the rise in civilian numbers is understandable given that additional personnel must be funded from within current Defence funding levels unless linked explicitly to a specific Government-funded initiative. In last year's budget a programmed reduction plan was set in place to reduce civilian numbers by 1,008 from 18,385 to 17,377 in 2003-04. Table 2.5.5 shows what's happened to date.

Figure 2.5.5: Civilian personnel: 1996/97 to 2004/05



Source: 1997-98 to 2002-03 Defence Annual Report, 2001-02 Defence Budget Brief and 2004-05 PBS

The projected result of 18,356 for 2003-04 is only 29 positions below last year's figure. There are four reasons for this:

(1) The planned rationalisation of the Defence Integrated Distribution System (DIDS) has been slipped yet again (it was one of the mitigating factors given last year). This accounts for 638 positions.

(2) An extra 25 staff have been added due to Government decisions.

(3) Unanticipated increases in areas like intelligence, air traffic controllers, and acquisitions project staff totalling 349 positions.

(4) Substitution of Professional Service Providers (PSP) by 84 civilian personnel to achieve a more cost-effective workforce.

These increases have been offset by a slippage in recruitment in 2003-04 of 117 positions to create the projected result of 18,356 civilian positions. All of these changes to the civilian workforce in 2003-04 are detailed in the PBS on page 207 Table 5.3. The table also outlines the planned reductions in civilian personnel across

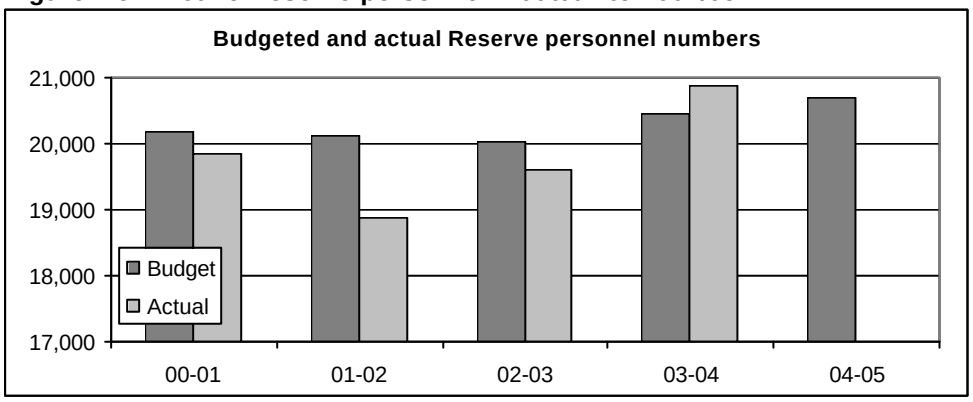
the forward estimates that will lead to a civilian workforce of 17,667 by 2007-08. The total would have been smaller but for the addition of 229 personnel due to new intelligence measures announced in the budget, and the strategy of replacing PSP contractors with 229 more cost-effective civilians.

This all looks good. The civilian workforce is being closely managed and transparently reported. Although the fact that Defence managed to, in effect, create 349 new civilian positions unrelated to Government initiatives or more efficient practices in 2003-04 is a little worrying. And curiously, despite all this unplanned growth in numbers, Defence still claimed savings of $9.6 million (or around 121 positions) due to reductions in the civilian workforce [PBS page 6.2]. Perhaps this is the slipped recruitment of 117 positions mentioned earlier.

Reserve Numbers – Turning the Corner

Reserve numbers increased by 752 personnel between 2001-02 and 2002-03 and 1,244 between 2003-03 and 2003-04. This compares favourably with the decline of around 1000 between 200-01 and 2001-02. Comparisons with earlier years are problematic because data prior to 2000-01 includes an unknown number of inactive reservists. Nevertheless, a consistent comparison is possible within this earlier data and it reveals drops of around 2000 (8%) and 3000 (12%) in the years immediately prior to 2000-1. Thus, the increases in 2002-03 and 2003-04 represent a welcome reversal of a persistent and adverse trend.

Figure 2.5.4 Active Reserve personnel: 2000/01 to 2004/05



Source: 2000-01 to 2003-03 Defence Annual Reports and 2004-05 PBS

There are probably many reasons for this, not least of which being the more immediate and relevant role allocated to the Reserves in terms of sustaining and supporting the permanent ADF on operations. This has already taken effect with over 670 Reservists having deployed on operations to East Timor as of March 2002. In addition, the Government has been active in providing improved legislative protection through the *Reserve Services (Protection) Act 2001* and substantial support to employers of Reservists through the *Employer Support Payment Scheme.*

The PBS reports that active Reserve numbers are expected to reduce by 154 positions or 0.7% between 2003-04 and 2004-05. It's not said whether this is a deliberate levelling off of Reserve numbers for capability or budget reasons. The Army output for Protective Operations that employs most of the Reserve Personnel was still mentioning personnel shortages as a problem in the 2002-03 annual report.

How much do personnel cost?

Personnel expenses in 2004–05 will be around $6.7 billion rising to $7.2 billion in 2007–08 [PBS Table 2.12]. This represents around 41% of the Defence budget.

In the past, growth in military personnel costs has created a pressure on the Defence budget. Not because the growth in remuneration has been out of step with community outcomes, but because Defence did not receive adequate indexation to cover the real growth in personnel costs. This was supposed to be remedied in the White Paper when a provision for 2% real growth in per-capita military personnel costs was built into the ten year funding projection. However, because this extra funding does not commence until 2004-05, Defence has had to find the real additional cost of personnel from elsewhere in the budget between 2001-02 and 2003-04. Over the three years this has amounted to something in the vicinity of $377 million thereby creating a significant pressure on the overall budget. In 2003-04 the first chunk of relief comes in the form of an extra $236 million for personnel expenses from the White Paper (see Section 4 of this brief).

Separate military and civilian personnel expenses have appeared in the last three annual reports and in the 2004-05 PBS, Table 5.4. This allows us to calculate the recent and estimated per capita cost of civilian, permanent and Reserve military personnel over an eight-year period once Reserve personnel expenses are taken into account. The results of this calculation appear in Table 2.5.5 and 2.5.6. The per-capita expenses include salaries, allowances, superannuation, health, redundancies, housing, fringe benefits tax and worker compensation. Unfortunately, Defence has not disclosed their revised ADF targets for the forward estimates this year.

The percentage growth rates are nominal (not corrected for inflation) but we have listed the actual and projected CPI, and implicit Non-Farm GDP Deflator (NFGDPD) rates for each year to allow comparison. The NFGDP deflator is important because it is the deflator used to maintain the buying power of Defence funding. In addition, we've provided the Treasury figures for the wage cost index and the ABS data for Average Weekly Ordinary Time Earnings (AWOTE).

Military per-capita Trends

Table 2.5.5 shows the changing average per-capita costs of the permanent ADF.

Table 2.5.5 Per-capita permanent ADF personnel expenses

	Military Numbers	Expense $ 000's	Per Capita	Nominal Growth	Comparison			
					CPI	NFGDPD	Wages	AWOTE
2000-01	50,355	4,151,801	$82,451					
2001-02	50,932	4,390,704	$86,207	4.56%	2.90%	2.00%	3.25%	5.5%
2002-03	52,080	4,568,493	$87,721	1.76%	3.10%	2.60%	3.50%	5.2%
2003-04	52,225	5,088,606	$97,436	11.08%	2.25%	4.00%	3.75%	5.6%
2004-05	52,872	5,295,066	$100,149	2.78%	2.00%	2.50%	3.75%	-
2005-06	undisclosed	5,560,616	-	-	-	-	-	
2006-07	undisclosed	5,632,475	-	-	-	-	-	
2007-08	undisclosed	5,911,510	-	-				
			average	**5.04%**	**2.56%**	**2.78%**	**3.56%**	**5.53%**

Source: Defence Annual Reports and 2004-05 PBS, expenses adjusted pre-2003-04 to take account of Reserve component.

To ensure consistency we have adjusted the historical data in Table 2.5.5 to remove military compensation, which has been transferred to the Department of Veteran's Affairs, and removed one off expenses incurred in 2004-05. This ensures a like-with-like comparison between the years.

Comparing the average nominal growth with the average NFGDPD over the same period, the average real increase in military personnel expenses comes out at just on 2.2%. Also, it's interesting to note that the average annual increase in military per-capita costs comes out just a little under AWOTE for the period.

For the first time the PBS provides a detailed breakdown of employee expenses [Table 5.4 page 208]. By using this data along with the results for the 2002-03 annual report we can trace the reason for the large increase in military per-capita expenses between 2002-03 and 2003-04. The cause is a 17.5% increase in salaries and allowances between the two years.

While total employee expenses can be skewed by large accrual adjustment (like leave liabilities after a salary rise) this is probably not the case for salaries and allowances. Consequently, a 17.5% increase is difficult to understand. ADF salary growth in the period was modest amounting to increments of only 3% in 2002-03 and 5.58% in 2003-04. Moreover, the payment of high allowances due to operations would have peaked in 2002-03 and declined in 2003-04. Nor has there been much in the way of increasing proportions of more senior ranked personnel. Perhaps the difference reflects a substantial increase in allowances.

Civilian per-capita Trends

Table 2.5.5 shows our calculation of the changing average per-capita costs of the defence civilian workforce. We have excluded the year 2007-08 because we understand a revised estimate will occur at additional estimates.

Table 2.5.6 Per-capita civilian personnel expenses

	Civilian Numbers	Expense $ 000's	Per Capita	Nominal Growth	Comparison			
					CPI	NFGDPD	Wages	AWOTE
2000-01	16,292	956,661	58,720					
2001-02	16,819	1,086,118	64,577	9.97%	2.90%	2.00%	3.25%	5.5%
2002-03	18,385	1,235,752	67,215	4.09%	3.10%	2.60%	3.50%	5.2%
2003-04	18,356	1,333,499	72,646	8.08%	2.25%	4.00%	3.75%	5.6%
2004-05	17,841	1,415,281	79,327	9.20%	2.00%	2.50%	3.75%	-
2005-06	17,646	1,432,503	81,180	2.34%	2.50%		3.75%	
2006-07	17,665	1,486,291	84,138	3.64%	2.50%		3.75%	
			average	**6.22%**	**2.76%**	**2.78%**	**3.63%**	**5.43%**

Source: Defence Annual Reports and 2004-05 PBS.

As with the military per-capita expenses, our attention was drawn to the very large increase in per-capita costs in both 2003-04 and 2004-05. The 2003-04 annual report presents data to show that per-capita civilian salary and allowances increased by 13.2% from the previous year in 2002-03, while the PBS Table 5.4 implies a figure of 18.4% for 2003-04.

As with the similar figures for military salary and allowance increases, we are at a loss to explain what's going on. The salary increments for civilians for the period in

question are only 6.1% in 2002-03, 2% in 2003-04 and 6.1% in 2004-05. And the increased proportion of civilians in more senior positions seems unlikely to offer an explanation (although the 9% increase in senior officer numbers in 2002-03 would have helped).

In principle, we could use the cash personnel expenditure to analyse changing personnel costs free from the perturbing impact of accrual shifts. Unfortunately, the cash figure is only available for total personnel expenditure with no distinction between civilian, military and reserve components. Because these respective personnel numbers have changed over time, there is no easy way to extract a per capita figure from the data. It would be good if historical cash personnel expenditure was available separated into its military and civilian components. This would then allow us to look at historical per capita figures to see if Defence was receiving adequate funding for the real growth in personnel costs.

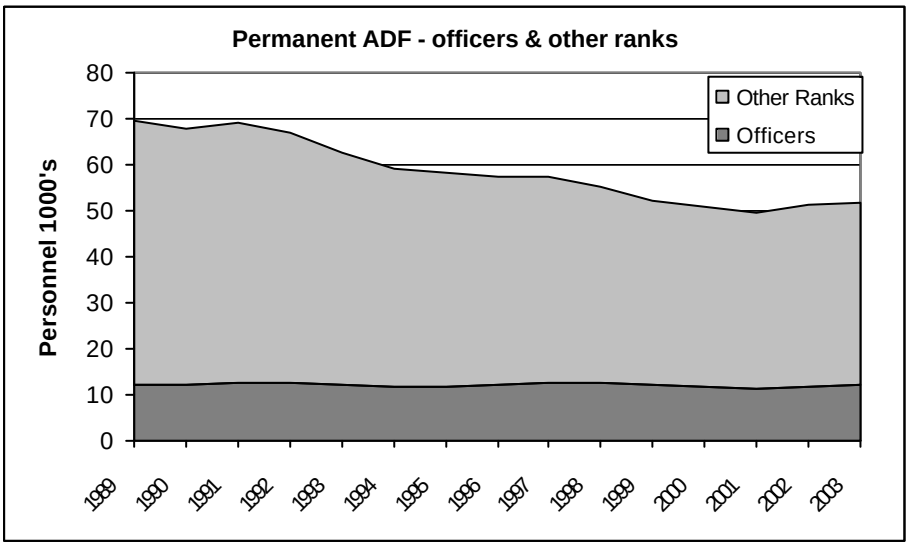
Personnel Structures

The breakdown of ADF personnel by rank, and civilians by level, appears in Table 5.3 of the PBS.

Military Ranks

As the ADF has contracted over the last decade the number of officers has remained more or less constant so that the percentage of officers in the permanent ADF has grown from 17% to around 23%, Figure 3.5.5. The result is that there are now less than 3.4 enlisted men for every officer. In comparison, recent figures for the UK and US are around 19% and 16% respectively although it should be noted that they both have very much larger economies of scale.

Figure 2.5.5: Permanent ADF Numbers as at 30 June 1989 - 2003



Source: Defence Annual Reports 1989-90 to 2002-03.

Generals and Mandarins

The recent trend in star rank, senior executive, and senior officer numbers is shown in Table 2.5.4, the most recent data is taken from 5.2 in the PBS. Changes in reporting account for the gaps and lack of earlier data.

Growth at the senior level has been strongest on the civilian side. Between 2000-01 and 2003-04 the number of civilian senior officers increased by 16%. However, the number of senior executive is projected to fall from 130 in 2002-03 down to only 113 in 2004-05. However, this might only reflect a decision by Defence to stop reporting the number of personnel acting in senior executive positions. (The 2003-04 PAES showed 117 substantive and 9 acting senior executives in February this year.) It would be good if Defence explained what they are reporting and provided a consistent time-series back for a number of years – for both senior officers and senior executives.

Last year's budget predicted that the number of senior officers in Defence would fall by 371 positions or 10%. Instead, the number has grown slightly.

Table 2.5.7 Numbers of Senior Ranks and Executive Levels; average funded strength

	98–99 Actual	99–00 Actual	00–01 Actual	01–02 Actual	02–03 Actual	03–04 Projected	04–05 Budget
Civilian[1]							
Senior Executives	100	106	103	117 (15)	130 (20)	115	113
Senior Officers[2]	–	–	3,317	3,554 (290)	3,843 (295)	3,860	3,850
Military							
Star Officers	110	–	120	119	120	122	121
Senior Officers[3]	1,360	–	1,415	1,467	1,507	1,548	1,465

[1] Civilian numbers include relief staff numbers that appear in brackets for 2001-02 and 2002-03.
[2] Executive Level 1 and 2 Levels.
[3] Colonel and Lt Colonel Ranks.

The planned reduction in the number of senior military officers is mainly the result of Army reducing their number of senior officers by 83 or 14% between 2003-04 and 2004-05. This follows a 16% cut in the number of star-ranked Army officers during 2003-04 from 56 to 47. However, the latter adjustment returns Army's star-ranked numbers to just a little below recent historical levels. The former is a real cut relative to Army's rank structure a couple of years ago. It may be that these adjustments reflect Army adapting to more normal conditions after the unusually high operational tempo.

Whatever happened to the goal of 65% combat related personnel?

One of the outcomes sought by the Defence Reform Program was to boost the percentage of combat and combat-related personnel in the ADF from the 42% that prevailed in 1996 towards a goal of 65%. We think that this is both a laudable goal and an excellent measure of the efficient employment of ADF personnel.

The 2003 Report of the Strategic Workforce Planning Review recommended using the Functional Activity Definition to separate the permanent ADF workforce into operational and non-operational components. We assume that these definitions are

similar to those employed previously to define combat and combat-related verses non-combat positions.

In any case, they present the following table:

Table 2.5.8: Operational verse non-operational personnel.

	Operational	Non-Operational
Permanent ADF (excluding 6,000 trainees)	71%	29%
Permanent ADF (including 6,000 trainees)	62%	38%
Defence Civilians	7%	93%

Source: Report of the Strategic Workforce Planning Review, 2003, page xviii.

Assuming that this new measure is comparable with the one previously used by Defence we can compare it with previous results. This is done in Table 2.5.9.

Table 2.5.9: The Teeth to Tail Ratio for the ADF

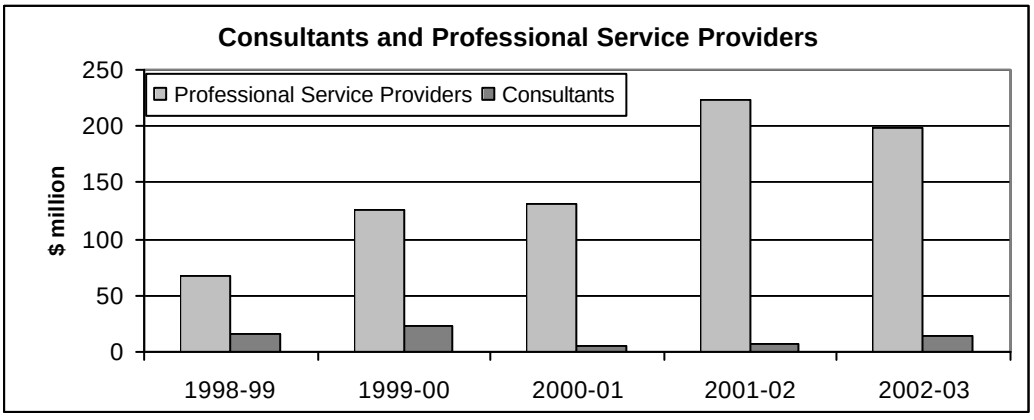
Year	1991	1996	1996	2000-01	Sep-01	May-02	May-04
	Media Release 219/02	Media Release 385/01	Annual Report 2000-01	Annual Report 2000-01	Media Release 385/01	Media Release 219/02	
ADF	68,402		-	-	-	-	52,225
Operational	27,361		24,000	31,700	-	-	32,379
Percentage	40%	42%	42%	60%	62%	62.40%	62%

It would be good to have visibility of how the operational component of the Defence workforce has grown since 1996 on a year by year basis including some idea of where the new positions have been added. Given the recent addition of combat positions in a number of areas there is probably a very positive story to be told.

What's going on with Professional Service Providers?

Up until 2002-03 there had been a steady increase in expenditure on Professional Service Providers (PSP) – contracted personnel that undertake specialist roles in Defence, Table 2.5.6. Unlike the remainder of Defence's workforce, PSP numbers go unreported and unlike consultants their remuneration is not reported. Nor is their average tenure.

Table 2.5.6: A reduction at last!



Source: Defence Annual Reports 1998-99 to 2002-03.

But in 2002-03 spending on PSP fell by 11% compared with the previous year. And as part of Defence's program administrative savings, a reduction of $46.5 million per annum will apply in future years. This amounts to an almost 25% decrease compared with spending on PSP in 2002-03. At the same time, around 222 additional civilian positions will be created to take the place of the lost PSP workforce, at a cost of around $18.6 million per annum. We do not know if the overall $46.5 million saving is net of this additional cost or not.

You might naturally ask; how can 222 permanent civilian personnel costing $18.6 million make up for the work of an unknown number of PSP costing $46.5 million (or $65.1 million if the figure is a net saving)? The answer is very simple: PSP cost a lot of money.

Do the workforce planning figures add up?

One frustration in preparing this year's budget brief was the absence of forward estimates for military personnel numbers in the PBS. And when we looked at the responses to SLC questions from February 2004 we were dismayed to find that the numbers given in response to question W26 did not add up. We understand that Defence is preparing a revised response. There's some irony in this. Exactly the same problem arose when the identical question was asked in the SLC back in February 2002.

Aside from being needed to track per-capita personnel expense trends, the projected military personnel numbers are of interest for two reasons. First, the personnel reductions flowing from the Defence Capability Review decision to retire some ADF assets remain undisclosed. Second, previous responses to SLC questions on personnel targets and aggregate personnel shortages have been difficult to reconcile.

Perhaps it's time that projected personnel numbers were routinely included in the PBS (as they were last year).

Section 2.6: Management Reforms and Efficiencies [PBS Chapter 6]

This chapter in the PBS deals with the implementation of the Defence Procurement Review (pages 213–214) progress on budget and business process reform (pages 215–216), various efficiency programs within the department (pages 217–219), and further narrative on the delivery of internal services including information technology services (pages 220–224).

This brief has a separate discussion of the first two topics dealing with management reform in Section 3. So we'll only deal with efficiencies and internal services in what follows.

Program of Administrative Savings [PBS page 217]

The White Paper set progressive goals for Defence efficiency savings and last year's budget added another aggressive set of targets for further savings from administrative areas. These are listed below in Table 2.6.1

Table 2.6.1 Planned Savings Measures in Defence

$m	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	ongoing
White Paper Savings Initiatives	50	200[1]	200	200	200	200	200	200
Administrative Savings Targets			50	100	150	175	200	200
Total	50	200	250	300	350	375	400	400

[1] Originally $100m but boosted to $200 million at Additional Estimates.

The administrative savings targets are designed to offset unavoidable cost pressures including salary, wage and military allowance costs above price augmentation to the Defence budget, rising Comcover premiums, and funding for infrastructure maintenance.

The PBS says that these savings will be achieved through four themes that are explained in more detail in the PBS:

- reductions in overheads including civilian personnel numbers, professional service providers and the number of personnel posted overseas
- structural changes to Defence to remove overlapping common services,
- business process improvements including financial transformation and more efficient back-office functions, and
- further outsourcing, where feasible, in terms of military workforce structures.

The PBS provides Tables 6.2 and 6.3 which show where the administrative savings are coming from and where they are being re-directed. This is a welcome and positive step in improving the transparency of Defence efficiency measures.

By and large, the savings appear to be coming from administrative areas. (The exception is the savings from the withdrawal of the 3 P-3B training aircraft from service in 2005-06). But perhaps this should have been obvious. There was never any question of cutting non-administrative, ie military or training capability, to achieve an efficiency dividend.

There are two observations to make about this:

First, the scale of savings is significant by any standards. Annual recurrent savings of $400 million per annum is full comparable with the roughly $600 million per annum annual saving claimed by the Defence Reform Program (DRP). But the DRP was a detailed program of initiatives that caused very substantial disruption to Defence for a number of years.

Second, the new program of administrative savings is going to be used to offset unavoidable funding pressures elsewhere in the budget. In effect, ‘avoidable’ overheads are being cut to fund ‘unavoidable’ overheads. There is no net gain in capability, or to put it another way, there is no increase in productivity. For the moment at least this makes sense, given the difficulties Defence has had with its financial management in recent years. But once greater control and discipline is

established, and resources have allocated to address priority cost pressures, it will be time for Defence to look to absolute increases in productivity that can be used to fund capability. A private business in Australia today that did not improve its productivity on a year-by-year basis would not survive for long.

What happened to the White Paper savings?
The White Paper savings targets were achieved last year through re-baselining the non-capability-related elements of internal Group budgets. As we observed at that time, this may have simply been a matter of belt tightening after internal budget grew fat during the financial turbulence of 2001-02. Unfortunately, these ongoing savings rate no mention in this year's PBS. But two questions remain:

Where did the money come from? The very full reporting of the latest administrative savings shows that savings are not easy to come by. The re-baselining the non-capability-related elements of internal Group budgets must have delivered cuts to administrative spending. What were they? It seems that most of the obvious items like civilian personnel, professional service providers and travel are being squeezed hard as part of the new administrative savings initiative. Nevertheless, the reductions below recent historical levels in these areas are modest. So the $200 million White Paper savings must have come from somewhere else.

Where has this money gone? The extra DCP costs are accounted for in the White Paper funding (see Chapter One of the PBS). The savings may have gone to logistics but then that would bring the total annual increase in logistics spending to above $600 million per annum in only the last three years. Perhaps that's what was needed.

Commercial Support Program [PBS page 219]

The Commercial Support Program is a long-standing Defence program that market-tests activities against commercial alternatives. There is nothing to add to this self contained discussion except to point out the several interesting activities being examined including ADF rotary wing flying training and Navy technical training services.

Delivering Internal Services [p.165] and Information Environment [PBS p.167]

These two sections of the PBS deal with improvements to the delivery of internal services by the Corporate Services and Infrastructure Group, and the plans for further development of the Defence Information Environment. The discussion is self-explanatory. By and large the picture is one of an organisation steadily working to improve the efficiency and effectiveness of what it does.

However, we still have very little idea of what's actually going on within the Groups, although the PBS does contain a table [PBS page 103] that shows various group contributions to the Defence Outcomes.

As an example of what sort of internal Group information might be informative, we've included the following table of how DSTO divides up its money between different research areas.

Table 2.6.2: Defence Science and Technology Organisation Program Expenditure

Division/Centre	2002-03 Actual $m	2003-04 Estimate $m
Air Vehicles Division	25.6	23.7
Maritime Platforms Division	22.0	20.60
Chemical, Biological, Radiological and Nuclear Defence Centre	7.2	7.1
Scientific and Engineering Services Division	12.2	11.4
Air Operations Division	15.5	14.3
Maritime Operations Division	26.4	24.2
Land Operations Division	17.4	16.1
Electronic Warfare and Radar Division	27.3	24.4
Weapons System Division	27.1	23.2
Command and Control Division	14.4	13.5
Defence Systems Analysis Division	10.0	10.5
Intelligence, Surveillance and Reconnaissance Division	30.4	28.0
Information Networks Division	14.3	14.8
Total	**249.9**	**231.9**

Source: SLC question W45 February 2004.

Section 2.7: Defence Materiel Organisation [PBS Chapter 7]

Materiel Reform [PBS pages 226–229]

This is the first year for the DMO post the 2003 Defence Procurement Review. The first part of the chapter in the PBS dealing with the organisation outlines the reform program and the progress to date. This is pretty much self-explanatory and any interesting issues to do with the new organisation are discussed in Section 3 of this brief.

In moving to give DMO a greater level of independence, it was decided to remove that part of the organisation that undertakes operational logistics support, the Joint Logistics Agency (JLA), and keep it within Defence. This makes sense. The JLA is an operational part of the ADF and must sensibly remain within Defence proper under normal command and control arrangements. This leaves DMO with responsibility for procurement of new equipment and what might be called routine through-life support of that equipment.

The advantage of grouping these two functions together is that a more seamless approach to the equipment life cycle – from acquisition to disposal – can be developed. This was an important part of earlier DMO reforms which saw the creation of System Project Offices (SPO) that brought together acquisition and support staff at locations adjacent to their customers.

The big milestone looming for DMO is 1 July 2005 when it will commence operation as a quasi-independent ‘prescribed agency’. This is twelve months behind the first (highly unrealistic) target that was mentioned last year at the time of the Procurement Review.

DMO Budget [PBS page 230]

One of the fundamental changes when DMO becomes a prescribed agency under the Financial Management and Accountability Act is that it will present separate financial statements. As a first step, they have listed the key elements of the DMO budget in Table 7.1 of the PBS. This is reproduced in Table 2.7.1 below. The funding for the JLA has been excluded from the 2003-04 data.

On the basis of current per-capita personnel rates this implies that DMO post-JLA separation will have around 990 military personnel and 4,250 civilian personnel. It will be interesting to see how this changes as DMO moves to a more 'business like' footing (which should push numbers down) and takes on a steadily growing workload (which should push numbers up). Over time, there will be some interesting metrics to extract on the level of overhead borne above and beyond the 13.5% operating component of major capital equipment investment (see Section 2.3 of this brief).

Table 2.7.1: DMO budget highlights.

	Projected Result 2003-04	Budget Estimate 2004-05
DMO Operating Expenses		
Employees – Military	121	99
Employees – Civilian	335	337
Total employees	457	436
Total suppliers	1,499	1,654
Total	**1,955**	**2,090**
DMO Purchases		
Approved Major Capital Equipment		
Capital	2,141	2,484
Operating	318	329
Total	**2,459**	**2,813**
Other Capital Purchases		
Minor Capital Equipment	135	111
Repairable Items	191	146
Other Plant and Equipment	104	115
Total	**430**	**371**
Inventory Purchases		
General Inventory	504	570
Fuel	223	256
Explosive Ordnance	217	193
Total	**944**	**1,019**

Source: 2004-05 PBS Table 7.1

The 'Top Thirty' Projects

The PBS lists the top 30 major capital equipment projects by 2004–05 expenditure [PBS table 7.2] and provides a description of each. This is a 50% increase in the level of disclosure in the past were only the top twenty projects were given. Still, there remains the danger that some large projects that are not doing well could escape scrutiny because they do not spend enough to make the top thirty. This has certainly

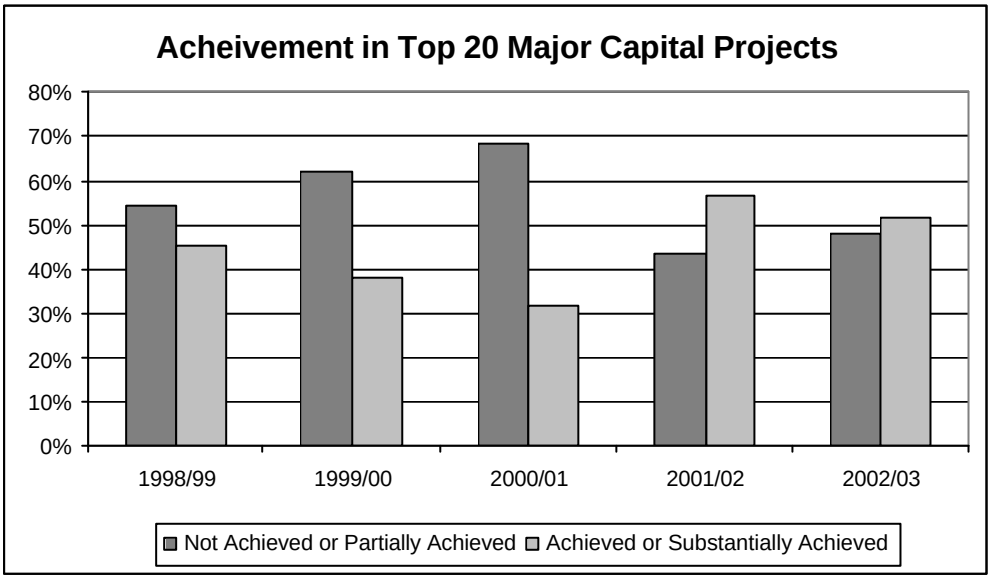
happened in the past. We've reproduced the Defence top thirty projects along with the assessment given to the project in the 2002-03 Annual report in Table 2.7.2 overleaf.

Looking back at performance in 2002-03, it's a very much a mixed bag. Newer projects like the Armed Reconnaissance Helicopter are doing well, as are some of the older tried and true successes like the Anzac ship project. Some old problem projects like the FFG upgrade aren't doing so well, and the High Frequency Modernisation project continues to be a matter for concern.

The long term question that remains unanswered is whether the current crop of well performing recent projects are simply enjoying the benefits of youth or whether the new ways of doing business in DMO are leading to better results. Only time will tell.

The good news is that the delivery of individual projects against performance forecasts in the last two years has improved substantially compared with the previous three years. Figure 2.7.1 plots the number of projects reported as either being 'achieved' or 'substantially achieved' as opposed to being only partially achieved or not achieved. It is important to remember that this is a measure of the achievement of projects against goals set in that year rather than their long-term progress. It is an encouraging sign nevertheless.

Figure 2.7.1: DMO delivering the goods



Source: Defence Annual Reports

This year, ASPI has again commissioned a team of defence specialist journalists to prepare reports on what we thought the top 20 projects for 2003–04 would be (see Section 8 of this brief). We were unable to exactly anticipate all the projects so some additional information has been collected.

Table 2.7.2 Top 30 Defence Major Capital Equipment Projects (million $)

Project	Project Number	Approved Expend	Spend to 30 June 2004	2004-05 Budget Estimate	2002-03 Annual Report Performance
Airborne Early Warning and Control	AIR 5077	3,516	1,556	462	Achieved
Armed Reconnaissance Helicopter	AIR 87 Ph2	1,894	454	445	Achieved
ADF Air Refuelling Capability	AIR 5402	1,771	1	214	
F/A-18 Hornet Upgrade	AIR 5376 Ph2	1,516	605	134	Partial
Anzac Ship Helicopter	SEA 1411 Ph1	998	891	60	Not Achieved
P-3C Update Implementation	AIR 5276	902	799	48	Partial
F/A 18 Hornet Structural Program	AIR 5376 Ph3.1	116	26	23	
Anzac Ship Project	SEA 1348	5,352	4,878	220	Achieved
Collins Combat System	SEA 1439 Ph4A	433	59	158	Partial
FFG Upgrade Implementation	SEA 1390	1,442	923	137	Partial
Armidale-class Patrol Boat	SEA 1444	455	24	81	Achieved
Lightweight Torpedo Replacement	JP 2070 Ph2	307	91	75	Partial
Collins Reliability and Sustainability	SEA 1439 Ph3	359	114	55	Partial
Evolved Sea Sparrow Missile	SEA 1428 Ph2B/3	270	175	43	Achieved
Anti-Ship Missile Defence	SEA 1448 Ph2A	471	1	31	
New Heavyweight Torpedo	SEA 1429	405	67	31	Achieved
Australian Light Armoured Vehicles	LAND 112 Ph3	666	466	58	Achieved
Direct Fire Guided Weapon	LAND 40	141	26	35	
Upgrade of M113 Vehicles	LAND 106	566	133	34	Achieved
Bushranger Infantry Vehicles	LAND 116	341	101	32	Achieved
Ground Surveillance Radar	LAND 53	83	45	27	
Joint Strike Fighter - JSFSDD	AIR 6000	205	39	53	
Milsatcom - Ground Infrastructure	JP 2008 Ph3E	144	32	52	
2CRU/3CRU Control and Reporting	AIR 5333	239	45	38	Substantial
Jindalee Operational Radar Network	JP 2025 Ph3/4	1,238	1,089	36	Achieved
Air-to-Air Weapons Capability	AIR 5400 Ph1/2	311	244	31	Partial
High Frequency Modernisation	JP 2043	595	263	30	Not Achieved
Air-to-Surface Stand-Off Weapon	AIR 5398	438	326	28	Partial
EWSP for Selected ADF Aircraft	AIR 5416	278	2	28	
Air-to-Air Weapons Follow-on Buy	AIR 5400Ph3	176	111	23	
TOTAL TOP 30 PROJECTS		**25,628**	**13,586**	**2,722**	

Source: 2003-04 PBS and 2002-03 Annual Report

SECTION 3 – DEFENCE MANAGEMENT

Introduction

The 2003 ASPI policy report *Sinews of War* charted the recent history of financial management in Defence with emphasis on the particularly turbulent years of 2000 and 2001. During that period several factors conspired to cause nothing less than a serious breakdown in fiscal discipline and budgeting within Defence.

Fortunately, things have improved a lot since then. And following last year's Procurement Review headed by Malcolm Kinnaird there are some big changes a foot in how Defence goes about spending billions of dollars each year on new equipment.

In this Section, we examine the state of play in Defence financial management and look at the challenges ahead for implementing Kinnaird's recommendations. On balance, the picture is positive although we've found room for a couple of suggestions along the way. The key one having more to do with the way the government manages Defence, than with the way Defence is managed internally.

Counting the pennies and sorting out the 'back office'

Defence is working hard to improve its housekeeping through both reduced administrative spending and better day-to-day business processes. Secretary Ric Smith is driving a bottom up approach to better financial management. He has eschewed high profile initiatives for a relentless attack on getting the basic right.

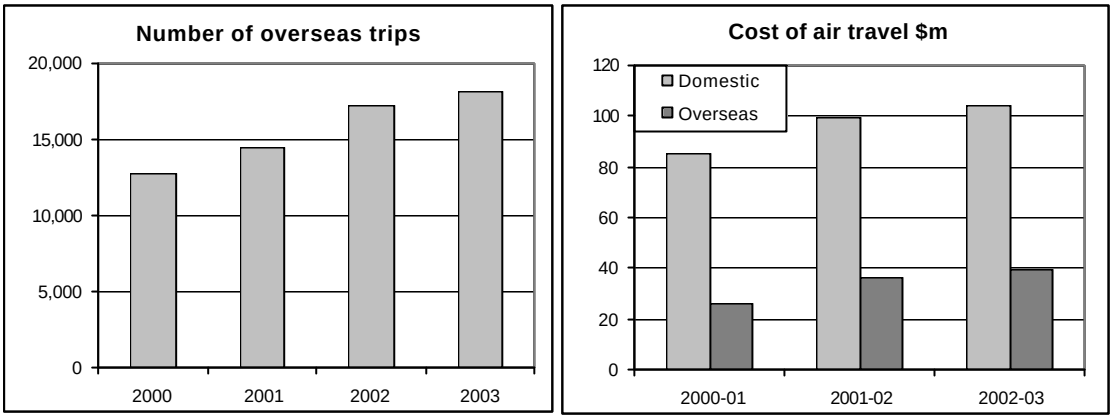
In terms of administrative spending, tighter fiscal discipline has been imposed over the last couple of years resulting in measurable progress in 2002-03. Indeed, as we saw in Section 2.5, the previously alarming growth in spending on Professional Service Providers has been arrested. And civilian numbers are back under control and heading downward. Meanwhile, the $50 million per annum in administrative savings efficiencies set out in last year's budget have been delivered and future targets look likely to be met.

There are also encouraging signs in a couple of areas which can be used as litmus tests of fiscal austerity – even though they don't amount to much in the overall budget. Take for example the number of mobile phones issued to Defence personnel. Following a 42% increase between 2000-01 and 2002-03 (from 12,366 to 17,679) the number of mobile phones has decreased by 11% since last year to 15,747. So the trend is in the right direction, even though there are still more than 1 in 6 military personnel, and 1 in 4 civilians, with a phone.

The situation appears to be similar for travel expenses, although recent unexplained changes in the reporting of travel expenses makes it impossible to construct a useful time series. Fortunately, data gleamed from SLC hearings allows us to examine changes over the last several years. Figure 3.1 shows the number of overseas trips taken by Defence personnel on commercial flights. This, of course, excludes the deployment of personnel using ADF (or leased) aircraft and ships to exercises or operations. Following 14% and 19% increases in 2001 and 2002, the number of trips only increased by 5% in 2003. Similarly, for the slowed increase in the cost of air travel which occurred in 2002-03 as shown in Figure 3.2.

As with mobile phones, the absolute volume is still sobering; amounting to roughly one overseas trip for every 4 full-time personnel[1]. Or if we assume the average cost of a domestic flight to be (a very generous) $500, then there were over 209,000 domestic flights taken in 2002-03 amounting to almost three trips per full-time employee. It's a good thing that growth in travel costs is being reined in.

Figure 3.1 & 3.2 Volume and cost of Defence travel



Source: Response to Senate Legislative Committee questions W38 & W39 February 2004.

There's also a lot going on in the back office in Defence. The old wasteful system of travel allowances has been replaced by a modern system of charge cards, and work is under way to improve the processing of invoices and prompt recovery of debt. These measures are all part of a disciplined process improvement program which will eventually see Defence employ modern digital imaging technology to streamline document handling and the progressive introduction of more efficient e-business technologies. In fact, the whole area of corporate information systems is being looked at closely to see where opportunities lie for consolidation and efficiency.

Finally, Defence is working to shift the focus of its personnel from the 'processing' of financial transactions to the delivery of results. This is important. Even if Defence had perfect management information systems – which is far from the case – the data contained will only ever be as good as what's entered into it.

Better planning and information

In a number of areas Defence is improving its medium and long-term planning, and it's revamping its management information systems to support this.

In the last twelve months Defence has completed two important planning exercises, both of which represent a substantial improvement on prior ad-hoc processes. The first is the *Strategic Workforce Planning Review* that examines the factors influencing the sustainability of the Defence workforce including its military, civilian, and industry

[1] We've taken the Defence data at face value. However, simple arithmetic gives an average airfare cost, per overseas trip, of less than $2200. With all Defence personnel flying business class. This seems a little on the cheap side.

components. The Review also set out a workforce planning cycle for Defence that is closely integrated into the capability planning processes currently used. In addition, workforce-planning tools have been developed that build a causal link between recruitment, retention and the dynamic evolution of the Defence workforce. Given the challenges facing workforce management in Defence, these developments are timely.

The second planning exercise was the *Force Disposition Study* that examined the efficiency and effectiveness of the ADF's geographic spread. We have not had the opportunity to examine the study's report, but we understand that it identifies options for consolidation which would save money without compromising our strategic posture. This is a sensible development, although any changes that flow from the study are likely to be slow and measured. The simple fact is that the location of ADF bases is a highly political issue quite independent of any strategic factors, and the cost of relocation is very often so large that savings can take many years to recoup. Still, it's good that Defence has provided the Government with the information needed to make informed choices on the matter.

In terms of planning processes, it's also worth mentioning the system that has been developed over the last several years to manage the preparedness of the ADF. A recent Audit Office report of the system had several suggestions for improvement but came to the following overall positive conclusion. "[It] is essentially a sound framework with a cascade of linkages between Government strategic guidance and the Service outputs [that] enables Defence management to generate preparedness types and levels required by current Government guidance."

Perhaps the biggest development on the planning front is the new arrangements being put in place for the planning of future capability following the Kinnaird review. We discuss these measures later in the context of the overall procurement reform.

Sound planning requires reliable information, which is often hard to find within Defence. To remedy this, Defence has a number of initiatives in place including the Force Element Product Costing project that looks at the cost of delivering Outputs. This will help the development of internal customer service agreements and assist long term planning and budgeting. Already, progress is being made on refining Output prices, although the recent changes of up to 90% in individual prices are somewhat unnerving (see Section 2.44). At least progress is being made.

There are further improvements on the horizon. Defence's plethora of management information systems (MIS) remains inefficient and ineffective – the whole being somewhat less than the disparate parts. Funding of between $50 and $75 million has been allocated in the DCP to fix the overall MIS over the next three years, and a further $60 to $100 million is pencilled in for the next decade. In addition, around $125 million has been allocated specifically to improve the logistics information systems towards the end of this decade.

One of the inevitable consequences of Defence's poor MIS infrastructure is the annual trials and tribulations that surround the Auditor General's consideration of the financial reports. Recent Audit Reports have highlighted a wide range of problems with Defence's financial systems and processes. The two recurrent themes are the inadequacy of business systems and a lack of data integrity and ownership. Defence

has responded to this by establishing a financial statements board, chaired by the Secretary, to drive a reform program aimed at delivering auditable annual financial statements by 30 July. They've also initiated Project Resolve to improve monthly financial reporting.

Some of the problems with the financial systems need to be seen in perspective. To an extent the most visible problems are centred on Defence's inability to accurately account for a range of balance sheet items some of which are a legacy of inventory purchased long before the introduction of accrual accounting by the Commonwealth. This needs to be fixed, but it's hardly the crisis sometimes depicted in the media. Certainly, there are no billions of dollars of 'missing' inventory as has sometimes been suggested.

Tidying up the Q-store: procurement reform

One area where clear and immediate action is being taken is in procurement. Following the Kinnaird Review of defence procurement last year, a new head has been appointed to the Defence Material Organisation (DMO) and a new three-star position (Chief of Capability Development Group) has been created in the HQ to take responsibility for developing new capability proposals. They both have their work cut out for them.

The three-star capability supremo has to make sure that future acquisition proposals can deliver the capabilities the government wants on time and within budget at acceptable risk. In defence-speak this is called 'capability definition'. Given the recent big increases to the cost of many DCP projects, this is not before time. But while the estimated cost of future projects has been going up, the ability of DMO (and industry) to deliver projects has been going down. In the last three years a total of more than $2.2 billion of planned investment in new capital equipment has been deferred because the money simply cannot be spent. This is the challenge faced by ex-ASC chief Steve Gumley who's taken on the forbidding task of turning DMO into a more commercially orientated organisation.

Along with these organisational changes, the so-called 'two pass' system of Government project approval has been revised and strengthened, and the roles of the capability managers (Output Executives) have been clarified. The Department of Finance now has a more prominent role in project scrutiny and assurance. To improve the financial analysis of projects, both Defence and Finance are establishing centres of expertise.

To oversee the reform agenda, a Defence Procurement Advisory Board has been established with high level private and public sector membership. They met for the first time in March 2004.

Of the many aspects of the Kinnaird reforms, two stand out. First, there is the proposal to involve industry early in capability definition to help refine cost, schedule and risk. This makes good sense. It's hard to see how anyone is better placed than industry to provide the data needed for informed cost-capability trade offs. Second, there is the move already under way to establish DMO as a separate financial entity (a so-called prescribed agency) largely independent of Defence. In the short term this major

corporate de-merger will distract from the more immediate issues of getting projects back on schedule. But in the longer term, it will allow Defence to take a more business like approach to at least part of their affairs. This is an opportunity that we return to later in this Section.

While these two moves make good sense on their own, they may create some tension. Getting industry involved early in capability definition means getting DMO involved early in the work of Defence's capability supremo. This will not be made any easier by having DMO as a largely separate entity. Even when DMO was part of Defence, they had limited influence on the formulation of the projects. Unless DMO is able to engage industry and influence the formulation of new projects, it runs the risk of being left once again holding the can for Defence's Australian-unique bright ideas. The acid test will be the two massive projects for the air warfare destroyers and the big amphibious vessels. So far, there is little sign of Defence accepting anything less than substantially redesigned vessels that meet their prescriptive Australian-unique requirements. This does not bode well.

The challenge of the de-merger of Defence and DMO should not be underestimated. Unless a proper due diligence process is gone through on both sides the potential for future problems is great. Hopefully, the temptation to effect a quick and simple de-merger will be resisted. Unless a clean and transparent separation is achieved the whole rationale behind the initiative is undermined because future accountability will be compromised. The only way this can be assured is by healthy and robust negotiation which draws out and resolves the many issues of detail. With this in mind, the government was wise to extend their target date for the financial de-merger by twelve months to June 2005.

What's next?

So far we've seen that Defence is moving sensibly on a number of fronts to achieve its stated goal of becoming a 'respected financial manager'. Progress will be measured in years not months, if for no other reason than the extended time scale for remediating Defence's management information systems. What more should be done?

Our view, as set out in the ASPI policy report *A Trillion Dollars and Counting* earlier this year, is that Defence needs to move to a fundamentally different business model that gives the Service Chiefs and other Output Executives control over the resources needed to deliver their outputs. It would be a big step for Defence to do this and abandon Soviet-style central control, but it's the surest and most direct way to establish clear lines of accountability. The de-merger of DMO and Defence provides a perfect opportunity to move in this direction by establishing clear customer-supplier agreements between the two entities This would then provide a prototype for similar arrangements within Defence that could eventually see those who deliver results controlling the means to do so.

Defence's current approach is to consolidate and enhance the various components of its centrally planned business model, and then to look at possible changes to the business model in maybe four or five year's time. This is hardly surprising, bureaucracies like Defence rarely initiate big changes from within. The impetus and

direction for change nearly always has to come from the outside – just as it did through the independent Kinnaird review of procurement.

Yet, Defence's current approach is a solid and respectable one, notwithstanding that we would counsel a more radical path. But rather than rehash the arguments from *A Trillion Dollars and Counting* for early and fundamental change, let's now look at what can be done to improve the efficient and effective delivery of military capability within the current arrangement.

How much did you say it costs?

In the context of how Defence goes about its business today, there remains an untapped opportunity for improvement that has nothing to do with what goes on internally. Put simply, the government could finally get serious about the five year old Output-Price framework and ask the fundamental question: Is the price right?

When the Output-Price framework was introduced back in 1999-00, it was envisaged that agencies would be subjected to periodic reviews by the Department of Finance to check the price being paid for outputs. It turns out that this was more easily said than done, with only very limited progress to date. In fact, the recent Budget Estimates Framework Review shifted the focus somewhat away from the price of outputs back onto the cost of inputs like salaries and wages etc (the move from having Outcome *net costs* rather than *prices* is no accident). This is a pity because the two perspectives are complimentary. The Government needs an assurance that the cost of inputs are constrained to sensible levels, and also that the overall cost/price extracted for an output is reasonable. Unfortunately the latter is far harder to achieve.

It's fair to say that the prices ascribed to the twenty-nine Defence Outputs are currently nothing more than a useless artefact of the formal budgeting process (see Section 2.2). They certainly play no role in decision making at any level, otherwise how else could they undergo the substantial revision that occurred earlier this year without any impact on real decisions?

Consider this. In May last year the price of the Ground Based Air Defence output was $93 million dollars, in February this year the price was revised up to $176 million. If the price twelve months ago was assessed as being good value for money, it certainly cannot be the case today. What this shows is that nobody, not Finance, not Defence, and certainly not the government, has any idea whether the cost being paid for the individual outputs represent a bargain or an exorbitant drain on the public purse.

The time has come to either get serious about the Output-Price framework or stop wasting time and relegate it to the scrap heap of bureaucratic history.

Price check!

Unlike a supermarket where the grocery clerk can hold up a can of beans and call 'price check', the Department of Finance faces a daunting task in saying anything sensible a priori about the price of a Defence Output. But with almost $16 billion per annum of taxpayer's money being spent it's worth having ago.

So what would a *price check* involve? There is a range of things that could be done, especially if we are not pedantic about the meaning of 'price' so that the efficient use of inputs is also put under scrutiny. Key elements could include:

- Benchmarking the cost of activities within an Output, like flying hours or steaming days, against commercial and foreign military comparators.

- Examining how well the capital assets are managed within an Output in terms of economic life and return on investment compared with commercial and foreign military benchmarks.

- Looking at how efficiently the personnel component of capability is used within the Output and determining the level of management overhead carried.

- Develop a set of metrics that could be used to monitor future performance and efficiency.

It would be impractical to try and price check all twenty-nine of the Defence outputs at once. At best, a single Output, or at very most a single Outcome, should be chosen as a trial. Six months seems a good first guess for the duration of the initial exercise. This would then provide a template for a rolling program of price checks of the remainder.

To properly undertake such an exercise would demand an independent and properly resourced multi-disciplinary team. The skills required would range across management accountants, military experts (perhaps brought in from overseas), operational analysts, management consultants and business people.

This would not come cheap. For arguments sake let's assume a team of five people. With salaries, expenses and some high-end consultant's fees, a check of a single output could easily cost $1 or even $2 million. A lot of money to be sure, but still less than one-half of one-percent of the average output price incurred by the taxpayer each year. This would be a small price to pay to know if the price is right or not. And remember it could go either way. The only thing worse than paying too much for defence, is paying too little and winding up with a hollow ineffective and unsustainable force. It's about time we had a close look and found out.

SECTION 4 – WHITE PAPER UPDATE

The 2003 Defence Capability Review (DCR) lead to a revised Defence Capability Plan (DCP) in early 2004. This resulted in revised White Paper funding disclosed in the 2004-05 budget. This section examines these changes to the DCP and the underlying funding.

4.1 Revised White Paper Funding

The 2000 White Paper provided $28 billion in additional funding to Defence (as measured in 2004-05 prices) which was to be delivered through 3% per annum real growth in the Defence budget over ten years. Up until the 2002-03 Annual Report the details of what exactly made up this additional funding had been unclear. The 2004-05 PBS has an updated breakdown [Table 1.2, page 16] that tracks the detailed changes between the original funding and the recent revision.

What's in the White Paper money?

For the most part, the revision of the White Paper funding amounts to a rearrangement of when money is spent, rather than any change to the overall amount. This allows us to discuss the composition of the funding without worrying too much about whether it's the original or revised plan. According to the 2004-05 PBS the White Paper provided money in three categories (all figures are in 2004-05 prices):

Operating and Personnel Costs: $3.8 billion
There's an extra $2.8 billion to cover the through-life support costs of new capabilities that will enter service as a result of the DCP. Because of delays in the delivery of projects some of this spending has been deferred in the revision of the funding. In addition, the White Paper provides $1 billion to adjust the operating cost baseline in the Defence budget. This includes offsetting shortfalls in Defence Reform Program (DRP) savings, and fixing the logistics shortfall caused by redirecting DRP savings in 1999 to increase the target strength of the ADF from 42,500 to 50,000.

2% Real Growth in Personnel Costs: $4.7 billion
The Defence budget is indexed annually on the basis of the implicit non-farm GDP deflator (NFGDP) which tends to fall below the real increase in wages and salaries (see Section 2.5 and 5 of this brief). Recognising this, the White Paper promised to make up the difference between the routine indexation received and the real cost of attracting and retaining personnel through a 2% increase in per-capita personnel expenses.

However, for reasons that are unclear, this extra funding does not commence until 2004-05. This raises the concern that the unfunded component of growing personnel expenses could have created a budget pressure over the last three years. Table 4.1.1 shows that this is probably the case. To a good approximation, the gap can be estimated by adding together 2% of personnel expenses from the first three years of the White Paper period. The answer comes out to be $512 million, against which $236 million is provided in 2004-05 leaving a $276 million short fall. Past that point, the annual increase in the White Paper 2% personnel supplementation more-or-less matches the annual additional costs. Thus, if Defence has made it through this far,

they should be right for the future – especially given the extra supplementation of $80 million over four years for military personnel in this budget.

This extra money will bring the total supplementation to 2.5% real growth per annum for military personnel

Table 4.1.1: Funding – Funding for 2% real personnel costs ($ million)

	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11
Personnel Expenses	5,744	6,194	6,932	6,710	6,993	7,119	7,197	?	?	?
Accumulated 2% Cost	115	239	377	512	651	794	938	?	?	?
White Paper Funding	0	0	0	236	367	505	650	805	965	1180

Source: 2004-05 PBS Table 1.2.

Major Capital Investment: $19.5 billion
The original White Paper funding provided $19.2 billion for spending on major capital equipment. The revised plan does the same but deferral of some of the spending means that inflation adds another $321 million in the out-turned spending which has been kept constant in real terms. (See PBS Table 1.2) This money provides the bulk of the funds that underwrite the Defence Capability Plan of new major equipment acquisitions.

So what's changed?

The original White Paper only extended out to 2010-11 whereas the new version extends to 2013-14. So, to allow a comparison between the two, we've produced graphs of the old and new funding out to that year, Figure 4.1.1 and 4.1.2.

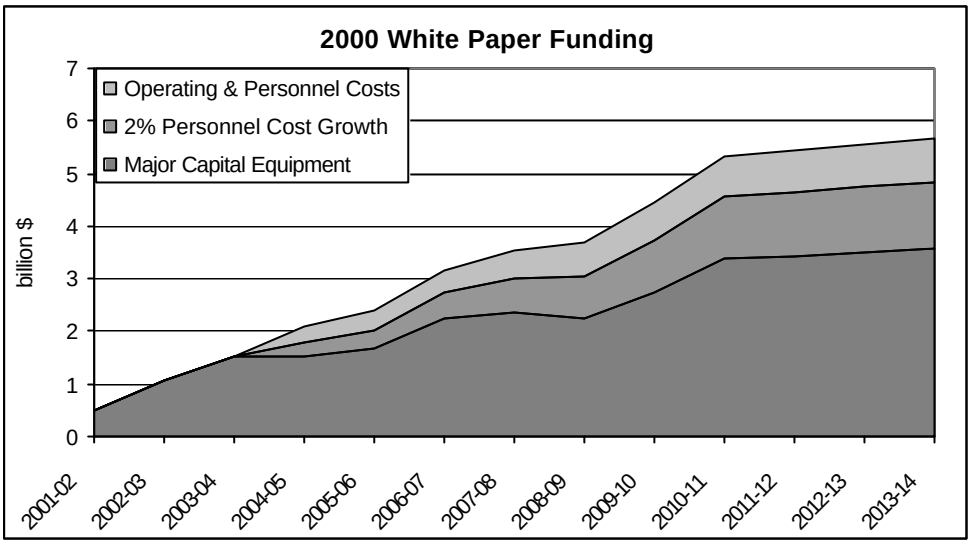
In producing these two graphs, we've assumed that the underlying Defence budget (exclusive of deferred spending that has been shifted into those last three years in the revised plan) remains constant in real terms beyond the end of the decade. This is the working guidance Defence has pending a review of long-term funding in the context of the 2005-06 budget, and it's the same approach used by Defence in Table 1.3 of the PBS to calculate the defence funding past 2010-11.

It's worrying that the Government has not fixed the long-term funding trajectory for Defence. The development of new military capability can take a decade or more from conception to entry into service. This demands long-term planning underpinned by firm long-term funding. As we enter this mid-part of the 'golden decade' of 3% real growth in underlying Defence spending, it's time to start thinking about giving Defence planners the surety they need to do their job.

The last time that Defence spending was 'held constant in real terms' was back in the 1990's when increases in actual costs exceeded inflation across the board resulting in severe budget pressures, hollowed out capability, and delayed investment in future capabilities. The 2004 ASPI policy report *A Trillion Dollars and Counting* explains why the cost of maintaining a modern defence force has, and will likely continue to, outpace inflation.

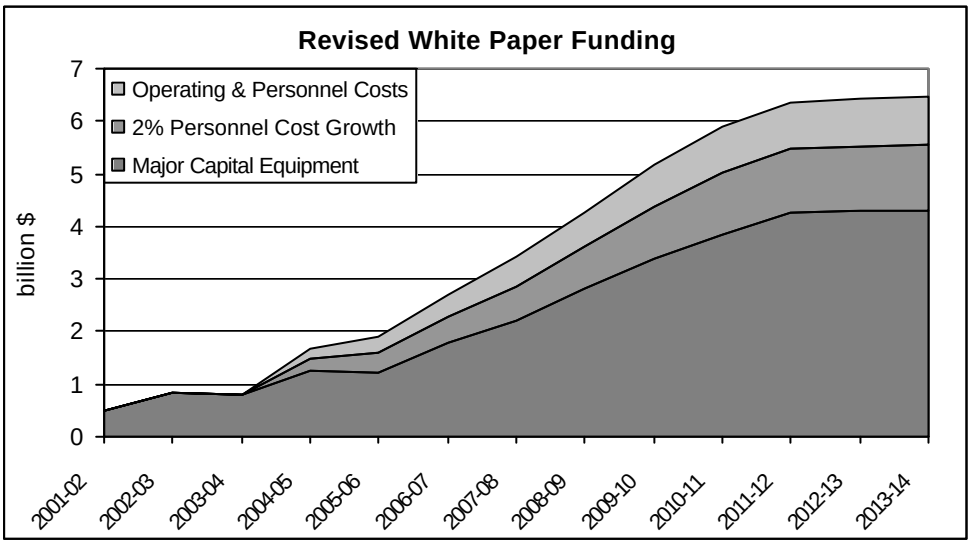
But let's not get too worried yet, the Government is due to consider this issue in the formulation of the next budget.

Figure 4.1.1: White Paper funding as originally planned. (2004-05 Prices)



Source: 2004-05 PBS Table 1.2 and 1.3

Figure 4.1.2: Revised White Paper funding post the 2003 Defence Capability Review. (2004-05 prices)



Source: 2004-05 PBS Table 1.2 and 1.3

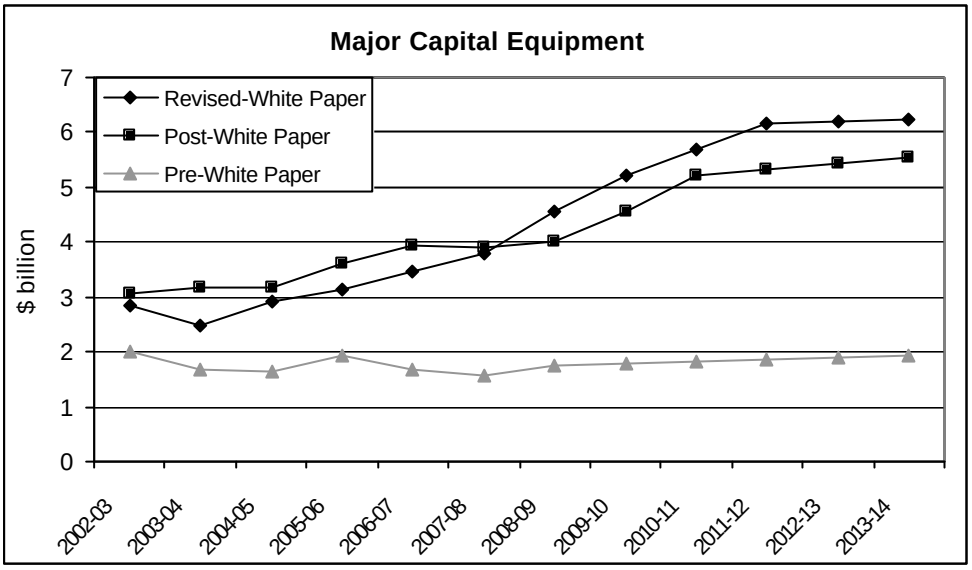
Delayed capital investment

The main difference between the two funding profiles is that some of the planned spending on major capital equipment has been deferred from the first half of this decade until 2008-09 and beyond. We explore the reason for this deferral later in this Section.

The new profile of funding for major capital equipment is steeper and more sustained than before. To see how this impacts the overall major capital equipment program we need to add in the pre-White Paper funding. Using the information in Table 3.3 of the PBS (and the 2002-03 Annual Report) we can calculate the pre-White Paper, post-

White Paper and revised-White Paper major capital equipment funding for the period 2002-03 through 2007-08, where we have excluded the foreign exchange provision to allow a smooth match with recent years. Beyond this period we can only estimate by out-turning the average of the final three year's pre-White Paper spending through to 2003-14 by 2% per annum to account for inflation. The year 2001-02 is beyond analysis in this manner because no figures for major capital equipment spending are available. The results appear in Figure 4.1.3.

Figure 4.1.3: Major Capital Equipment Spending (2004-05 prices)



Source: PBS Table 1.2, Table 3.3 and 2002-03 Defence Annual Report

There are three interesting things about Figure 4.1.3. First, the White Paper provided a lot of money for major capital equipment; by the end of this decade, spending will have almost increased three-fold. Second, the reprogramming of major capital equipment spending results in a steeper and more sustained rise in new investment than was originally planned. Indeed, while DMO gets some respite in the near-term, the medium and longer-term challenge has grown. Third, the implied level of baseline (pre-White Paper) major capital equipment investment is less than $2 billion per annum. This is surprisingly small given that this is out-turned (inflation adjusted data).

It's difficult to find hard data on major capital equipment investment in the years immediately before the White Paper because it went unreported during that period. But from the early to mid 1990's the figure tended to be a bit over $2 billion per annum (and that's not accounting for inflation). This motivated us to look more closely at just exactly what happened to Defence spending around the time of the White Paper.

There is no question whatsoever that the Government delivered the promised White Paper funding increases over the last four years (up to the point where $2.2 billion of investment was reprogrammed to past 2007-08). The funding boosts were explicitly added to the budget and forward estimates back in May 2001. The question is what areas benefited from the additional funds. This question can only be answered relative to the baseline funding allocations before the White Paper.

The first budget after the White Paper was in 2001-02 so the baseline funding can be found in the 2000-01 PAES. (To see how the budget is built upon previous estimates see Section 2.2 of this brief.) Comparing Defence funding between the two documents immediately confirms that the White Paper money was provided. But the increases look to be much more in favour of personnel and operating expenditure than towards additional capital investment.

It's hard to be precise, but spread across the budget year and next two years (which is all that is visible in the budget documents) there's more than a $1 billion less in capital investment than we would expect. At the same time, personnel and operating expenditure were boosted by $1.5 billion across the same three years. In contrast, the first three years of the original White Paper funding in PBS Table 1.2 only allocate money to new investment.

The simplest explanation is that mounting personnel and operating costs prompted a re-allocation of planned spending away from capital investment in the period after the 2000-01 PAES. What this shows is that the allocations of money in the White Paper is ill defined without a funding base linked to prior years' spending and budget forward estimates.

4.2 A new Defence Capability Plan

The 2001-2010 Defence Capability Plan DCP-2001 outlined the government's major capital equipment investment plans for the coming decade as decided at the time of the 2000 White Paper. It was this program of new investment which underpinned the Government's commitment to 3% real growth in Defence funding.

It was originally planned that the DCP would undergo annual revisions to take account of new information and changing strategic priorities. But it was not until February 2004 that the first full revision of the plan was released. The new plan, DCP-2004, reflected the detailed decisions taken by the government in the Defence Capability Review (DCR) in late 2003.

Two ASPI Insights; *The Defence Capability Review 2003* and *Reviewing the Defence Capability Plan 2004-2014* deal at length with the capability aspects of the DCR and the subsequent DCP-2004. The purpose of this Section is to examine the budgetary impact of the new plan and to quantify the aggregate changes compared with the old version. This was done to an extent in *Reviewing the Defence Capability Plan 2004-2014* but new information has since become available.

Before proceeding it's worth emphasising that, with some initial exceptions, the DCP only covers the unapproved capital investment program. That is, those projects that the government plans to consider for approval at some point in the future. By and large it does not include projects that have been approved and are underway already. This creates a gap in public disclosure that Defence undertook to redress in 2001 through the publication of a document similar to the DCP covering approved projects (see page iii DCP2001). To date, no such publication has been released.

What progress has been made in delivering the 2001-10 DCP?

The 2004-05 PBS said that the government has approved around 110 projects or phases of projects with a total value of around $18 billion since the White Paper in December 2000. This is more-or-less consistent with a recent answer given to the DFA&T committee that detailed the projects approved up until 28 February 2004. The aggregate figures on a year-by-year basis appear in Table 4.2.1 updated with information from the 2004-05 PBS. While the dollar figure given in the PBS is consistent with the information collected, the number of projects is a little high. Perhaps there are classified 'black' projects that we do not have visibility of.

Table 4.2.1 Progressing the 2001-10 and 2004-14 Defence Capability Plans

	Number of Projects		Total Project Approvals			Spending	
Year of Decision	Projects Approved	Remaining from DCP-2001 (DCP-2004)	Min Cost $m	Max Cost $m	Mid Cost $m	Spend to Date $m	Percent Spent
Prior	21	3	6,080	8,545	7,313	2,055	28%
2001-02	27	1	1,925	2,745	2,335	729	31%
2002-03	24	2	4,275	5,650	4,963	236	5%
2003-04	21	(3)	1,996	2,696	2,346	0	0
Total	**93**	**-**	**14,276**	**19,636**	**16,956**		

Source: DFA&T SLC Q. W4 February 2004, data correct as of 28/02/04. 2004-05 PBS

The first observation to make is that almost all of the projects planned for approval up to and including 2002-03 in DCP-2001 have been approved. This is an achievement.

As far as the number and value of projects approved goes, some care is required. Strictly speaking, the number of projects approved since the White Paper is only 72 once those projects in the table approved prior to the White Paper are excluded. This reduces the total value of projects approved since the White Paper somewhere between $7.4 billion and $10.1 billion. However, DCP-2001 included a number of projects that had been approved prior to the White Paper but which were not yet to contract. Moreover, the government has taken to reconsidering, and in effect re-approving, these projects prior to contract. Having said that, the data from Defence that underpins Table 4.2.1 also includes some previously approved projects that were not in DCP-2001. There're also a number of projects that have been initiated since DCP-2001, including some rapid acquisitions for recent operations but these are fully appropriate to include in the list.

The recorded spending to date on the projects is also shown in Table 4.2.1. It's difficult to draw any firm conclusions from the data. Nevertheless, if we look at projects with a 2001-02 year of decision we see that 31% of the approved funds have been spent. Assuming that this has occurred over roughly the last three years, it seems a little on the light side given that the average period between year-of-decision and in-service-date for these projects is only 3.2 years. Indeed, close examination of the projects reveals that there are a number of projects that are approaching, or have passed, their in-service-date for which a relatively small proportion of the available funds have been spent. Of course, this may simply reflect the phasing of spending towards the end of the projects.

Comparing the detailed information provided by Defence on project approvals with DCP-2001 shows that; 11 projects have been delayed by a year or more while 1 has been accelerated, and 14 projects have moved into a higher cost band while 6 have moved into a lesser category. Although the trend is towards delayed capability delivery and increased cost, this is an unsurprising and relatively modest result.

Comparing the 2001 and 2004 DCP

In a response to SLC question W4 (e) in February 2004, concerning the movement of projects from one cost band to another in the successive versions of the plan, Defence provided a list of four projects that had reduced in cost and suggested the Committee could look up the DCP to find projects with higher costs. According to our analysis, there are around 14 projects or phases of projects that have reduced in cost.

It's difficult to be precise about the difference between the two plans because of the re-naming, amalgamation and splitting of projects. However, with a little work and using common sense to sort out the ambiguities, we have tracked the changes to the 65 projects or project phases that are common between the two versions of the DCP. The results appear in Table 4.2.2.

Table 4.2.2: Comparing DCP-2001 and DCP-2004.

Schedule	
Accelerated	5
Static	32
Delayed	28
Total	**65**

Cost	
Increased	29
Static	22
Decreased	14
Total	**65**

The comparison of costs between the two DCPs is complicated by the intervening changes to price and exchange rates. However, advice from Defence to the SLC was that the effect is small and that broad comparisons are nonetheless possible, even though small changes could sometimes tip a project from one cost band to another.

In terms of what happened to the projects or phases of projects in DCP-2001 and what's been added into the DCP-2004 as new projects, Table 4.2.3 lists the results of our analysis. In evidence to the SLC, Defence advised that all but a couple of the projects not carried forward from DCP-2001 to DCP-2004 had not been cancelled but simply deferred to beyond 2014. The approved figure in Table 4.2.3 is less than that implied in Table 4.2.1 because the latter includes projects not listed in the 2001-02 DCP (like the AEW&C project).

Table 4.2.3: Projects new and old.

	Number	Cost
DCP 2001-10		
Approved	65	$10.7 billion
Abandoned or delayed past 2014	34	$3.2 billion
DCP 2004-14		
Carried over from DCP-2004	65	$37.9 billion
New projects in DCP-2004	44	$11.1 billion

Looking in detail at the individual projects we found that the average delay in projects carried forward from DCP-2001 to DCP-2004 was somewhere between 9 and 15 months, not counting those projects that have been deferred to beyond the end of the current ten year planning horizon. And the overall cost of these projects has grown by around 20% in the three years since DCP-2001. Such an increase has serious implications. In a constant resource envelope, cost increases inevitably translate into deferred capability. For a fuller discussion of ASPI's analysis of DCP-2004 see the ASPI Insight *Reviewing the Defence Capability Plan 2004-2014.*

Budget impact of the DCP

The White Paper added a lot of money to the Defence budget, and most of it in the early years was directed towards boosting investment in major capital equipment. But over the last three years it has become very clear that the planned program of investment cannot be achieved. This is most easily shown by looking at how much of the planned spending has either been deferred or simply gone unspent. Table 4.2.4 overleaf shows the set backs suffered by the major capital equipment program in the last three years.

In Table 4.2.4 we've excluding spending that has been deferred from one year to another within the period. The 2001-02 under spend of $200 million is our estimate of the major capital equipment component of the $253 million of unspent specialist military equipment funds in that year (no data is available on capital investment for that year).

The ongoing failure to deliver projects was one of the reasons the government commissioned a review of defence procurement in 2003. For a discussion of how the recommendations of this review are being implemented see Section 3 of this brief.

Table 4.2.4: Reductions in planned investment in major capital equipment.

Set Back	Financial Impact
Unspent funds from 2001-02	$200 million
Unspent funds from 2002-03	$200 million
Investment spending deferred in 2003-04 budget	$642 million
Unspent funds from 2003-04	$500 million
Investment spending deferred in 2004-05 budget	$884 million
Total	$2,426 million

Source: Defence PBS, PAES and FAD&T SLC question W5 June 2003.

Abandoned capability – is that all it's worth?

The Defence Capability Review announced the early retirement of the F-111 fleet and the two oldest of our FFG frigates, as well as the laying up of two of the new Mine Hunter vessels. The planned savings from these foregone capabilities are detailed in Table 4.2.5

Table 4.2.5 Personnel and Operating cost savings from abandoned capability (million $)

	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	Total
2 x Mine Hunter	0.0	19.0	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	**187.8**
2 x FFG Frigate	0.0	58.0	71.0	80.0	70.0	80.0	83.0	83.0	83.0	93.0	**678.0**
F-111 Strike	0.0	0.0	0.0	0.0	0.0	8.7	51.0	145.4	138.4	143.4	**486.9**

Source: SLC question W4 February 2004

Across the next decade these cuts to capability will deliver savings of over $1.3 billion dollars. The 2003-04 Budget shows that this money is being returned to the Government (in the first couple of years at least) although increases elsewhere in the personnel and operating budget more than compensate for the loss.

The surprising thing about these cuts is just how little money is freed up through the loss of these major capabilities. We explore these issues below for the F-111 and FFG:

F-111 Strike Reconnaissance Capability

The total savings from the loss of the F-111 strike reconnaissance fleet are less than $150 million per annum. This means that the current long-range strike and reconnaissance capability has been exchanged for an amount less than 1% of the Defence budget. Even though this does not include the savings from foregone projects on the F-111, it still seems something short of a bargain.

The last time that Defence gave a figure for the cost of the strike reconnaissance capability was back in the 1999-2000 PBS where non-depreciation and non-personnel expenses were given as $182 million and personnel at $152 million. So how can the total savings now including personnel only come to $150 million? The deep maintenance contract with Boeing is quoted in public sources at $55 million per annum alone. In fairness, it must be said that the F-111 has life-of-type spares available that will reduce its inventory costs compared with other aircraft. But then why are its costs increasing so quickly?

And what about Amberley Airfield where the F-111 fleet is based? Is it going to be maintained and if so, for what purpose and at what cost? The other assets presently at Amberley include the DHC-4 Caribou light transport aircraft, two squadrons of air field defence guards, two expeditionary combat support squadrons and miscellaneous support and training units. With the departure of F-111 fleet the opportunity for closing the base and consolidating RAAF disposition arises. It would be interesting to know what the ADF disposition study said about the options.

Far more transparency of the savings from the abandonment of the F-111 capability is needed. A good start would be to know the value of the contracts for F-111 support and maintenance, a list of the personnel currently employed at Amberley in all roles, and a breakdown of the annual cost of fuel, spares and inventory for the fleet. Such information should be available as it was when detailed data on the Caribou recovery program was provided to the SLC in answer to question W31 in November 2002.

FFG-Frigates

The early retirement of the oldest two FFG frigates delivers savings of around $85 million per annum. Currently, the cost of supplier’s expenses and inventory

consumption for Navy's frigates runs at around $37 million per annum per vessel according to the figures on the Major Surface Combatant output. Doubling this gives $74 million.

The crew of an FFG is 208 excluding embarked aircrew. At the average per-capita rate for military personnel this costs around $42 million per year. Adding this to the $74 million for inventory and suppliers expenses gives a total of $116 million per annum compared with the nominated savings of $85 million per annum.

However, unlike the withdrawal of the F-111, the remaining FFG fleet will retain the same fixed overheads as the Major Surface Combatant output had to begin with. Taking this into account, the projected savings seem reasonable.

But, before we leave this issue, it's worth reflecting on the extent of the personnel savings. Navy maintains a ship-shore ration of around 1:2 which provides rest and respite posting for Navy personnel between sea postings. In many cases these personnel undertake jobs which would have otherwise been contracted out. There may be some more savings here that have not been considered, but they will only be the marginal difference between the cost of military personnel and either civilian or contractor staff.

Finally, it's worth mentioning that at the time of the decision to retire the two FFG frigates Defence had not determined the savings from the $1,442 million dollar upgrade which was to cover all six vessels in the fleet. Although the upgrade has only begun on one vessel, $923 million has already been spent. This is because much of the equipment for the upgrade of six vessels has already been purchased. It's likely that any savings will be minimal, and the additional equipment will be designated as 'spares'. If the project savings really are as small as our pessimism leads us to believe, the question must be asked as to whether the ships should be upgraded and sold, or perhaps given away to a friend like New Zealand?

SECTION 5 – DEFENCE PERSONNEL RENUMERATION

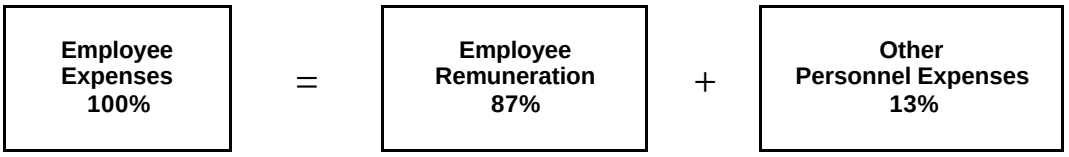
Introduction

With over 90,000 employees, Defence is the largest Commonwealth employer, and the nation's third largest employer behind Coles Myer (160,000) and Woolworths (140,000). In 2004-05, Defence will employ 52,872 permanent Australian Defence Force (ADF) personnel (as well as 20,710 Reservists) and 17,841 Australian Public Service civilians.

Despite this huge workforce, debates about the size of Australia's Defence budget tend to focus on the multi-billion dollar procurement of ships, tanks and planes. Expenditure relating to Defence personnel frequently escapes examination. This is surprising given that the largest part of the Defence Budget, 41% or around $6.7 billion per annum, is spent on personnel.

The cost of employees

ADF and Civilian employee expenses have risen from $5.4 billion in 1996-97 to $6.5 billion this year, and are projected to top $7.2 billion in 2006-07. For our purposes it's convenient to break up personnel expenses into two parts as follows (with percentages for 2004-05 shown):



Where employee remuneration consists of:

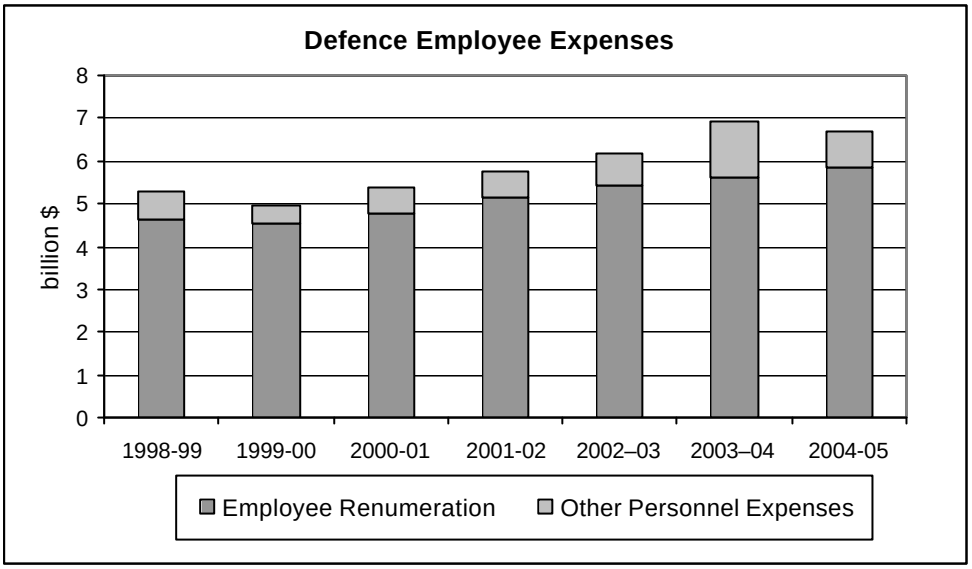
- Salaries
- Leave and other entitlements
- Separation and Redundancies
- Allowances
- Superannuation
- Health Benefits
- Defence Housing (ADF only)

And other personnel expenses – the charges, fees or taxes incurred by Defence that are not paid to personnel – consists of:

- workers compensation premiums/COMCARE premiums
- other employee expenses
- fringe benefit taxes
- military compensation scheme (ADF only)

Figure 5.1 shows the proportion that employee remuneration and other personnel costs make up of total employee expenses for the period 1998-99 to 2004-05.

Figure 5.1: Components of Employee Expenses



Source: Defence Annual Reports, 1998-2003; Defence Portfolio Budget Statement 2004-05.

Of the total Defence budget, employee remuneration has averaged around 36% from 1999-00 to 2004-05. Other personnel costs have made up between 3.5% and 8% of the total Defence budget over the same period. The spike in other personnel costs for 2003-04 in Figure 5.1 is due to one-off costs and adjustments (see Section 2.2.5)

So what makes up employee remuneration?

Table 5.1 is a break up of ADF and Civilian employee remuneration for 2002-03, the most recent year for which this information is available. The greatest share of employee remuneration is from salaries. Leave and other entitlements make up over 9% of Civilian remuneration, while only 2% for the ADF. On the other hand, overseas allowances and other allowances account for over 11% (4.4 + 6.8) of ADF employee remuneration, but only 1.8% for Civilians.

Table 5.1: 2002-03 Employee Remuneration Components (million $)

	ADF	%	APS	%
Salary	2,538	60.2	898	74.0
Superannuation	621	14.7	174	14.3
Leave and other entitlements	87	2.1	112	9.2
Separations and redundancies	5	0.1	6	0.5
Overseas allowances	183	4.4		
Other Allowances	286	6.8	22	1.8
Health Expenses	130	3.1	1	0.1
Housing	361	8.6		
TOTAL	**4,211**	**100%**	**1,213**	**100%**

Source: Defence Annual Report 2002-03.

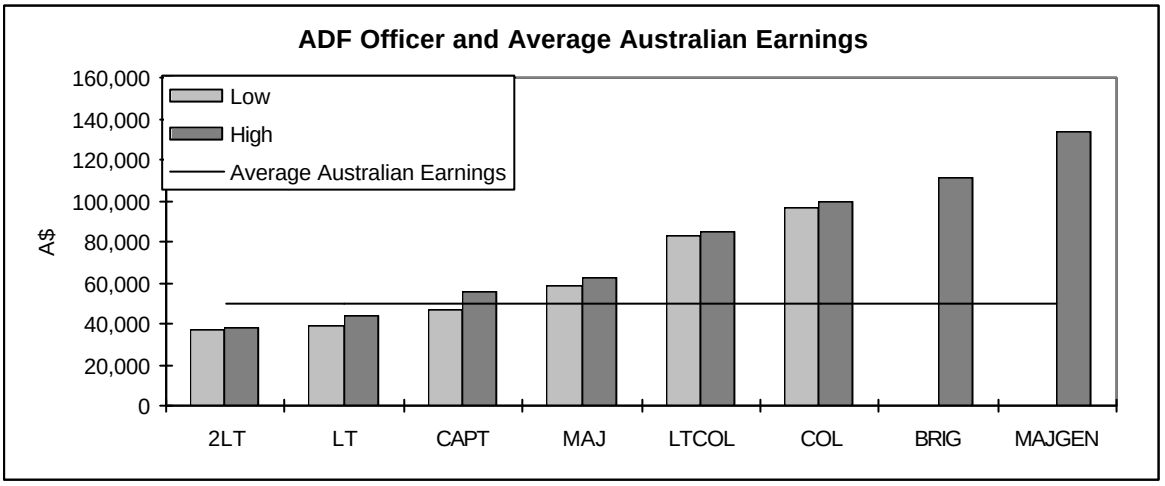
Salaries

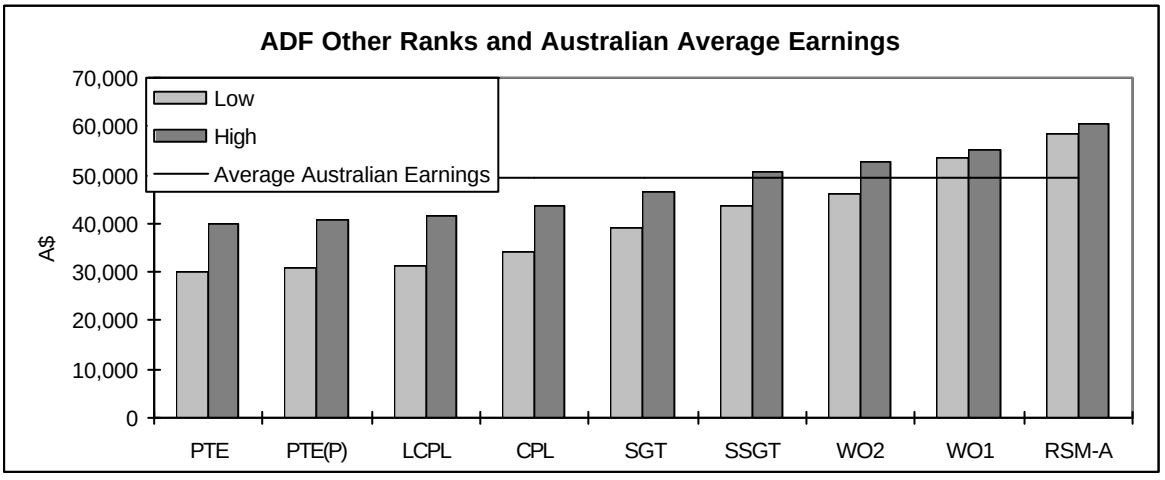
A salary is a periodic payment for regular work or services to employees. The word derives from the Latin "salarius" meaning "of salt" with Roman soldiers originally receiving salt rations as a "salary." Salaries make up the largest part of employee remuneration.

Military Salaries

ADF salaries can be separated into two groups. Those for commissioned officers and those for other ranks. It's interesting to compare the salaries for ADF officers and other ranks with average annual Australian earnings, Figures 5.2 and 5.3. In the 12 months to February 2004 the ABS figure for average full-time adult ordinary time earnings was $49,348. In the case of ADF officers, this annual salary is roughly equivalent to the median salary for an Army Captain. In the case of other ranks, it is equivalent to the median salary for a Warrant Officer, Class 2.

Figures 5.2 & 5.3: ADF annual salaries

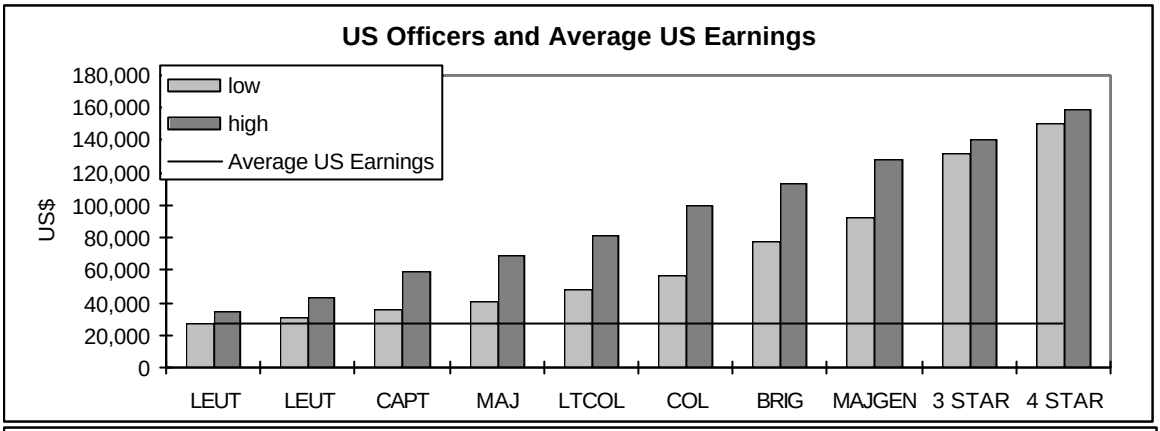


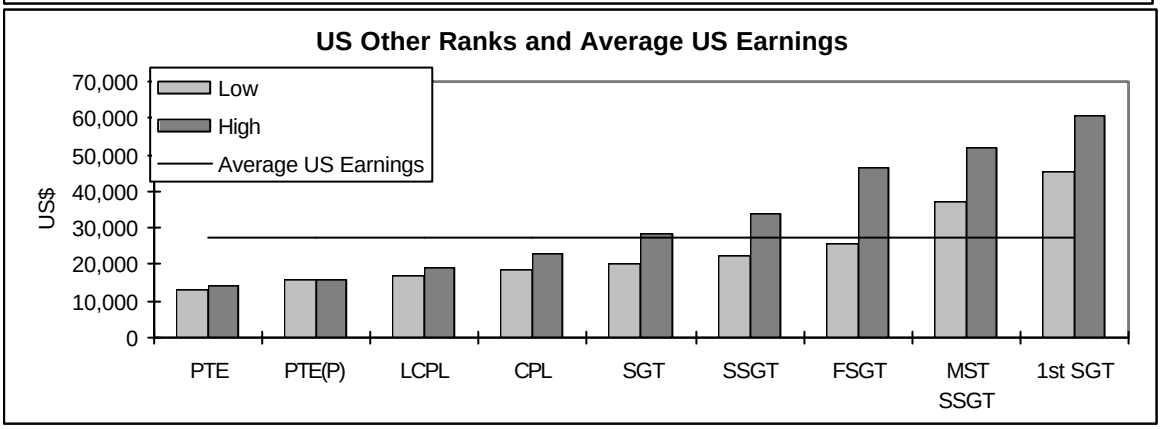


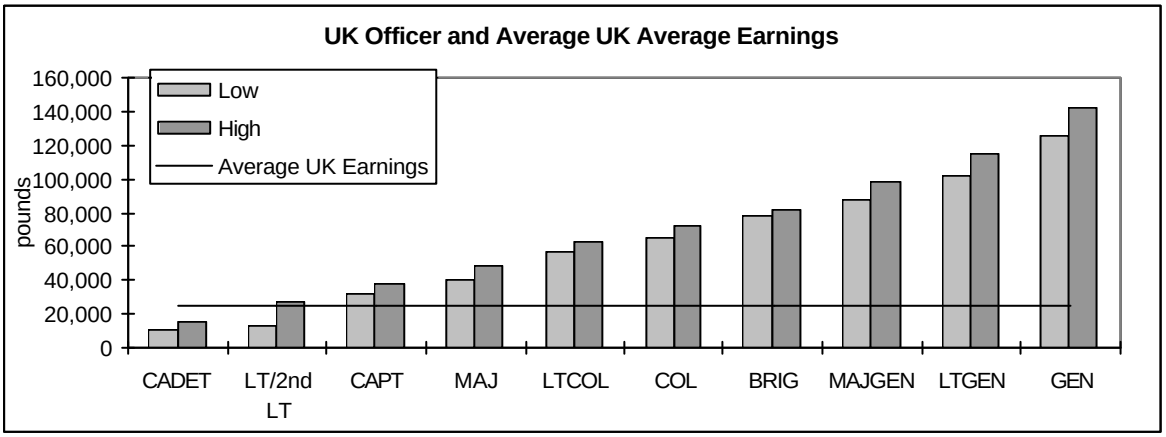
American and British military salaries can similarly be compared with average adult annual earnings in their respective countries. In the US, average annual earnings are approximately US$27,315 (Bureau of Labor Statistics, March 2004). This is equivalent to the salary for the lowest ranked US officer, a 2nd Lieutenant. All other US officer salaries are above this mark. For other ranks, average adult annual earings in the US are equal to the median salary of a Staff Sargent. In the UK, average annual adult earnings are approximately £24,648 (UK Office of National Statistics, April 2003). This is

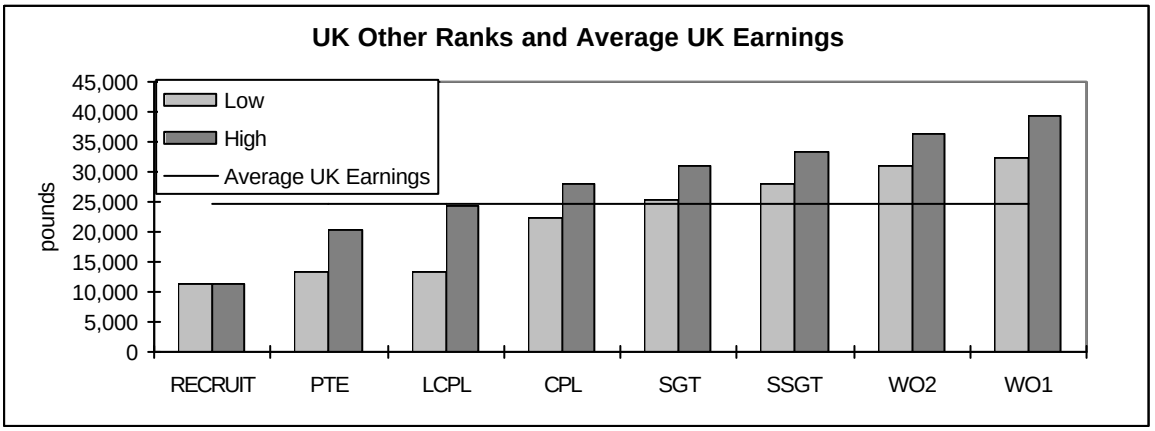
slightly above the median salary for a Lieutenant/ 2nd Lieutenant, and equivalent to the median salary for a Corporal. See Figures 5.4 – 5.7 below.

Figure 5.4 – 5.7: US and UK military annual salaries.







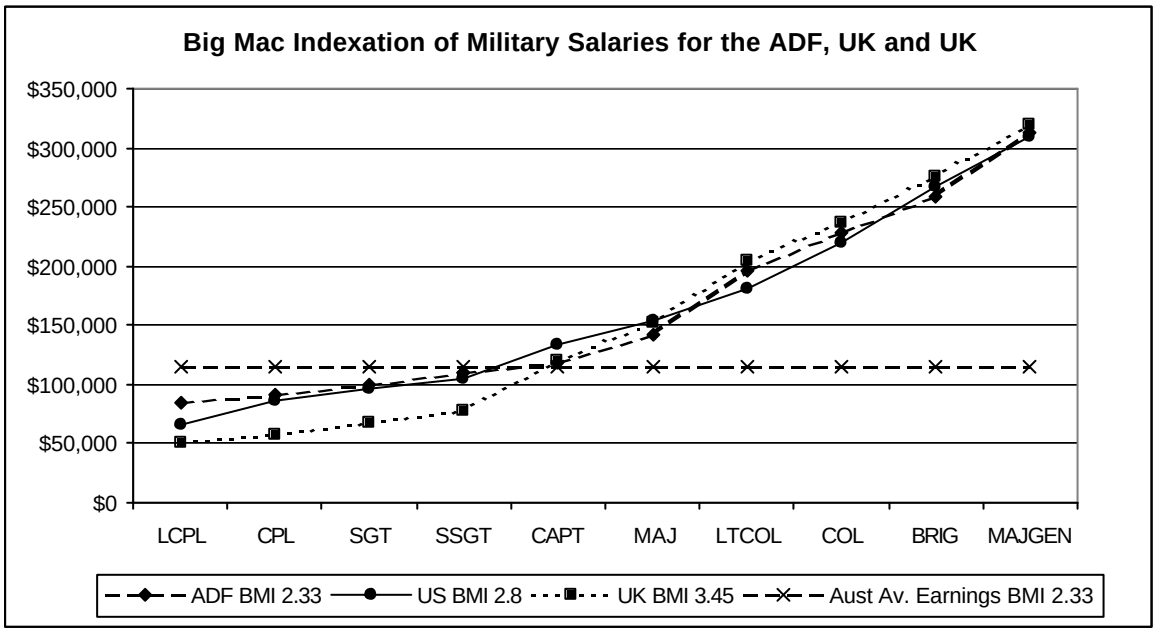


Thus, it would appear that both American and British officers and other ranks receive marginally higher salaries relative to the average in their communities than their Australian counterparts. Given the ambiguity in assigning comparative ranks this is probably not significant.

The Big Mac Index
ADF salaries can also be compared to the US and UK by using the *Economist's* Big Mac index. The Big Mac index (BMI) is based on the theory of "purchasing-power parity" (PPP). Under the PPP, exchange rates are adjusted to equalise the price of a basket of goods and services across countries. The *Economist's* basket is the price of a Big Mac burger sold by MacDonalds. The Big Mac PPP means that hamburgers would cost the same in America as they do abroad. The BMI index for Australia is $2.33, the US $2.80, and the UK $3.45 (*Economist*, 15 January 2004).

Figure 5.8 shows the BMI adjusted salaries for selected ranks across the Australian, American and British militaries. It also shows, as a relative point of comparison, the Big Mac indexation of average annual adult earnings in Australia. The trend for all three countries shows that there is very little difference in relative buying power in salaries, although UK salaries at the lower ranks are slightly less than the ADF and US equivalents. If anything, the alignment is surprisingly close between the three nations.

Figure 5.8: Big Mac Indexed Military Salaries



Civilian Salaries
Civilian salaries can be separated into two groups, APS1 to Executive Level 2, and Senior Executives (SES Band 1 to 3). Then there is the Secretary, whose appointment is outside of the routine system.

Table 5.2 compares median Civilian salaries (APS1 to EL2) to median salaries in a selection of Commonwealth departments. The salaries are taken from the respective, currently prevailing certified agreements for each department, factoring in the most recent salary increases. Almost with exception, Defence salaries are the highest, as

indicated by the shaded boxes in Table 5.2. However, these figures do not include performance pay which many other agencies – but not Defence – enjoy. Performance pay can be as much as 15% of salary and may well explain why Defence has such high salary rates. Also, the timing of workplace agreements may have skewed the data. Defence having recently concluded one. As a point of reference, average Australian adult annual earnings ($49,348) are equivalent to an APS4/5 Defence civilian salary.

Table 5.2: Median Civilian Salary Comparisons

	APS1	APS2	APS3	APS4	APS5	APS6	EL1	EL2
Defence	$33,630	$38,089	$42,742	$47,752	$52,584	$59,196	$73,388	$89,133
DFAT	$32,324	$37,561	$42,670	$47,805	$51,871	$58,984	$72,878	$88,930
PMC&C	$32,989	$35,693	$40,154	$44,886	$49,889	$58,001	$69,763	$84,094
Treasury	$31,458	$36,419	$40,939	$45,754	$51,927	$58,549	$70,936	$87,296
Health	$31,032	$35,725	$41,623	$46,000	$50,004	$57,113	$69,105	$81,667
Education	$31,998	$36,557	$40,246	$45,246	$49,155	$56,010	$70,288	$83,500

Defence salary increases compared

Table 5.3 compares average salary increases for full time adult ordinary time earrings to ADF and Civilian employees over the period 1992-2002. The Defence numbers do not include the impact of pay category reviews for the military nor changes to the public service level structure for civilians. This may explain why average annual ordinary time earnings increases are higher than ADF and Civilian increases. The ADF and Defence civilian increases are identical because parity is intentionally maintained, notwithstanding separate mechanisms for setting rises in each group.

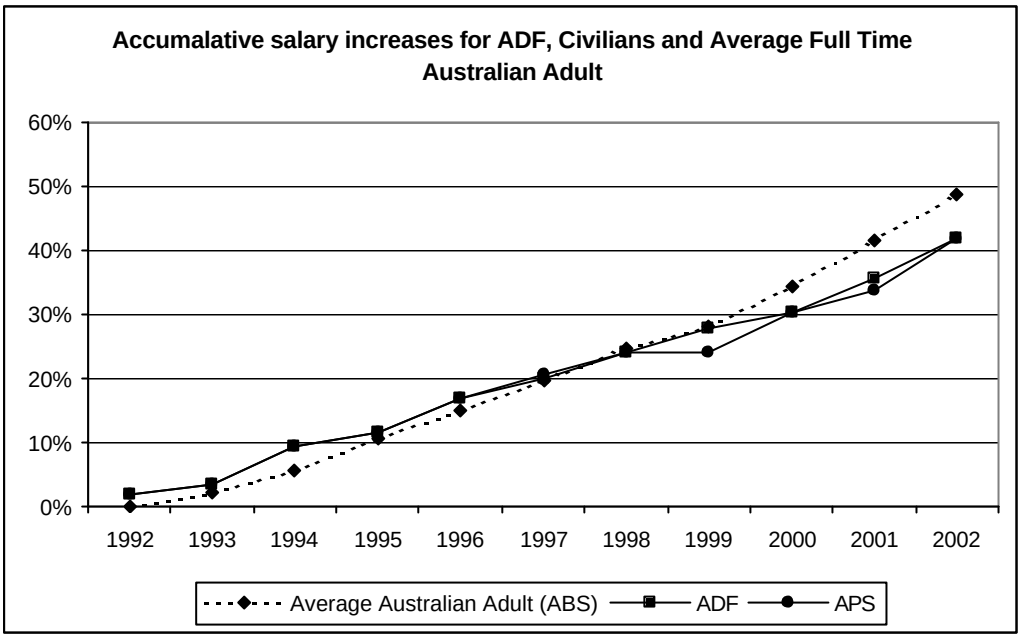
Table 5.3 Nominal Defence salary increases 1992-2002

	Average Australian Earnings (ABS)	ADF	Defence Civilians
Average % increase	4.1%	3.6%	3.6%
Cumulative % increase	48.8%	41.9%	41.8%

Sources: Australian Bureau of Statistics; "Defence Pay Outcomes - Comparative Information," Defence Personnel Executive web site.

These nominal cumulative salary increases (not accounting for inflation) can also be plotted graphically over time to show the trend across the three categories. See Figure 5.9 over the page.

Figure 5.9: Comparison of Nominal Salary Increases



Source: Australian Bureau of Statistics; Defence Personnel Executive web site.

Executive Remuneration

Table 5.4 shows the total remuneration of Defence's top executives. This includes salary, superannuation and car. For civilians, an additional performance bonus of up to 15% of total remunerations is possible. The CDF receives an additional 7% of total remuneration in lieu of a performance bonus.

Table 5.4 Executive Salaries and Remuneration

	Total Remuneration	Performance Pay
CDF	$342,370	$23,966
VCDF	$293,550	
Service Chiefs	$280,160	
Secretary	$342,370	$51,356
DMO Chief Executive	$510,300	$73,320

Source: Remuneration Tribunal, Defence Force Remuneration Tribunal.
Question W28 SLC February 2004

The CDF, Secretary and DMO head are effectively Chief Executive Officers (CEO). By weight of employee numbers, Defence is the third largest company in Australia. Yet, the average remuneration for a CEO in Australia's largest 50 companies is $2.1m, of which about 30% ($700,000) is made up of bonuses and company shares. This still leaves an annual CEO salary of around $1.4m.

On an international level, these executive salaries can be compared to Defence heads in the US, UK and New Zealand using current exchange rates. The US Joint Chiefs of Staff and the Secretary of Defence receive a salary of US$171,900, which is equivalent to approximately A$247,000. The UK Chief of Defence receives an annual salary of £189,000, which is equivalent to approximately A$480,000. From these comparisons,

UK Defence executives appear to get paid a great deal more than their Australian equivalents, with the US and Australia roughly similar. However, when these salaries are compared using the Big Mac index, the differences are a lot smaller. Under the BMI, Australia's CDF would receive a salary of $580,193, the US Joint Chief of Staff and Secretary a salary of $529,200, and the British Chief a salary of $593,055.

Allowances

The discussion so far has tended to focus on the salaries paid to ADF and Defence civilian personnel. While this is the largest component of remuneration it is important to take account of the many significant allowances paid to Defence personnel.

Military Allowances

ADF personnel receive salary related allowances for three reasons. Firstly, to compensate for environmental conditions associated with certain work, known as a disability component. Secondly, to recognise certain Skills and Qualifications (Q&S). And thirdly, as an incentive to attract and retain ADF personnel whose skills are attractive to the private sector.

The most common (almost universal) ADF allowance is the service allowance, which the Defence Force Remuneration Tribunal says "compensates for the special demands and exigencies of service life." The service allowance is currently $8,781 per annum.

There are 17 main nature of pay allowances payable to ADF personnel. Example include:

- Submarine Service allowance, which ranges from $$7,668 to $24,556 per annum after 11 years.
- Language Proficiency allowance which ranges from $720 per annum for a low understanding of a Group 1 language to a high of $7,208 per annum for an advanced understanding of a Group 3 language.
- Flying allowance of $1,560 per annum for a non-commissioned officer with less than 2 years experience, to $25,919 per annum for an officer with 10 or more years flying experience.

The 2001 Nunn Review of ADF remuneration found that allowances created an "entitlements mentality" and recommended that ADF allowances be rationalised. In early 2004, the Government announced that it would implement this recommendation. The rationalisation process has two steps. First, more ADF allowances are to become superannuable. Second, some allowances will be built into ADF salaries, making the salary structure more flexible.

Operational Allowances

Defence has traditionally paid deployed ADF personnel very well. During World War I Australian diggers earned the sobriquet "bob-a-day" soldiers. Today, ADF personnel do not pay tax on salaries or allowances when on war-like deployment. In addition, since the East Timor deployment in 1999, additional allowances have been paid on a case by case basis when deployments arise. For example, Special Forces personnel currently deployed inside the area of operations in Afghanistan or Iraq on warlike service are paid

a tax-free allowance of $200 per day. Non Special Forces ADF personnel working with the Coalition Provisional Authority in Iraq are paid $150 per day.

Civilian Allowances
The Defence Employees' Certified Agreement 2004-2006 states that allowances "recompense individuals who hold particular qualifications or appointments or who suffer particular disabilities in their work."

There are some 27 allowances listed for Defence civilian personnel. These range from $8.49 per week for an employee who holds a basic first aid qualification, to $15,608 per year for Department Liaison Officers in lieu of over time.

Superannuation

Military
There are two streams of superannuation for the ADF (and Reserve members who undertake one year of full time service):

- The Defence Force Retirement and Death Benefits Scheme (DFRDB)

- Military Superannuation Benefits Scheme (MSBS)

The Defence employer contribution rate calculated by the Australian Government Actuary in 2002-03 was 33%, for the DFRDB, and 22.3% for the MSBS.

In March 2004, the Defence Minister announced that a greater number of ADF allowances would be superannuable. The Minister used the example of an Army private with seven years experience and specialist skills. This meant that an Army Private under the old system would receive a lump sum of $51,660 and under the new system a lump sum of $67,410.

Civilians
There are two steams of superannuation for Defence Civilians:

- Commonwealth Superannuation Scheme (CSS)

- Public Sector Superannuation Scheme (PSS)

For Civilian employees who are not members of the CSS or PSS, the Department makes an employer superannuation contribution to their nominated fund. The Defence employer contribution rate to the PSS in 2002-03 was 11.9%, and for the CSS 19.9%.

Superannuation Comparisons
Table 5.6, at the end of this section, compares the four Defence superannuation schemes to military superannuation schemes in the US, UK and New Zealand. Unlike the ADF and Civilian superannuation schemes, the US, UK and NZ schemes are not CPI indexed. In addition, basic salary and recognised allowances are superannuable for the ADF, whereas only basic salary is superannuable for the US, UK and NZ. It is also worth noting the high percentages of employer contributions for the ADF and Civilians, given that under Australian Superannuation Guarantee legislation, the minimum employer contribution is 9%.

Other Employee Remuneration Components

Health Benefits & Expenses
ADF personnel do not have to pay the Federal Medicare levy. Defence assesses that for a Major in the Army with a median salary of $60,706, this equates to a saving of around $526 per annum.

ADF personnel also receive free dental and health services. In 2004-05, health expenses for the ADF totalled $152.5m, up 15% from $132 m in 2003-04. Working on the assumption that all this money is spent directly on 52,872 ADF personnel, we can calculate the per capita costs to be around $2,497. By comparison, the ultimate HBA private health insurance cover for a single in Australia (after the Government's 30% rebate) is $1790 per year.

Defence Housing
Defence will incur an expense of $413 million for housing in 2004-05. On a per-capita basis this comes to $7,800 per permanent ADF member. But this is not spread evenly across all personnel.

So what does it all add up to?

With so may additional components to remuneration beyond salary it's difficult to get a measure of just what the total package is. Fortunately, Defence has produced a web-based tool that allows ADF and Civilian employees to calculate their remuneration. The tool is called a Comparative Employment Value Adjustable Model (CEVAM). Unfortunately, the latest Miliary and Civilians CEVAM are unavailable. Nevertheless, we can use CEVAM version 3.6 for the Military currently on the Defence web site. The model uses ADF salary and allowance rates from 3 July 2003 under the ADF Workplace Agreement 2002-2004.

The CEVAM incorporate salaries, allowances, superannuation, and motor vehicle benefits (for 1-star officers and above). It also factors in savings for ADF personnel by not paying the Medicare levy, and receiving free medical and dental services, and housing benefits.

We have taken four examples from the Army to see what Defence personnel remuneration adds up to. We cannot claim that the examples we have chosen are representative or otherwise. They have been chosen to display the range and quanta of the various parts of military remuneration.

Example 1: Private
A single Army Private housed in barracks in Darwin with no dependents. The Private receives a salary, district allowance, service allowance, uniform allowance, and superannuation under the MSBS. Moreover, he or she does not pay the Medicare Levy, nor pay for health insurance or housing.

Example 2: Major
A Major working in Canberra, and renting a house with dependents. The Major receives a salary, uniform allowance, service allowance, superannuation, and rental assistance. Moreover, he or she does not incur the Medicare Levy, nor pay for health insurance.

Example 3: SAS Major
A full trained SAS Major based in Perth without dependents, renting a house alone. He receives a salary, service allowance, uniform allowance, district allowance, SAS Force allowances and rental assistance. Moreover, the Major does not incur the Medicare Levy, nor pay health insurance.

Example 4: Major General
A Major General working in Sydney, and renting a house with dependents. The Major General receives a salary, uniform allowance, superannuation, star ranked vehicle allowance and rental assistance. Moreover, he or she does not incur the Medicare levy, nor pay health insurance.

The monetary values from CEVAM 3.6 for these three examples appear in Table 5.5.

Table 5.5: CEVAM modelling for ADF Total Employee Remuneration

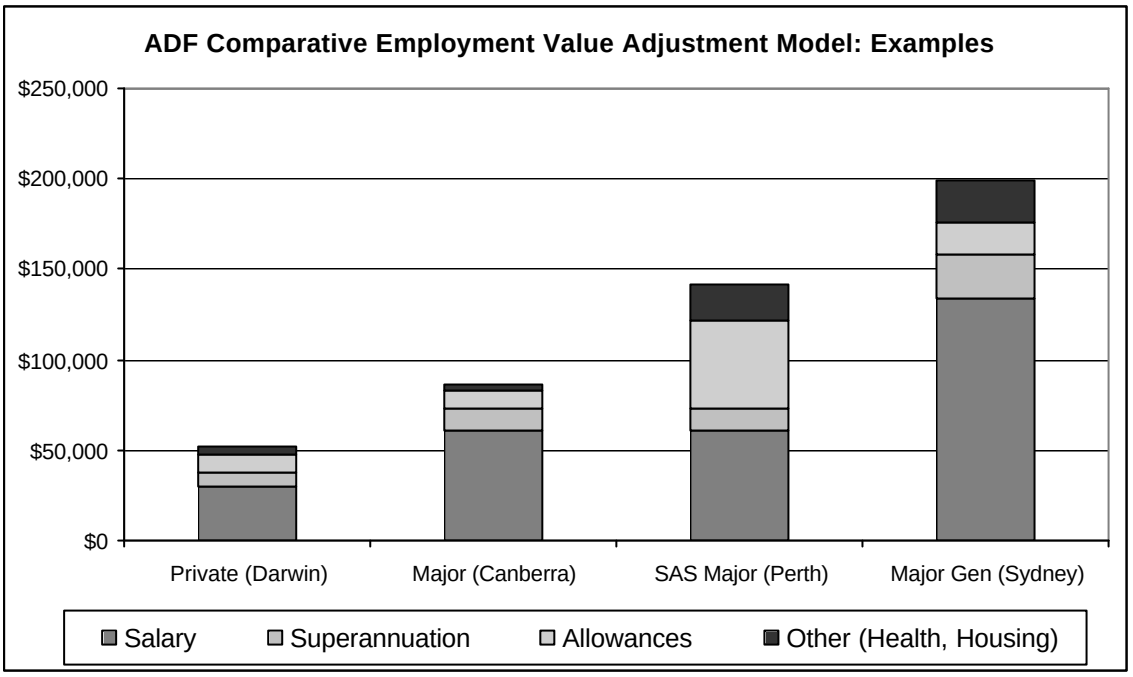
	Private (Darwin)	Major (Canberra)	SAS Major (Perth)	Major Gen (Sydney)
Salary	$30,165	$60,709	$60,709	$134,072
Service Allowance	$8,781	$8,781	$8,781	$0
Uniform Allowance	$419	$682	$682	$682
District Allowance	$1,250	$0	$0	$0
SAS Allowances	$0	$0	$39,204	$0
Superannuation (18%)	$7,010	$12,508	$12,508	$24,133
Star Ranked Officer's Vehicle	$0	$0	$0	$17,000
Medicare Levy not incurred	$609	$526	$1,698	$1,011
Private Health Insurance not incurred	$2,556	$0	$3,375	$0
Housing Costs Benefit	$1,300	$3,287	$14,531	$22,223
TOTAL	**$52,090**	**$86,493**	**$141,408**	**$199,121**

Source: CEVAM 3.6, accessed at <www.defence.gov.au/dpe/CEVAM/ADF_CEVAM_v3.6.xls>

The results in Table 5.6 are depicted graphically in Figure 5.10. It should be noted that the SAS allowances for the Major include a Special Action Force allowance of $15,450, a qualified SAS disability allowance of $20,600 and a parachute allowance of $3,142.

The message from the CEVAM results is that in some cases the non-salary components of ADF remuneration can be a very important part of the total package. Consequently, care must be taken when looking at the comparisons of ADF salaries with community and foreign benchmarks as we did earlier.

Figure 5.10 Total Remuneration Results for CEVAM Case Studies



Source: CEVAM model Version 3.6

Who decides how much Defence employees get paid?

Defence Force Personnel

Until 1985, ADF remuneration was set by the Government of the day. The Defence Force Remuneration Tribunal (DFRT) now determines ADF salaries and allowances. The DRFT consists of three members who are appointed by the Governor-General. Its functions are set out in section 58H of the1903 *Defence Act*:

a. to inquire into and determine the salaries and relevant allowances to be paid to members of the ADF; and

b. to inquire into and make determinations in respect of prescribed matters that have been referred to the Tribunal.

The DRFT is also required by statute to review determinations in respect of salaries and allowances every two years. The Minister under 58b of the Defence Act sets other allowances for the ADF.

Defence Civilians

Defence Civilian salaries and allowances are determined by periodic workplace agreements.

Tribunal and Commission Determinations

The DRFT considers periodic ADF Workplace Remuneration Arrangements for Colonel ranks and below, and Star Rank Arrangements for One and Two Star Officers. Similarly, Civilian Workplace arrangements are voted on by Defence Civilians and approved by the Australian Industrial Relations Commission.

Interestingly, in the latest ADF Workplace Arrangement for 2004-2006, the DFRT consideration accepted salary and allowance increases sought by the ADF, noting that

"they are consistent with those for Defence Civilian employees under the Defence Certified Agreement: 2004-2006." If the principal consideration of the DFRT is that ADF employee remuneration is commensurate with Defence Civilians, it begs the question as to why there are separate mechanisms.

Defence Executives

The CDF, VCDF and the Service Chiefs are classified as Specified Statutory Officers, and the Remuneration Tribunal determines their pay. The Remuneration Tribunal is an independent statuary authority established under the Remuneration Tribunal Act 1973. The tribunal consists of three part-time members appointed by the Governor General. The tribunal's role is to determine, report on or provide advice about remuneration, including allowances and entitlements for the full time and part time holders of various public offices. Under the 1973 Act, remuneration for these public offices is reviewed annually.

Remuneration for the Secretary of Defence is determined by the Prime Minister under Public Service Act 1999, section 61. The Prime Minister's decision is informed by recommendations from the Remuneration Tribunal.

Conclusion

Defence remuneration is a complex field and we cannot pretend to have done anything more than surveyed the key aspects in the foregoing analysis. Nevertheless, our comparisons of ADF with foreign military salaries revealed a surprising degree of consistancy, and we've learnt the danger of making too direct a comparison between ADF, civilian and private sector remuneration based on salaries alone.

This is our first attempt at what will be an on-going examination of Defence remuneration in the annual ASPI Budget Brief. In future years we hope to expand the analysis further.

Table 5.6: Superannuation Comparisons

	ADF MSBS	ADF DFRDB	APS PSS	APS CSS	US Military	UK Military	NZ Military
Scheme	Defined benefit & accumulation	Defined benefit	Defined benefit	Defined benefit	Defined benefit	Defined benefit	Accumulation
Funding Arrangement	Partial	Partial	Partial	Partial	Unfunded	Unfunded	Funded
Primary benefit	Lump Sum (commutable)	Pension (commutable)	Choice of lump sum or pension	Choice of lump sum or pension	Pension (commutable)	Pension	Lump sum
Deferred benefit	All members from age 55+	Refund of contribution if <20 years	From age 55+	From age 55+	From age 60	From age 60	From age 60
Indexation	CPI	CPI	CPI	CPI			
Superannuable salary	Basic salary & recognised allowances	Basic salary & recognised allowances	Basic salary & recognised allowances	Basic salary & recognised allowances	Basic salary	Basic salary	Basic salary
Member contribution	5-10%	5.5%	2-10%	5% minium-10% maximum	Nil	Nil	7.6% minium
Employer contribution	22.3% in 2002-03	33% in 2002-03	11.9%	19.9%	Variable actuarial value	Variable actuarial value	17.9%
Other						Pensions federal income tax exempt	

Source: Adapted from the Review of Defence Force Remuneration, 2001.

SECTION 6 – THE COST OF WAR

Introduction

In recent years the cost of ADF operations has emerged as an important public policy issue. That's why the 2003-04 ASPI Budget Brief included an extensive analysis of the cost of deployments since 1999-00. Rather than repeat that discussion this year, we've shortened the chapter. It only includes an explanation of how Defence is funded for deployments, updated tables of historical deployment costs, a summary of the cost of the Iraq and Solomon Islands operations, and an assessment of the impact on peacetime rates-of-effort of recent operations.

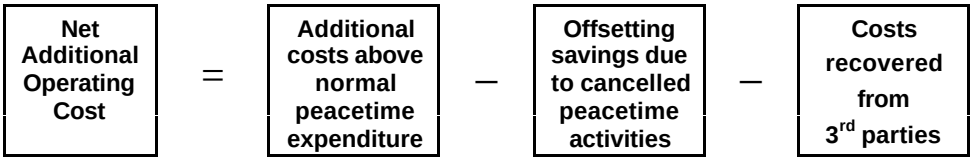
What do we mean by the cost of a war?

As a rule, Defence is supplemented for the *net additional* cost of any major military operation. This makes good sense because, in principle at least, it ensures that Defence does not have to compromise peacetime training to fund operations and avoids them having to maintain a contingency reserve to cover unanticipated costs.

Figure 6.1 shows how the net additional cost of an operation is calculated. In the past, Defence only disclosed the aggregate net additional operating cost, the total value of new capital investment and the amount recovered from third parties. However, they now routinely provide itemised lists of the individual costs incurred in an operation although offsets remain undisclosed.

Figure 6.1 Calculating the 'Net Additional Cost of War'

Where:



Net additional operating costs include the additional cost of personnel allowances, shipping & travel, repair & maintenance, health & inoculations, ammunition, contracted support, fuel, inventory, consumables etc. Offsetting savings include money saved from foregone activities like the cancelled Exercise Crocodile 99 & Avalon Air Show in 1999/00 due to the deployment of Australian Forces to East Timor. Those costs recovered from 3rd parties include the partial recouping of costs from the UN when participating in a UN peacekeeping operation.

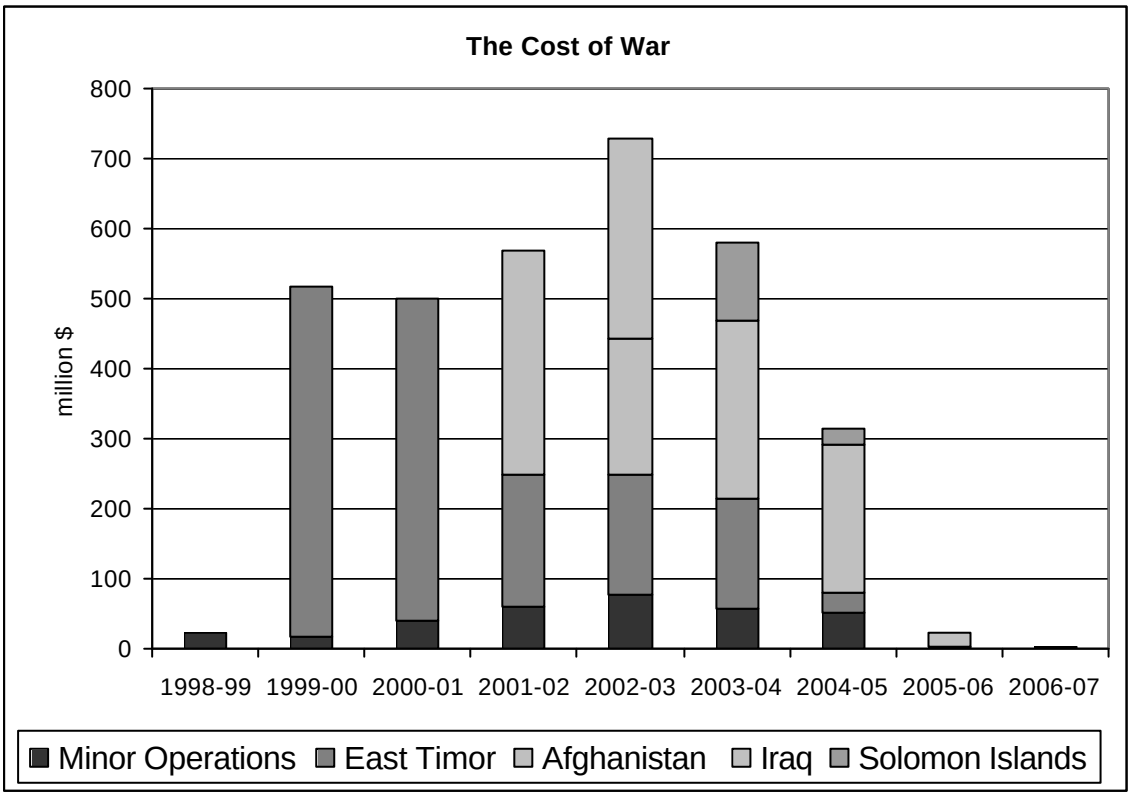
Net additional capital investment usually represents the accelerated filling of capability gaps specific to the operation. Recent examples include the purchase of additional equipment for the AP-3C maritime patrol aircraft for Iraq, and the rapid acquisition of the Javelin missile for Afghanistan. The capital cost sometimes also includes modifications to platforms and additional inventory purchases.

Finally, it's worth being specific about what is not included. The net additional cost of an operation does not include pay and allowances that would normally be incurred, nor does it include the cost of operating platforms within the planned peacetime rate of effort (nor does it cover the costs outside of Defence incurred by the AFP, DFAT or others involved in operations). Thus, aside from additional items like new equipment, ammunition, transport and contracted services, the net additional cost is the *marginal* cost of increased ADF activity due to an operation.

What's the big picture?

Table 6.2 shows the net additional supplementation received by Defence for deployments from 1998-99 through 2006-07.

Table 6.2: The net additional cost of ADF operations.



Source: Defence Annual Reports and Budget Papers

The data in Figure 6.2 excludes the 'force generation' costs associated with expanding the ADF by 3,555 troops, which was initiated soon after the East Timor deployment in late 1999. We have excluded this roughly $400–$500 million per annum because it was permanently included into the Defence funding base at the time of the 2000 White Paper. Minor Operations includes operations to Bogainville, Border Protection and increased protective security for ADF personnel and bases. Afghanistan includes the Multinational Interception Force (MNIF) which became part of the Iraq operation in March 2003.

The key point to make about Figure 6.2 is that the cost of supplementation has fallen. This has been accompanied by a significant drop in the number of ADF personnel on operational service. At the height of the East Timor operation around 6,500 personnel were involved. Today, less than 2,000 ADF members are deployed overseas.

New money for operations in the 2004-05 Budget

The PBS explains the additional supplementation that's been provided to cover the net additional cost of operational deployments [PBS pages 33 to 36]. The key elements are:

Iraq
The Government has made financial provision to retain the ADF contribution to Coalition operation in Iraq until (at least) the end of the forthcoming financial year. Consequently, an additional $132 million has been provided for Iraq over three years in this budget. Naturally, the vast bulk of the money ($125 million) occurs in 2004-05. When added to the $88 million of existing and re-phased earlier funding, this brings the total supplementation for Iraq in 2004-05 to $213 million. A remaining amount of $23 million will be spent in 2005-06 and 2006-07 on the repatriation and remediation of equipment.

East Timor
An extra $20 million has been provided in the budget to cover the cost of a one year extension of the UN mission to East Timor. When added to $11 million of prior supplementation, this will fund a continued but reduced ADF presence costing $27 million in 2004-05 and $4 million in 2005-06.

Border Protection
The elevated ADF contribution to coastal surveillance will be extended through 2004-05 at a cost of $16 million.

What do we know about current deployments?

The two new operations that arose in 2003-04 were the cooperative intervention to Solomon Islands and the ADF with Coalition forces in Iraq.

Solomon Islands
In July 2003 the government initiated a cooperative intervention mission to Solomon Islands to assist with the restoration of law and order and broader government reforms. The net additional cost of the mission to Solomon Islands was budgeted at $111.1 million for 2003-04 and $22.1 million for 2004-05. This includes the items listed in Table 6.1.

Table 6.1 Net additional costs of the Solomon Island deployment in 2003-04 & 2004-05.

Operating Costs	**$m**
Deployment and travel allowances for personnel	32.0
ADF health support	8.2
ADF logistic support	25.6
Strategic lift	18.4
Facilities	14.7
Communications	5.2
Commercial logistics support contract	15.0
Remediation of vehicles and equipment on return to Australia	14.2
Total Net Additional Cost	**133.3**

Source: PAES 2003-04

Initially, the mission involved 2,500 personnel including 1,400 ADF personnel, 155 AFP members, 90 Australian Protective Service officers and a number of Australian public servants who are helping with the restoration of government processes. In addition, there were a large number of personnel from Pacific Islands nations including 218 military personnel and 80 police. The role of the ADF in the mission was to provide logistical support and a security back up to police. Most of the ADF personnel deployed were, and remain, in the former category. As of March 2004, there were 521 ADF personnel deployed as listed in Table 6.2.

Table 6.2 ADF personnel in Solomon Islands, March 2004

Component	Number
HQ	51
Rifle Company	49
Force Support Squadron	113
Air Detachment	67
Communications Squadron	73
Naval Detachment	67
Engineer Element	44
Health Support Element	46
Visitors	10
Total	**521**

Source: FAD&T SLC question W13, February 2004

Iraq

In February 2004, some 830 ADF personnel were in Iraq or nearby as detailed in Table 6.3. This represents a significant reduction from the roughly 2000 personnel deployed in early 2003.

Table 6.3 ADF personnel in Iraq and surrounds, February 2004

	Total	Iraq
Air Traffic Controllers	58	58
AP-3C detachment	156	
C-130 detachment	140	
Iraq Military Assistance Training Team	7	7
Coalition Provisional Authority	4	4
HQ Combined Task Force 7	26	26
HQ Joint Task Force 633	59	59
Iraq Survey Group	12	12
Liaison Officers	4	2
Logistics and Communications	41	22
Maritime detachment	234	
Military Advisor to UN Special Rep	1	1
Multi-Nation Division - South East	7	7
Security Detachment	80	80
Liaison Officer to the Australian Rep	1	1
Total	**830**	**279**

Source: FAD&T SLC question W12, February 2004

Key contributions remaining include a Frigate, 58 Air traffic Controllers, two C-130 transport aircraft, two AP-3C Maritime Patrol Aircraft, headquarters personnel and an 80 strong security detachment for the Australian diplomatic mission in Iraq.

The addition of an Australian Army training team for Iraq was announced in May 2004. This new deployment comprises 40 soldiers along with a 13-member security detachment and two additional Australian Light Armoured Vehicles (ASLAV). The government has said that the ADF will remain in Iraq until at least June 2005.

The cost of the Iraq operations for 2002-03 and 2003-04 were detailed in a response to a question at the June 2003 Senate estimates hearings, Table 6.4. Although the timing of the spending has changed the individual items are probably still accurate.

Table 6.4 Net additional costs of the Iraq deployment 2002-03 and 2003-04.

Operating Costs	**$m**
Deployment and travel allowances for personnel	101.5
Strategic lift costs (transportation of personnel and equipment)	97.2
Additional operating cost associated with AP-3C deployment	14.0
Rapid acquisition of equipment and stores for contingency planning	43.6
Additional costs associated with sustainment of deployed personnel	212.4
Subtotal	**468.7**
Capital Costs	
Capital associated with AP-3C deployment including repairables	22.1
Enhancement of computer systems	3.8
Repairable items	28.1
Rapid acquisition of equipment and stores for contingency planning	92.7
Subtotal	**146.7**
Total Net Additional Cost	**615.4**

Source: FAD&T SLC question W1, June 2003

East Timor

On the 19th of May 2004 the Minister announced that the ADF will play a role in the small follow-on United Nations mission in East Timor for the next 12 months. This followed the UN Security Council passing a resolution renewing the mandate of the UN Mission of Support in East Timor (UNMISET) for another year.

The ADF commitment will involve around 100 personnel being part of the roughly 400 strong peacekeeping force. (The new commitment will also involve 16 Australian Federal Police officers.) This represents a reduction from the 440 ADF personnel in East Timor in May 2004. The Army's Blackhawk helicopters will also be withdrawn in June 2004.

Impact of operations on peacetime rates of effort

The impact of deployments on planned peacetime rates of effort is often counter-intuitive because rates of effort sometimes fall due to the disruption caused. Table 6.5 lists key platforms employed in recent operations. Interestingly, the F-18 and Chinook helicopter fleet experienced an increased rate of effort due to the Iraq deployment while the C-130 and AP-3C fleet fell below the peacetime rate of effort. This is notwithstanding that $14 million was provided for increased P-3C operating costs in 2002-03 due to the Iraq deployment. Unfortunately, comparable figures are not available for Navy vessels, although anecdotal evidence is that they regularly deliver substantial numbers of additional steaming days in support of operations well above peacetime rates-of-effort.

Table 6.5: Impact of Deployments on Key Flying Hour Rates

Platform	*Budgeted Peacetime Rate of Effort (flying hours)*	*Actual Rate of Effort (flying hours)*	*% Difference*
1999-00 (period including East Timor INTERFET operation)			
Blackhawk	9,260	8,179	-11.67%
Kiowa	8,985	8,379	-6.74%
C-130	16,762	13,144	-21.58%
Caribou	5,080	4,356	-14.25%
2001-02 (period including War on Terror & Border Protection operations)			
C-130	14,000	13,102	-6.4%
F-18	13,000	11,287	-13.2%
P-3C	8,660	9,624	+11.1%
2002-03 *(period including Iraq war)*			
C-130	14,000	13,622	-2.7%
F-18	12,500	14,077	+12.6%
AP-3C	9,600	8,172	-14.9%
Chinook	1,270	1,364	7.4%

Sources: Defence Annual Reports and Portfolio Budget Statements for 1999-00, 2001-02 and 2002-03.

So what do we get for our money?

Table 6.6 overleaf lists the net additional cost of recent ADF operations along with a brief description of what the operation entailed. It's important to note that many smaller operations, and even the extensive support given to the Sydney Olympic games, occur without any supplementation. We have not included the money received by Defence for Operation Safebase that has provided heightened protection for ADF personnel and facilities since 2001-02 at a cost of around $30 to $35 million per annum.

Table 6.6 Supplementation received for the cost of recent ADF operations($ million)

Operation	Net Additional Operating Cost	Net Additional Capital Investment	Duration (months)	Description
East Timor 1999-00	429.7	70.4	9	A peak of 6000 personnel reduced to 1600 in June 2000. Included 12 Blackhawk plus a troop of Kiowa helicopters, plus extensive airlift (Caribou and C-130) and sealift support.
East Timor 2000-01	335.9	123.5	12	1610 personnel in theatre. Included 4 Blackhawk and a troop of Kiowa helicopters, Caribou detachment plus airlift and sealift support.
East Timor 2001-02	187.5	0	12	1470 personnel. Included Battalion Group, troop of Kiowa helicopters plus airlift/sealift support. (Blackhawk & Caribou use unknown.)
East Timor 2002-03	172.4	0	12	1250 personnel. Included Battalion Group, troop of Kiowa, and detachment of Blackhawk helicopters plus airlift/sealift.
East Timor 2003-04	157.0	0	12	Similar to above but drawing down. By 30 June 2004 there were only around 440 personnel and a Blackhawk detachment remaining.
East Timor 2004-05	27.1		12	Australian contribution to extended UN peacekeeping in East Timor. Around 100 personnel with no helicopters.
East Timor 2005-06	4.1			Remediation and repatriation costs.
Bougainville 1998-99	23[3]	0	12	Unstated number of personnel plus airlift/sealift.
Bougainville 1999-00	18.3[3]	0	12	Unstated number of personnel plus airlift/sealift.
Bougainville 2000-01	40.2[3]	0	12	176 personnel plus airlift/sealift
Bougainville 2001-02	10[3]	0	12	35 personnel plus airlift/sealift
Bougainville 2002-03	14.6[3]	0	12	35 personnel plus airlift/sealift
Bougainville 2003-04	5[3]	0	12	ADF involvement ended in August 2003. This funding covers extraction and remediation of equipment.
Border Protection 2001-02	12.4	6.3	10	Undisclosed but included Frigates, Amphibious Transport Vessels, Patrol Boats, Hydrographic Vessels, P3C Maritime Patrol Aircraft, Special Forces & other Army personnel.
Border Protection 2002-03	25.1	2.7	12	Undisclosed.

Border Protection 2003-04	17.8	?	12	Undisclosed.
Border Protection 2004-05	16.0	?	12	Undisclosed.
War on Terror & MNIF 2001-02	180	140	9	1100 personnel. Included 2 Frigates, 1 LPA Amphibious Vessel, 4 F-18 Fighters, 2 B707 Air-to-Air Refuelling Aircraft, 2 P3C Maritime Patrol Aircraft, C-130 Transport Aircraft, 150 Special Forces plus command elements.
War on Terror & MNIF 2002-03	169	30	MNIF 9 Afghan 3	1100 personnel. Included 2 Frigates, 1 LPA Amphibious Vessel, 2 P3C Maritime Patrol Aircraft. C-130 Transport Aircraft, 150 Special Forces plus command elements.
War on Terror 2003-04	-5	0	-	
Iraq[5] 2002-03	285.3	?	7	2000 personnel. Included 2 Frigates, 1 LPA Amphibious Vessel, 14 F-18 fighters, 3 C-130 Transport Aircraft, 2 P3C Maritime Patrol Aircraft, 2 x Chinook helicopters, 500 Special Forces, Clearance Diver Team plus command elements.
Iraq[6] 2003-04	255.2	?	12	830 personnel including 279 in Iraq. Deployment includes C-130 Airlift detachment, Air Traffic Controllers, AP-3C Maritime Patrol Aircraft, Frigate, various HQ elements and a security detachment for the Australian mission in Iraq.
Iraq 2004-05	212.5	?	12	Similar to 2003-04.
Iraq 2005-06	19.3	?	12	Remediation and repatriation costs
Iraq 2006-07	4.0	?	12	Remediation and repatriation costs
Solomon Islands 2003-04	111.1	?	12	Initially 1,400 ADF personnel and an unspecified number of civilians. The size of the operation is reducing as stability returns to the country.
Solomon Islands 2004-05	22.2	?	12	Undisclosed.

Note: Supplementation was not provided to Defence for Bougainville in every year. The capital cost of the Iraq operation was around $146.7 million spread over two years.

SECTION 7 – DEFENCE BUDGET TRANSPARENCY

Introduction

The last two ASPI Budget briefs have included extensive suggestions of how to improve Defence budget transparency. We like to think that this contributed in some way to the very substantial increase in clarity and disclosure in recent Defence budget papers. This year's PBS is no exception being the clearest and most comprehensive to date. The Department it to be congratulated for this improvement.

The next step

In 2003 the JFAD&T Committee released their report of the 2002-03 Defence Annual Report which included the recommendation that:"*...the Department of Defence should respond to the measures proposed by the Australian Strategic Policy Institute (ASPI) to improve Defence budget transparency discussed on pages 99 to 105 of the ASPI Defence Budget Brief 2003-04."* It was gratifying that the Committee saw our suggestions worthy of noting, and pleasing that Defence subsequently agreed with the recommendation in their response to the Committee.

Because Defence is working to improve its disclosure of Defence budget information, there is little point in reiterating last year's detailed suggestions that remain on the public record. Instead, we've prepared Table 4.1 overleaf that lists suggestions we've made to improve Defence Budget Transparency.

Overall the signs are encouraging, especially when it's remembered that Defence has improved it's disclosure of budget data in many ways beyond that which we have suggested. These include:

- Explaining the common variations of cost across the Defence outcomes.
- The disclosure of projected and budgeted employee expenses by category.
- Disclosure of ADF Reserve costs.
- Disclosure of the DMO budget.
- A comprehensive breakdown of the Capital Budget including sub-categories like Major Capital Equipment (MCE) and Facilities.
- An explanation of the application of slippage to the MCE budget.
- An increase from 20 to 30 top MCE projects.
- More milestones are disclosed in the discussion of MCE projects.
- More extensive notes to the financial statements.

Suggestion	Status
1. Move from a single Defence Outcome *'The Defence of Australia and its Interests'* to multiple Outcomes that capture what is trying to be achieved. For example, *'Armed forces ready for operations'*, Maintenance of a favourable strategic environment' and 'Successful conduct of military operations'.	The previous single Defence Outcome has been replaced by 7 Outcomes that roughly reflect an organisationally based grouping of the underlying Outputs. However, the result is no more focused on achievable goals than before.
2. Provide price information down to (what was) the sub-Output level.	The old sub-Outputs have been redefined as Outputs with a resulting improvement in transparency.
3. Detail Output expenses.	The 2002-03 PAES saw the disclosure of expenses down to the Output level.
4. Explain variations in Output price.	The explanation of price variations has improved substantially over the last couple of years.
5. Set quantitative performance targets for the activity levels of platforms and units.	Air Force and Army Aviation now have targets for activity levels. Navy is yet to do so aside from the Patrol Boat days provided for civil surveillance.
6. Set quantitative performance targets for the availability of platforms and units in Outputs.	Navy now has availability targets, Air Force and Army are yet to do so.
7. Set preparedness target for Outputs using, for example, broad goals like 'a battalion group of around 1000 personnel at 30 days notice to move', and/or scenario based goals as employed in the US.	A generic target of meeting the CDF's preparedness directive applies to most Outputs. More detail should be possible without compromising security.
8. Disclose ADF permanent, Reserve and Civilian personnel numbers for each Output.	
9. Provide the breakdown of Outcome Price across the Defence Groups.	This information has been provided since the 2003-04 PAES.
10. Provide the breakdown of civilian and personnel numbers across the Defence Groups.	Not Achieved
11. Provide an explanation of, and performance targets for, Group activities.	Not Achieved
12. Explain variations in Group expenses from one year to another.	Not Achieved
13. Set targets, and report on, the cost, time and technical performance of projects. (The Senate FAD&T Committee has recommended that reporting should be modelled on the UK Audit Office/MoD framework.)	Despite some improvement in the level of detail provided on capital investment, clear targets remain undisclosed. The inclusion of significant projects beyond the top-20 in 2003-04 was a good initiative.
14. Provide a detailed breakdown of approved and unapproved major capital investment funding.	An excellent level of detail is now provided.
15. Disclose the total value of approved major capital equipment projects that remains unspent.	Not Achieved

16. Provide a fuller explanation of budget measures.	The explanation of budget measures has improved a great deal in the last several years.
17. Provide a reconciliation of individual budget measures	This has been achieved.
18. Clearly identify budget measures previously funded in the PAES.	Achieved
19. Provide a clear explanation of the achievement of White Paper funding.	The explanation provided is a great advance on prior disclosure although a couple of components remain opaque.
20. Provide a clear explanation of the calculation of Defence funding.	Achieved
21. Disclose recruiting and retention targets for the upcoming year.	Not Achieved
22. Targets and expenses for 'professional service providers should be disclosed.	Not Achieved
23. Quantify personnel shortages.	Although this is not disclosed in the PBS it has become a routine disclosure through the Senate Estimates process.
24. The planned combat/combat related component of the ADF should be disclosed.	Not Achieved
25. List the individual costs and offsets that make up the net additional cost of operational deployments.	Itemised costs have become a routine disclosure at Senate estimates hearings and increasingly within the PBS/PAES. Offsets remain undisclosed.

Section 8 – Top 24 Projects 2004

Compiled by:
Gregor Ferguson
Daniel Cotterill
Tom Muir
Editor and senior writers of Australian Defence Magazine

1. Airborne Early Warning and Control
2. Air to Air Weapon Capability
3. Air to Surface Stand-off Capability
4. ANZAC Ship
5. ANZAC Ship ASMD Upgrade
6. ANZAC Ship Helicopter
7. Armed Reconnaissance Helicopters
8. ASWUP
9. Australian Light Armoured Vehicle
10. Bushranger
11. Collins Combat System
12. Collins Reliability & Sustainability
13. Evolved SeaSparrow
14. FFG Progressive Upgrade
15. Heavyweight Torpedoes
16. High Frequency Modernisation
17. Hornet Upgrade
18. Lightweight Torpedo
19. Military Satellite Communications
20. Minehunter Coastal
21. M113 Upgrade
22. New Air Combat Capability
23. P-3C Upgrade Implementation
24. Replacement Patrol Boat

Project Air 5077- Airborne Early Warning and Control

Project Overview and Key Issues
The airborne early warning and control (AEW&C) aircraft to be acquired by Australia are based on Boeing's 737-700 twin-engined airliner fitted with a radar of over 400km range being developed by Northrop Grumman.

Airborne radar can see much further than ground-based systems in much the same way that a better and more distant view is obtained from the top of a hill.

Successful implementation of this project will enhance the capability of Australia's surveillance and air defence system. AEW&C will allow more effective detection, identification and tracking of targets, and better control of fighters. While the aircraft's primary role will be wide area surveillance of Australia's air/sea gap, it can perform a range of other tasks including over-the-horizon targeting, battlefield surveillance, search and rescue and civil support operations. The AEW&C system is a crucial force multiplier.

Defence originally intended to buy six AEW&C aircraft but this was reconsidered in the lead-up to the 2000 Defence White Paper and the contract signed in December that year covered four machines with options for up to a further three.

Critics of that decision suggested that Australia was buying four aircraft for the price of six as the high level of non-recurring development expenses pushed up the unit price. However, six sets of AEW&C equipment were part of the initial order.

The cost to purchase aircraft five and six was negotiated to be $US175 million for the pair, while the cost to purchase aircraft seven will be a maximum of $US250 million#. The options were originally to expire in June 2003, but this was then extended until June 2004. A decision to exercise the option for two more aircraft was announced in May as part of the Federal Budget at a cost of $326 million.

The project's budget approval in 2000 was $3,110.5 million and is currently $3,600 million in January 2004 dollars*. The project budget is adjusted yearly to compensate for movements in the cost of labour and materials and foreign currency exchange rates (principally against the US dollar), and according to Defence this, aside from the purchase of two extra aircraft, is the sole reason for the variation from the original project budget approval.

Any large and technically complex military procurement project carries an element of risk and AEW&C is no exception. The most challenging area will be integration of the radar and mission system computing software.

Recent project achievements include delivery of the first radar in September 2003; completion of the preliminary design for support segments in October 2003; electrical power on for first aircraft in November last year; the completion of structural modifications on the first aircraft in February 2004; and, the completion of Software Build 5 in April this year.

Milestones expected over the coming year include the first flight this May; electrical power on for the second aircraft in June; completion of critical design processes for the support segments in September; completion of modifications to the second aircraft in November; completion of Software Build 6 in December; and, finalisation of airworthiness testing of first aircraft also in December this year. Air 5077 has been running ahead of schedule in many areas.

Australian Industry Involvement (AII)
Under the original plan to buy six aircraft, four of them would have had the necessary airframe modifications performed here by Boeing Australia, and until the option for two extra aircraft was exercised it appeared this opportunity was lost and the work would be conducted exclusively in the US. However, four of the aircraft will now be fitted-out in Australia, creating around 170 new jobs in Brisbane, a move that will increase AII by $80 million. Strategic industry development activity worth an additional $99 million has also been included with the purchase of the additional aircraft.

Boeing Australia and BAE Systems Australia are the main local companies involved in an AII program that now comprises over $480 million in local content and over $900 million in strategic industry development activities. While a specified percentage has not been set, the local content program represents about 18% of the contract price. According to Defence, some Australian SMEs are already starting to win overseas contracts as a direct result of their involvement in this project.

#Sep 98 prices, which is the original contract baseline plus project costs.
*Current figure from the DMO with $326 million added for the extra two aircraft

Project Air 5400 - Air to Air Weapon Capability

Project overview and key issues
Project Air 5400 - Air to Air Weapon Capability was established to help re-establish the regional capability edge previously enjoyed by the RAAF's force of F/A-18A/B Hornet fighters. Under this project Defence has ordered the AIM-132 Advanced Short Range Air to Air Missile (ASRAAM), manufactured by MBDA in Europe, and the AIM-120B and –C Advanced Medium Range Air to Air Missile (AMRAAM), manufactured by US company Raytheon.

The RAAF has not disclosed how many missiles it has ordered; the value of the ASRAAM contract with MBDA also remains undisclosed, but the total project budget is $309 million at December 2003 values.

The Hornets were originally armed with the short-range AIM-9M Sidewinder and medium-range AIM-7M Sparrow missiles and were in danger of being outclassed by regional air forces which have ordered or begun fielding advanced western and Russian aircraft such as the F/A-18C/D Hornet, F-16C/D, Mig-29 and Sukhoi-27 and modern short and medium-range air to air missiles.

To restore the RAAF's air to air combat edge and maintain this convincingly until the Hornet is replaced by the F-35 Joint Strike Fighter from about 2012-2015, the Hornet

upgrade project (Air 5376) is implementing the radar and avionics changes necessary to exploit the full capabilities of both AMRAAM and ASRAAM. On current plans both weapons will arm the F-35 when it enters service – they are part of the baseline family of weapons which the F-35 is designed to carry.

The RAAF bought the AMRAAM from the US Air Force under a Federal Military Sales (FMS) arrangement. This combat-proven weapon is in frontline service with the US Air Force, Navy and Marines, and with the UK's Royal Navy. Integrated with the upgraded Hornet's new Raytheon APG-73 radar, it is a true 'fire and forget' weapon which allows a single aircraft to engage several adversaries simultaneously at extended range.

Deliveries are complete. The AIM-120B armed the upgraded Hornets of 75 Sqn squadron in the Gulf in early-2003. The AIM-120C, which incorporates minor aerodynamic modifications, is expected to be declared operational by the ADF's Airworthiness Board in July. Singapore is the only other AMRAAM user in our region at present.

The RAAF ordered the ASRAAM in 1998 from European missile house MBDA in a commercial contract of undisclosed value.

The ASRAAM is much faster and more agile than the Sidewinder, with a considerably greater range and is far more resistant to counter-measures and decoys. It is also designed for use with a helmet-mounted sight which confers a further significant advantage in dogfights; the RAAF will acquire a helmet-mounted sight as part of the Hornet HUG.

Australia has been granted full access to the ASRAAM Intellectual Property which will allow the UK and Australia to collaborate on future development and enable both partners to field enhancements faster and cheaper.

Deliveries to the RAAF were delayed for nearly two years by a contractual dispute between MBDA and the UK Ministry of Defence in early-2001 over ASRAAM's performance. The RAAF has slightly different performance requirements from the UK, but wants missiles of the same software configuration and build standard.

This dispute was resolved in early 2002 and the RAF declared ASRAAM operational last year. MBDA is delivering incremental enhancements in missile performance through successive software loads. The Commonwealth and MBDA agreed a delivery schedule and weapon configuration based on one of these upgrades. The Commonwealth began formally evaluating the performance of this ASRAAM configuration in August 2003 and a training capability was in service by January 2004. Following successful live weapon firings in early 2004 the ASRAAM is expected to be declared operational in July this year.

The RAAF is the first export customer and the first Hornet operator to order ASRAAM. The project cost included a lengthy integration and flight test process, by Hornet manufacturer Boeing in the US, supported by the US Navy and by the RAAF in Australia.

Australian Industry Involvement (AII)
AII Target: AMRAAM – none. ASRAAM: The contract included the option of an ASRAAM In Service Support Capability consisting of an Australian ASRAAM Software Support Capability (AASSC) and Deeper Maintenance Services. MBDA and its Australian sub-contractor BAE Systems Australia have proposed establishing and operating the support facility in Adelaide, and at the time of writing Aerospace Development and Air Force Headquarters were evaluating the cost benefit of executing this option, in particular the value gained by acquiring the AASSC facility. The decision was expected by late-2003 but was delayed pending completion of the ASRAAM evaluation – the decision is now expected in May 2004.

Project Air 5398 - Air to Surface Stand-off Capability

Project overview and key issues
This project is acquiring and fielding the AGM-142E medium-range air to surface missile which will allow the RAAF's F-111C strike aircraft for the first time to engage targets with great accuracy from 'stand-off' range – that is, from safely outside the range of most targets' own defences, so reducing risks to both aircraft and crew.

The AGM-142E is a 1,363kg rocket-powered missile designed by Israeli company Rafael and manufactured in the US in a joint venture with Lockheed Martin. The RAAF ordered an undisclosed number of AGM-142s from the USAF under a Federal Military Sales (FMS) agreement in December 1998. The total project budget for Air 5398 is $437 million.

Already in service with the Israeli Defence Force and the US Air Force, the missile can use either a blast/fragmentation or a penetrating warhead; these are selected and fitted before take-off to suit the target. The RAAF variant will have an imaging infra red (IIR) guidance system for day and night operations. It can be used in the 'fire and forget' mode, or steered to its target by the aircraft navigator via a secure data link. The USAF version of this weapon, which is believed to be similar to the RAAF's, is known to have a range of at least 57nm (90km).

The operational capabilities of the AGM-142 were demonstrated successfully in 2002 in Afghanistan. There, missiles launched from USAF B-52 bombers were used to attack cave and tunnel complexes on mountain sides and in deep valleys. Their man-in-the-loop guidance system made it possible to attack targets which were protected by the rugged terrain from other types of guided weapon of similar penetrative effect.

This is the first time such a complex integration task has been carried out entirely in Australia and the process has been slow and expensive. Delays incurred integrating the AGM-142's own software and associated data link pod with the F-111C mission computer with mission computer have pushed back the Initial Operational Capability (IOC) for the AGM-142 by nearly 18 months to early-2006.

The delay has been attributable, first, to aircraft mission computer software and airframe wiring modifications designed to enable the F-111 to launch and guide both the AGM-142 and the subsequent Follow-On Stand-Off Weapon (FOSOW) to be

acquired under Project Air 5418, and more recently to difficulties relating to certification of aircraft software. Boeing Australia Ltd is prime contractor for the integration work at Amberley.

The software certification issues have been resolved and the DMO reports good progress is being made against the revised schedule.

Flight trials of the fully integrated aircraft and missile system are scheduled for late 2004/early 2005 and test firings of live weapons are scheduled for mid-2005. This program will be followed by Operational Test and Evaluation (OT&E) in late-2005 to meet the scheduled 2006 in-service date.

Once in RAAF service the AGM-142E will significantly increase the striking power of the F-111C force while reducing its vulnerability to modern air defence weapons. Except for the more expensive Boeing Harpoon anti-ship missile which arms its F-111Cs, F/A-18 Hornets and AP-3C Orions, the RAAF currently has no air-to surface stand-off missile capability of any kind.

Last year's announcement that the F-111s will retire from about 2010 means the F-111 will not be armed with the FOSOW. But integration of the AGM-142 will continue in order to provide a stand-off strike capability pending the introduction of the FOSOW which will arm the RAAF's F/A-18 Hornets and AP-3C Orions from no earlier than about 2008. Upgraded Hornets, armed with the FOSOW, are intended to replace the F-111/AGM-142 combination pending the introduction of the F-35 Joint Strike Fighter from about 2012-13 onwards.

Australian Industry Involvement (AII)
There were no AII targets associated with the acquisition of the missiles themselves; however, their integration with the F-111C represents an important investment in the development of indigenous software and aerospace engineering skills necessary to upgrade the F-111C, of which the RAAF is now the sole operator, and maintain and support new capabilities through their life of type.

SEA 1348 Phase 2 – ANZAC Ship

Project Overview and Key Issues
With the mid-March launch of Ship PERTH (10), the final ANZAC class frigate, and delivery of BALLARAT (08) in April, the ANZAC Ship construction program will now wind down, ending a 19-year success story for Australian defence industry with Perth's delivery in June 2006. The planned expenditure for 10 Ships is currently $6.2 billion which includes a fixed price Prime Contract currently estimated at $5.3 billion (Feb 04 prices) for the construction of 10 Ships, associated shore facilities and initial integrated logistic support.

The ANZAC ship program has been a major achievement for prime contractor Tenix. The largest and arguably one of the most successful contracts ever awarded in Australia, Tenix's management of the contract has earned it international recognition and a number of prestigious engineering and quality awards.

The first frigate, HMAS Anzac was commissioned in May 1996. Eight ships have now been delivered of which five are in service with the RAN and two with the RNZN. The five ANZAC frigates in service have proved their worth in operations in the Persian Gulf, off the north coast of Australia and in Antarctic waters.

Built to a modified Blohm + Voss MEKO 200 design, the 3600 tonnes displacement of the ANZAC is somewhat larger than the standard M200 platform. There were particular advantages with the MEKO design concept in that its use of modular construction techniques permitted the parallel production of hull and superstructure modules at sites in Australia and New Zealand. The modules are shipped to the Tenix facility at Williamtown, Victoria for final assembly and launch.

Construction techniques include the construction and partial fitting out of modules allowing the installation and testing of equipment before incorporation of the module into the hull proper. To streamline the management of technical warship data for the ANZAC build, prime contractor Tenix developed Crossbow, a web-based tool that can search multiple databases across different languages, countries, formats and content into a single integrated and coherent dataset. The system is being used in the upgrade of the frigates by the ANZAC Alliance to speed access to ship information across the defence and associated industries.

In view of the 17year life of the construction program and the ANZAC's initial modest combat capabilities, a number of capability enhancements are in train including the combat system, and anti-ship missile defence and undersea and surface warfare capabilities. The class is also being equipped with the Enhanced SeaSparrow Missile (ESSM) as well as the Harpoon Block II anti-ship missile.

The main gun is a United Defense 127mm Mk 45 Mod 2 gun, which can fire at a rate of 20 rounds/min to a range of over 20km. Two triple 324mm Mk 32 torpedo tubes for Mk 46 anti-submarine torpedoes are fitted. The latter is being replaced with the Eurotorp MU90 Advanced Lightweight Torpedo. The introduction of Super Seasprite helicopters towards the end of 2004 will extend the ships' surveillance and Anti Surface Capability.

Other class enhancements include equipping the ships with the Centaur Electronic Support Measures (ESM) system, and improved access to both satellite and modern high frequency communications. Also being updated are the capabilities to handle electronic information on board ships and to rapidly transfer information between ships of a fleet. The estimated eight-ship Australian project life to date expenditure to 30 June 2004 is $4878 million.

Australian Industry Involvement

The involvement of industry in Australia and New Zealand has been critically important to the success of this defence project. A core industrial capability for product through life support has been established and the target of some 70 per cent local content has been achieved. The project is also providing long-term benefits for the economies of Australia and New Zealand, involving more than 1300 companies with 73% local industry content and 8% local industry related work (Defence Offsets) and involvement.

SEA 1448 - ANZAC Ship ASMD Upgrade

Project overview and key issues

The ANZAC Ship class was initially contracted with a modest surface and underwater self-defence capability limited by the ceiling price, leaving the ships' future surface and subsurface warfare capabilities for later consideration. SEA 1448 Anti-Ship Missile Defence (ASMD) upgrade was introduced to address some of these limitations (other upgrades address Undersea and Surface Warfare capabilities) and provide the class with a reasonable level of anti-ship missile defence against emerging regional capabilities.

Moves to upgrade the ships' self defence capabilities—especially against missile threats-- have been under consideration for several years. The first of these—the over-ambitious Warfighting Improvement Program (WIP)—was cancelled in favour of a more modest proposal. Subsequent investigations by a combined Defence/Industry study team, focussing on defence against missile attack—the ANZAC ship's major capability shortcoming—recommended a series of essential capabilities as part of the class upgrade. These enhancements and additional important capabilities were subsequently assessed by DSTO in more stressing environments using its modelling and simulation techniques.

The ANZAC Alliance, comprising Tenix Defence, Saab Systems and the Commonwealth, was then tasked with determining whether the modelled capability could be procured, integrated and introduced into service and supported within the program budget. The Alliance subsequently produced a costed system configuration for the baseline $500m ASMD upgrade which includes such elements as an infra-red search & track system that detects thermal energy radiated by missiles, an upgrade to the surface search radar to improve its small target detection capability, and a very short range air defence missile system. The ships' combat management system will also be upgraded to match the functionality of the new equipment and increase its data processing capability.

The ASMD upgrade project also includes a study and related trials to consider the feasibility of including an active phased array radar as part of an ASMD solution in the ANZAC class. The outcome of these trials will determine whether the proposed second channel of fire--to enable multiple launch of ESSM missiles and illumination of their incoming targets—is based on installing a second conventional fire control director or a phased array radar director. The acquisition of a second channel of fire will be made under a subsequent phase of the ASMD upgrade program. Another essential capability, Link 16, received priority approval for installation under a separate project.

The ASMD upgrade was deferred pending the findings of the 2003 Defence Capability Review and its revised $520 million budget went unapproved until the end of 2003 when the Government announced funding approval for the project. Despite this delay Alliance members are confident that the scheduled in-service date of 2007 will be met and might even be exceeded.

In the meantime the Alliance has been revalidating equipment tenders and is undertaking a series of risk reduction and other studies on aspects such as the impact

of the equipment proposals on ship's weight, stability, demand on ships' services and associated changes in training needs. Original ASMD component proposals are also being reviewed against advances in technology.

Australian Industry Involvement (AII)
There is substantial local industry involvement in the ASMD program through the development, integration, test and verification of the various components of the planned capability by Alliance members Tenix and Saab, including through use of their facilities. The industry members of the Alliance will also be responsible for the installation and through life support of the equipment including software maintenance and upgrade. The upgrade of the 9LV combat management system to the COTS-based Mk 3E level has been developed locally by Saab Systems. The company will also upgrade their 9LV fire control directors.

If as a result of current trials phased array technology is adopted as part of the ASMD solution it is likely that locally developed and manufactured phased array radars and illuminators will be used, providing an additional boost to the level of AII in this project. The current sea trials of a representative subset of the CEA-FAR phased array are expected to conclude in June.

Sea 1411 - ANZAC Ship Helicopter

Project Overview and Key Issues
Defence is in the process of acquiring 11 Seasprite helicopters for its eventual fleet of eight ANZAC Class frigates. The helicopters are to enhance the ships' surveillance and offensive capabilities and are equipped with radar and other sophisticated sensors along with torpedoes and anti-ship missiles. Flight simulator and support facilities are also being acquired.

Deliveries of fully compliant aircraft were to have commenced in late 2000 and be completed by August 2001. This has been delayed by the failure of major sub contractor Litton Integrated Systems to successfully develop the integrated software package necessary to run the sensors, avionics and weapons. The radar, datalink capability and the Penguin anti-ship missiles are not yet integrated with the mission control system. Without this software the helicopters cannot fulfil their intended role.

Progress is being made, however, and of the 11 aircraft 10 are in Australia and four have been provisionally accepted by the Commonwealth, and a fifth was to be offered for provisional acceptance on April 21. Five more aircraft will be provisionally accepted progressively over the next few months. The eleventh aircraft is fully assembled and will remain in the USA for ongoing flight tests until late 2004. The delivery of fully functional helicopters will begin in December 2004.

The final delivery will consist of uploading the full capability software across the fleet in early 2005 and Navy expect to have their first Super Seasprite flights at sea by mid 2005. Provisional acceptance of the aircraft with a basic suite of software (interim training and utility capability) was approved to enable First of Class Flight Trials with an ANZAC class ship, some Operational Test and Evaluation (OT&E) and training of core squadron personnel in preparation for the fully capable aircraft.

Full acceptance into Naval Service will occur following completion of the OT&E and is scheduled for December 2006. The timeframe is mainly driven by the Penguin missile firing to be undertaken in conjunction with the RIMPAC deployment in 2006.

The main criticisms of this project have been that Defence's project management team should have prevented this state of affairs, and that the contract should have had more effective penalty clauses to encourage contractor performance. Defence points out however, that it was prime contractor Kaman Aerospace International's job to manage Litton, and that it was the Defence project team which advised Kaman of problems with subcontractor performance early in the contract execution. The real problem was more to do with the suitability of the chosen prime contractor and contracting strategy for this highly developmental software intensive project.

A broader question is whether Defence should seek to buy "Australia only" solutions on projects like this with only a small production run; a path that incurs significant development costs and increases exposure to high levels of technical risk.

The highest technical risk to the project remains the integration of the tactical software builds generated by the subcontractors.

Australian Industry Involvement (AII)

Kaman is teamed with Tenix Defence, CSC Australia, Scientific Management Associates and Safe Air NZ. CSC Australia and Northrop Grumman Information Technology of San Diego have taken over the major software sub-contract abandoned by Litton and are providing systems engineering and software development and support.

Scientific Management Associates' involvement covers logistics analysis and supply support functions, and providing training and documentation. Safe Air of New Zealand is providing design services, aircraft assembly, maintenance and overhaul. Safe Air will also design and manufacture aircraft ground support equipment.

The contracted AII obligation is an overall Australian Industry Involvement Program valued at $A229.763m in local content and $A63.846m in Strategic Industry Development Activity. Based on current predictions Kaman have advised Defence that they will over achieve the requirement by $A100 million.

The RFT for the project was issued in October 1995, a decision made in January 1997 with a contract signed in June that year. The original project budget was $745.6 million in February 1996 dollars and currently stands at $1002.461million in January 2004 dollars.* The difference is due to price and exchange rate fluctuations.

*current budget figure from the DMO

Armed Reconnaissance Helicopters (Project Air 87)

Project overview and key issues

In December this year the Army will start fielding 22 Eurocopter Tiger Armed Reconnaissance Helicopters (ARH). Acquired under Project Air 87 these will equip the 1st Aviation Regiment at Robertson Barracks, Darwin, providing a modern airborne reconnaissance, escort and fire support capability which Army currently lacks.

The total approved budget for this project is $1.82 billion. This includes a $1.14 billion fixed-price prime contract signed in December 2001 with Australian Aerospace Ltd, the Australian subsidiary of Eurocopter. The prime contract also includes a training system with a suite of aircrew and groundcrew training devices and a contractor logistics support system.

.

The first of these aircraft made its maiden flight on schedule at Eurocopter's Marignane factory in France on 20 February this year and the project remains on track to achieve its planned In-Service Date (ISD) of 15 December. This requires the delivery of two Tiger ARH with an ADF airworthiness authority Special Flight Permit, with trained crews; ADF and contractor support measures in place; and training and technical manuals accepted by the Commonwealth.

Based closely on the French Army's HAP variant, which will enter service by June this year, Australia's ARH is armed with a 30mm gun, 70mm rockets and Lockheed Martin Hellfire air to ground missiles. Built largely from carbon fibre composites with armour and Electronic Warfare Self-Protection (EWSP) systems, the Tiger ARH carries a pilot and 'battle captain' – the tactical coordinator and aircraft commander.

Australian-specific modifications have been minimised to reduce project risks. Equipped with the same infra red, electro-optic and passive electronic sensors as the French Tiger HAP, it will replace the Army's obsolete, Vietnam-era Bell UH-1H Iroquois gunships and the unarmed Bell 206 Kiowa reconnaissance helicopters, which carry no sensors or self-protection systems, in the reconnaissance role. It will gather and exchange tactical and surveillance data with Army's Battlefield Command Support System (BCSS) through the medium of a dedicated Ground Mission Management System (GMMS).

The Tiger ARH's weapons, sensors and tactical data links will make it a key element of future Army combined arms combat teams in the ADF's emerging Network-Centric Warfare construct.

This will be the first Tiger variant to carry the ARC-210 secure tactical radios and the first non-US platform to integrate the US-made Hellfire precision-guided missiles. US government export clearance for these items and for their integration with the French-built mission system was granted quickly. Integration and testing have been facilitated by close cooperation between Lockheed Martin, Eurocopter, Australian Aerospace and their respective national governments. The missiles themselves have been acquired by the Commonwealth under a US Foreign Military Sales (FMS) agreement.

Early Tiger ARH flight tests have validated the digital interface between the Hellfire and the Tiger ARH, paving the way for live firing tests of the Hellfire at Woomera in mid-2005. The French and German military airworthiness authorities approved military type certification for the baseline Tiger helicopter in April 2004; this covers elements of the Tiger aircraft common to the Australian ARH variant. Preliminary Australian military type certification for the Tiger ARH is scheduled for March 2005 and full certification for March 2006.

The twin-dome flight simulator matches closely that ordered by the French and German Armies for their Tiger variants. Army originally requested a simpler version but a long lead time in signing the flight simulator sub-contract with Thales Training & Simulation, and a decision in late-2003 by Army to adopt the more capable Franco-German simulator configuration, have resulted in an estimated 10-month delay in the delivery of this system which will now be fully operational in late-2005.

In the meantime, a proportion of Tiger ARH instructor and regimental aircrew training will need to be carried out in France and paid for largely out of liquidated damages for late delivery.

In Australia flying instructor and ground crew training will commence in January 2005 with the first pilots' course in July 2005. A fully operational capability, with two trained squadrons based in Darwin, will be achieved by the end of 2008. Construction of the 1st Aviation Regiment's new facilities at Robertson Barracks began in May 2004.

Australian Industry Involvement (AII)
AII Target: In-service support capability, especially for sensors, mission and EW system software and airframe, engine and mechanical repairs.
AII Achievement: Except for the first four aircraft, which will be built in France, the Tigers will be assembled by Australian Aerospace Pty Ltd in Brisbane; this will be their logistics support base, sustained by an assembly line for Eurocopter's EC-120 Colibri light turbine helicopter. ADI Ltd will be responsible for ground mission segment and part of the software support aspects of the contract; and Haliburton KBR Pty Ltd will be responsible for delivering aircrew and groundcrew training except for tactical training which will be provided by uniformed personnel, while TTS Pty Ltd will deliver the aircrew training devices. In addition, Australia will be the sole source of some components for the global Tiger program: ADI will provide electrical wiring looms, Hawker de Havilland will build airframe composite parts and Honeywell will build flight control components.

Project SEA 1348 PhIII – ASWUP

Project Overview and Key Issues
This project covers improvements to the surface warfare and mine and obstacle avoidance capabilities of the ANZAC frigates operated by the Royal Australian Navy**.**

Sea 1348 Phase 3 was approved in 1997, at a value of $146 million in December 1997 dollars, and covered four separate capabilities for the ANZAC ships within its approval. These were:

- Harpoon anti-ship missile system, including the fire control system and canisters for each ship (missiles procured under JP1);
- Torpedo Self Defence;
- Mine and Obstacle Avoidance Sonar; and,
- Integration of the torpedo tubes to enable the ships to fire lightweight torpedoes.

The Shipbuilder, Tenix Defence, was engaged to undertake preliminary studies into the implementation of all four capabilities. Revised cost estimates developed through negotiations between Defence and Tenix in early 2001 indicated that the project was significantly under funded. Further investigations were undertaken to find a way to deliver all four capabilities within the approved project cost, however this was not achievable.

Consequently, the integration of the torpedo tubes was removed from the scope of the project and is now being pursued through a separate project (JP 2070), and the other three capabilities were split into separate sub-phases:
- Phase 3A Harpoon;
- Phase 3B Torpedo Self Defence System; and,
- Phase 3C Mine and Obstacle Avoidance Sonar.

Harpoon was the highest priority and was approved in the 2001/02 budget at a cost of $167 million. The approval of Harpoon left a balance of only $30 million in December 2001 dollars to complete both other phases, a level of funding well short of that needed to complete these two elements of the project.

The current budget figures for the project are: Phase 3A: $152.3 million in February 2004 dollars and Phase 3C: $57. 8 million in February 2004 dollars.

The ANZAC frigates currently have no mechanism to warn of mines or other obstacles in the ship's path other than the standard navigational sonar system. The Mine and Obstacle Avoidance Sonar was assessed as a priority and approved last year. The Petrel sonar system will be fitted which involves the installation of a retractable sonar array and the associated monitoring, control and support equipment. This is the same sonar as that being installed in the FFGs under their upgrade project.

The Torpedo Self Defence System was deferred for consideration later in the Defence Capability Plan but did not appear in the public version of the 2004-2014 DCP released earlier this year. The ANZAC frigates are currently fitted with the Nixie towed decoy system, designed to seduce incoming torpedoes away from the towing ship. The ships are also fitted with launchers that currently deploy airborne chaff decoys but which are capable of launching subsurface decoys. However, the apparent cancellation of Phase 3B must leave the ANZAC’s more vulnerable to torpedo attack than would otherwise have been the case.

This project’s acquisition strategy is based on the acquisition and integration of existing capabilities, and no unusual technical risks have been identified. The most likely cause of delay stems from the RAN’s current high level of operational engagement and the availability of ships to undergo the upgrade. The current schedule for Phase 3A will see the first operational capability later this year with all ships

complete by 2007. Phase 3C will deliver its first operational capability in 2005 and also be completed by 2007.

The successful implementation of this program will result in a significant and much needed enhancement to the ANZAC ships' offensive capabilities against surface targets and the vessels' ability to avoid mines and other obstacles.

Australian Industry Involvement (AII)
The ANZAC Ship Alliance is managing the Phase 3A/C upgrade. The ANZAC Ship Alliance is a virtual company formed to implement change to the ANZAC frigates. The participants in the Alliance are Tenix Defence, Saab Systems and Defence represented by the DMO (Major Surface Ships Branch).

The Lead ships will be outfitted in WA while follow-on ships will be outfitted in accordance with the ANZAC ship repair and maintenance availability schedule and locations under competitive tender arrangements.

AII for Phase 3A is covered by the ANZAC Ship Alliance's obligation to maximise competition and AII in all work undertaken by the alliance, and was reported by the DMO last year to be $36,347,766. AII for Phase 3C will amount to 70% of contract value.

*Current figures from DMO.

Project Land 112 - Australian Light Armoured Vehicle (ASLAV)

Project overview and key issues
he Australian Army has begun taking delivery of its third batch of Australian Light Armoured Vehicles (ASLAV). It operates 126 of these vehicles in the light reconnaissance role and deliveries of a further 144 vehicles ordered in 2001 under Ph.3 of the project began earlier this year.

The ASLAV is a variant of the 2nd generation Light Armoured Vehicle (LAV 2), of which over 2,000 have been manufactured by General Dynamics Land Systems (GDLS - formerly General Motors Defense) in Canada. The hulls of all ASLAV variants are manufactured in Canada; their 25mm gun turrets are manufactured in Adelaide, as are the Mission-Role Integration Kits (MRIK) which configure the baseline LAV 2 vehicle for Australian requirements.

ASLAV is an 8x8 wheeled all-terrain light armoured vehicle. In its troop carrier variant it can carry nine troops and a driver. The three-man armed variant carries a 25mm gun in an electrically-powered turret with gunner and commander's day/night sight. A Recovery/Fitter's variant is also being acquired as part of the third batch. ASLAV will equip Regular and Reserve units in Darwin and Queensland.

Army ordered 126 ASLAV, worth $382 million, in the two previous phases of this project and all have been delivered. The Ph.3 contract is worth a further $364 million;

this phase will also retrofit the earlier ASLAVs to an enhanced common standard with Phase 3. First deliveries of the Phase 3 vehicles took place in late-2003. The final Phase 3 vehicle has left the GDLS production line in Canada and is expected to be accepted by the Commonwealth in July 2004. The final upgraded Phase 2 vehicle is expected to be delivered in 2006.

First used operationally by the Australian Army in East Timor, and since then in Iraq, ASLAV has proved a reliable and effective reconnaissance, surveillance, patrol and mounted infantry rapid-response asset.

After exploring developmental solutions to meet Army's need for up to 25 surveillance variants of the ASLAV, dubbed ASLAV-S, and a Behind-Armour Commander's Weapon Station (BACWS) for the turret-less personnel carrier variant, the DMO and GDLS are now also exploring lower risk options for Military Off The Shelf (MOTS) solutions to these requirements.

Project Land 112 has been a relatively low-risk undertaking. All ASLAVs use the baseline LAV 2 hull/drive train/turret package. The MRIKs, designed and installed by Tenix Defence Systems in Adelaide, are a low-impact modification to this basic design

The as-yet-unapproved Ph.4 of this project will enhance the survivability and capability edge of ASLAV as part of an ongoing upgrade program extending beyond the current 2004-2014 Defence Capability Plan. Earlier plans to acquire a Light Armoured Vehicle Armoured Mortar System (LAVAMS), which would have seen a 120mm mortar mounted on an ASLAV variant under Project Land 135, have been dropped from the current DCP.

Australian Industry Involvement (AII)
AII objectives for Phase 3 were not framed in workshare or capital value percentage terms but aligned instead to Army's long-term support needs and the establishment of a sustainable industry support base. In the model developed by the DMO and GDLS, General Dynamics Land Systems - Australia Pty Ltd (GDLSA) has established a factory in Adelaide which manufactures the 25mm gun turrets for most variants of the LAV family sold worldwide. GDLSA has also established a logistics and maintenance base in Darwin to support ASLAV units there and will establish a similar facility in Brisbane in September this year to support ASLAVs operated by units there.

Tenix Defence Land Systems Division manufactured and will install the MRIKs for Phase 3 under a sub-contract worth $34 million.

Before being acquired by GDLS, General Motors Defense set up an accreditation process with local sub-contractors which has seen some 23 primary and over 90 secondary components suppliers in Australia and New Zealand accredited as members of General Motors' global supply network. GDLSA is also pursuing potential ASLAV export orders in South East Asia and the Middle East.

Project Land 116 - Bushranger

Project Overview and Key Issues

Project Bushranger was created to increase the mobility of Australia's infantry soldiers by equipping their units with four-wheel drive armoured vehicles that offer protection against small arms fire and mine blasts. The vehicle is capable of carrying up to 10 troops and has a range of 600 kilometres.

This class of vehicle is referred to as an Infantry Mobility Vehicle (IMV) and its role is to deliver foot soldiers to their area of operations in relative comfort and safety so they are fresh and ready to fight. An IMV is not a tank or armoured fighting vehicle.

A $200 million contract was signed with ADI Ltd on June 1, 1999 for the supply of 370 of their Bushmaster IMVs in six variants including troop transports, command vehicles and ambulances.

Production was then expected to commence in mid 2000 with the first vehicles entering service two years later, however the project had been beset with delays and uncertainty and was almost cancelled by recommendation of the Defence Capability and Investment Committee at the end of 2001.

At issue are concerns over the long-term reliability of the Bushmaster. To address these concerns, Defence instituted an extensive testing regime which is nearing completion and some changes in specification. The reliability problems are mainly in the vehicle's drive-line and concern the durability of axles, drive shafts and hubs. A Bushmaster has an all up weight of about 14,000kg and as such imposes high loads on these components.

Major changes to the design between the original contract signing and the renegotiated contract signing have included both the engine and transmission. Other variations have included relocated hatches, a tenth seat, fitting the vehicle "for but not with" a grenade launching system, and "run flat" inserts for the tyres. There have been no changes to Defence’s vehicle design requirements since the renegotiated contract was signed in mid 2002.

The specification changes, design rectification and reduced number of vehicles have seen the unit cost increase. There has been no increase in the total project cost since the original approval, apart from standard adjustments for inflation and exchange rates. The project's budget is currently $332 million in December 2003 dollars. Because of the increased unit cost of the vehicles, the number to be procured within the fixed total budget has been reduced to 299.

ADI passed a qualification test in late 2002 using reworked prototype vehicles, and low rate initial production of a small batch of vehicles commenced soon afterwards. Defence and ADI also began a reliability growth program that year, the testing phase of which is now complete with analysis of the results underway. The results of this process will not be known until June 2004. Three initial production vehicles have completed 110,000 km of testing. A decision on whether or not to enter full rate production will be made once the test results are known.

An initial low rate production vehicle was delivered in late August 2003, while the first Company group of vehicles (15) is scheduled for delivery to 7 Brigade in May 2005. The last vehicle to be delivered is scheduled for December 2007, and this is the capability in-service date.

The two main causes of this project's problems were insufficient time being allowed to get a prototype vehicle into production, and signing a production contract when the final specification Army required had yet to be finalised.

Australian Industry Involvement (AII)
ADI Ltd has been contracted to achieve AII levels of 69%, and the vehicles will be manufactured at ADI's Bendigo facility in Victoria where preparations have been made for transition to full production. At the time of contract signing ADI estimated that the project would create 40 new jobs, mainly among shop floor personnel.

Delivery will be co-ordinated with respective logistic support arrangements. Through life support for the IMV fleet is expected to include extensive commercial support services contracted to ADI.

SEA 1439 PhIV- Collins Combat System

Project Overview and key issues
Phase 4, Collins Full Operational Capability, is a major component of SEA 1439 a multi-phase project concerned with maximising the capability of the Collins-class submarines by rectifying deficiencies in their platform and combat capabilities. Phase 4 has seen enhancements to the submarines' sensors including sonar, electronic surveillance and towed array processing as well as improvements to the communications functions.

But a major hurdle to achieving full operational capability has been the unacceptable performance of the combat system due to major shortcomings in sonar processing and data integration. It was initially proposed to replace the combat system with a commercial off the shelf (COTS) system and following integration studies and the issue of a formal request for tender, systems proposed by STN Atlas and Raytheon were evaluated.

However this process was cancelled in favour of a collaborative arrangement with the US Navy under which much of the combat system technology is to be sourced from overseas with local industry involved in the integration and installation of the systems as well as supplying some components and specific support activity. This acquisition strategy was considered a significant risk mitigation factor in that most of the equipment will be non-developmental and in service with the USN.

This strategy was confirmed in September 2002, the government announced a $400 million project to purchase replacement combat systems for the Collins-class submarines based on the Raytheon CCS Mark II tactical command and control system currently in use with the US Navy. As part of the program, the sonar augmentation currently installed into the augmented submarines Sheean and Dechaineux would also be extended to the remaining submarines.

Initial Design Studies involving Raytheon, STN-Atlas and Thales Underwater Systems, ie those companies participating in the earlier COTS acquisition proposal together with DSTO, and later involving the ASC and the US Navy covered issues such as cost, schedule and risk, and the acquisition, integration and installation of the new combat system and peripheral systems. Following completion of the studies the main acquisition contracts were signed between June and October 2003.

A major part of the system is being procured from the United States Navy, initially via a Foreign Military Sales case signed in June 2003, and later via an armaments cooperative
project currently being negotiated. The first combat system will be delivered to a land-based integration test and training facility (ITTF) in early to mid 2005. Installation of the first combat system into a submarine is planned for 2006, with all submarines to be upgraded by the end of the decade.

The ITTF will be operated by the DMO during the integration, test and initial training phases of the project and then shared with the RAN for on-going training and development. DSTO has no specific role in the testing program but has been, and will remain involved in the development of system architecture, specifications and interface requirements. Where necessary, DSTO expertise will be engaged to support the analysis of test procedures or test results. DSTO will be acutely involved in the ongoing joint development program with the USN after initial acceptance.

The approved acquisition strategy identified Raytheon Australia Pty Ltd (RAPL) as the integration support contractor and ASC as the submarine installation contractor. The complete set of support activities is currently under development and RAPL has been engaged to provide a System Integration Plan (SIP) and Integration Schedule during April-May 2004. Further integration tasks will be contracted following delivery of the SIP. The project is developing a contract with ASC covering replacement combat system platform installation design. Separate contracts will be developed with ASC for the installation on each submarine later.

Of the total of $433m expenditure approved for Phase 4 some $80m will have been expended by the year June 2004.

Australian Industry Involvement (All)
Involvement of Australian industry is a key requirement of this project and the level of AII is expected to be higher than in building the submarines when 70% of the platform work and 45% of the combat system work was performed in Australia. While the capability enhancements and improvements to the Collins submarine involve overseas sourcing of major equipment items there is very considerable scope for the continued involvement of Australian industry in the integration, installation and long term support of the submarines and their equipment as well as ongoing opportunities for the manufacture and supply of components.

SEA 1439 PhIII - Collins Reliability & Sustainability

Project overview and key issues
SEA 1439 is a wide ranging multi-phased project aimed at maximising the capability of the Collins-class submarines by rectifying deficiencies in their platform and combat systems, enhancing their sensor and communications systems, introducing a program of continuous improvement and finally replacing their sonar systems.

The original Collins submarine construction project (SEA 1114) sought to provide an advanced submarine capability for the RAN out to 2015 and beyond. But due to deficiencies in the capability of the delivered submarines a new project--SEA 1446 Collins Class Augmentation--was introduced as an interim measure to bring three submarines, COLLINS, DECHAINEUX and SHEEAN, to an enhanced level of operational capability for which funding of $266m was approved

This project was concerned essentially with short term improvements and, as the 'trials platform', COLLINS underwent propeller and hull improvements and some augmentation of the combat system with much of this work drawing upon the US Navy's expertise and equipment. (The USN had encountered similar data handling problems in the combat systems of their LOS ANGELES-Class SSNs and had developed augmentation packages for this purpose).

Under a fast track program DECHAINEUX and SHEAAN were brought to the MLOC (Minimum Level of Operational Capability) standard with measures to provide improved self protection, self defence, discrete high speed communications and better mechanical reliability. The program was subsequently widened and the functionality of the combat systems of the two submarines was augmented beyond that provided for COLLINS and a $72 million further upgrade of the latter together with an upgrade for RANKIN was approved involving modifications to their propellers and improvements to hydraulic systems and propulsion.

While solutions to meet platform systems shortcomings have been implemented on the two fast track submarines, these and other capability enhancements need to be implemented on the remaining four submarines as opportunity permits, noting that many of these issues still require design and support development. This activity, together with overall infrastructure improvements was approved under Phase 3 of SEA 1439 as Reliability & Sustainability improvements.

Under this phase major fast-track platform system upgrades have now been completed on DECHAINEUX, SHEEAN and RANKIN prior to delivery, and are nearing completion on COLLINS and FARNCOMB, which are currently in Full Cycle Docking. WALLER will receive these modifications during its full cycle docking that will commence in this year (2004). Further upgrades including special forces modifications, sewage system automation and fire fighting capabilities are being designed by the prime contractor, the Australian Submarine Corporation (ASC), for implementation during other submarine maintenance availabilities.

Of the $348 million approved for this phase, it is estimated that $110 million will have been expended by June 2004.

Phase 5, Collins Continuous Improvement Program, will mark a new direction in the through-life management of submarine capability. The strategy behind continuous improvement is to provide regular capability upgrades rather than have a mid life upgrade for the class. A number of items will compete for inclusion, ranging from new generation propellers, special forces modifications, improved active intercept sonar and low probability of intercept communications

Australian industry involvement
Involvement of Australian industry is a key requirement of this project and the level of AII is expected to be higher than in building the submarines when 70% of the platform work and 45% of the combat system work was performed in Australia. While the capability enhancements and improvements to the Collins submarine involve overseas sourcing of major equipment items there is very considerable scope for the continued involvement of Australian industry in the integration, installation and long term support of the submarines and their equipment as well as ongoing opportunities for the manufacture and supply of components.

SEA 1428 - Evolved SeaSparrow

Project overview and key issues
The Evolved SeaSparrow Missile (ESSM) program is an international cooperative venture undertaken by ten of the twelve nations of the NATO SeaSparrow Consortium to develop and produce an improved version of the RIM-7P SeaSparrow Missile. The ESSM's performance is greatly superior to that of the Sea Sparrow, providing longer range and higher terminal manoeuverability. Australia's involvement in the ESSM program has being conducted under Project SEA 1428, concerned with the development and production phases of the program, and provision of the ESSM capability to the eight RAN ANZAC Ships and four FFG frigates.

Following completion of the initial phases, comprising engineering and manufacturing development tasks on the missile and the associated quad pack capability, the program has progressed to the integration of the ESSM into the ANZAC Class ship combat system, the modification of three ANZAC ships (05, 06 and 07) and the acquisition of missiles for both the ANZACs and FFGs. Integration of ESSM into the FFG class is being performed under SEA 1390 FFG Upgrade. ANZAC Ships 05, 06 and 07 are now fully ESSM capable as operational test and evaluation is complete and the system has been delivered.

September 2002 saw the delivery of the first ESSM to the RAN, the first consortium member to receive the missile. Four months later HMAS WARRAMUNGA successfully fired the missile against a towed target off the West Australian coast. This firing was the first outside the USA, the first from a manned ship using a non-Aegis combat system and the first to test the ESSM’s self-destruct capability. The successful firings by WARRAMUNGA provided evidence that the overall ESSM system was capable of handling, loading, storing, launching and supporting ESSM in flight.

The current phase of the project centres upon the integration of ESSM into the remaining ANZAC class ships. Thus BALLARAT (08), TOOWOOMBA (09) and PERTH (10) will be delivered as ESSM capable ships. HMAS Ships ANZAC (01) and ARUNTA (03) will be upgraded to ESSM during maintenance availabilities in 2005/06. Production delays initially affected the delivery of missiles however with the resumption of full rate production earlier this year (2004) Australia is now in receipt of production missiles.

A total of $555m has been spent to date from within the three phases of this program, which includes engineering and development tasks, missile and canister acquisition and integration of ESSM into Anzac Ship class. A further $105m is estimated to be spent on integrating ESSM on ships 08, 09 and 10 and backfit of ships 01 and 03 together with further missile and canister acquisitions. Estimated expenditure for the acquisition of additional missiles under the final (and as yet unapproved) phase of the program (Phase 4) has increased to between $75 and $100m.

Australian Industry Involvement (AII)
There has been considerable Australian industry involvement in the development, production and implementation phases of the program. BAE Systems Australia, design agent for the ESSM's aerodynamic and thrust-vectoring performance, has been the lead Australian contractor in program and has been responsible for manufacturing ESSM guidance components.

Tenix has been responsible for the ANZAC missile integration with Saab Systems Australia, BAE Systems and CSC Australia as subcontractors for this task. The ANZAC ship combat system has been redesigned locally to interface directly to the Mk41 VLS and to CEA Technologies' solid state illuminator.
The combat system software also incorporates Australian developed engageability data and exploits advanced operating modes of the missile during engagement to enable area defence, high value unit protection and crossing target capabilities to be exploited.

ADI Limited has provided design services and the manufacture of elements for the international ESSM program as well as the development and manufacture of electronic test equipment for the ESSM launch system. ADI is also responsible for implementation of the ESSM into the FFG.

SEA 1390 - FFG Progressive Upgrade

Project overview and key issues
The RAN currently has six *Adelaide*-class frigates based on the US *Oliver Hazard Perry* class guided missile frigates (FFG-7) four of which were built in the United States and two in Australia. They were commissioned into RAN service between 1980 and 1993. The two oldest ships will be withdrawn from service from 2006 when the last of the Anzac frigates are delivered and will not be upgraded under this project.

Designed as carrier escorts for operation in low to moderate threat environments they came with modest combat capabilities including anti-air and anti-ship missile systems,

a 76mm gun and torpedo tubes. Additional enhancements for RAN operations included the addition of a Seahawk helicopter and the Nulka anti-missile decoy.

But the capability of the FFG's unchanged sensor and weapon systems for operations in a more complex regional threat environment has progressively diminished and the ships have also experienced supportability problems through component obsolescence and the high maintenance costs of some equipment.

The progressive upgrade project will restore the FFGs parity against regional capabilities through upgrades to their air defence, anti-submarine and anti-surface warfare capabilities with specific emphasis on improved self-defence against anti-ship missiles—a significant performance shortcoming. It is anticipated that that the service life of the two US-built ships and the two younger Australian-built ships will be extended progressively from 2016 to 2020.

Following competitive design studies by ADI Limited and Tenix Defence Systems, ADI was awarded the prime implementation contract, worth $897 million, in June 1999.
ADI's team included Lockheed Martin (combat system upgrade), Gibbs & Cox (platform systems design) and Thales Underwater Systems (underwater programs).

While extending the life and reliability of the platform was not considered unusually difficult improving the ships' combat capabilities has been a much more complex undertaking and this has led to an overall schedule delay of up to 24 months agreed between the Commonwealth and the prime contractor.

Software development and integration exercises were performed in the Land Based Test Site at Garden Island prior to the handover of the first ship. Upon completion of the upgrade the test site will be reconfigured as the Weapon System Support Centre providing through life support for the upgraded combat system.

ADI commenced the final installation/production phase of the upgrade at its Garden Island facility following handover of the lead ship, HMAS SYDNEY (FFG 03), in September 2003. Work in the dry dock has seen the installation of new diesel generators, the Mk 41 vertical launch system housing and the air conditioning plant. Combat system equipment including new mine avoidance sonar, electronic support and all the upgraded fire control system hardware has also been installed. Further formal combat system development and stress testing of system software was being undertaken ashore during May 2004.

The combat system software is scheduled for formal release to HMAS SYDNEY in July for harbour testing. An engineering version will be available to assist in the set to work process. Sea trials will follow the harbour tests with the frigate due for delivery to the RAN in the second quarter of 2005. This upgrade program is scheduled to be completed with HMAS DARWIN (FFG 04) in 2008.

A total of $926.4m is estimated to be spent by 30 June 04 from within the Approved Project cost of $1421.9m (Feb 04 Prices). The cost impact of the decision to upgrade four instead of six frigates has yet to be finalised and contract savings will have to be negotiated with the prime contractor given the contract's fixed price arrangements.

Such negotiations will need to cover the disposal of long lead items ordered for the two frigates that are no longer included in the upgrade program.

Australian Industry Involvement (AII)
ADI Limited was contracted to achieve AII levels of 52 per cent of the contract value. The support and maintenance of new operational software at the Weapon System Support Centre, established by ADI at Garden Island, is an important component of AII.

SEA 1429 - Heavyweight Torpedoes

Project Overview and Key Issues
Project SEA 1429 will acquire a new heavyweight torpedo for the Collins Class submarines, replacing the Mk 48 Mod 4 heavyweight torpedo currently in service with the Royal Australian Navy.

A Memorandum of Understanding between the Australian and US Governments has been established to jointly develop the Mk 48 Advanced Capability (ADCAP) Mod 7 Common Broadband Advanced Sonar System (CBASS). The new torpedo will have greater autonomy allowing earlier severance of the wire guidance system, a move that allows the submarine to leave the target's vicinity earlier, increasing its chances of survival.

The selection of this torpedo has it roots in the July 2001 termination of the competition for a replacement combat system for the Collins Class. When announcing that decision then Defence Minister, Peter Reith, said that, "The selection process for the heavy weight torpedo has also been terminated. A new arrangement will be developed by the Australian and US Navies under a cooperation agreement." He claimed that the benefits of his decision included greater access to US Navy tactical information, re-supply in time of need and the provision of torpedo firing exercises with US submarines.

Development of the Mk48ADCAP is reported to be progressing as expected with initial testing of system components well underway and in-water runs scheduled for mid to late 2005. One of the main elements of technical risk facing the project involves integrating advancements in processing capability into the Mk 48 ADCAP torpedo.

The submarines will require modifications to carry and fire the new torpedoes, and this aspect of the project received some controversial media coverage when selection of the Mk48 ADCAP was announced. However, an Australian Submarine Corporation integration study concluded that the risk of integrating the new torpedo into the Collins Class submarine is low and only minor structural modifications to the submarine are required to carry it. A replacement combat system is being provided under a separate project to fire the new digital torpedo. Some different maintenance facilities and test and support equipment is also necessary.

The main benefits from the successful implementation of the project include a significant step-up in torpedo capability; the transfer of torpedo technology to

Australia; the ability to conduct intermediate and depot level maintenance; and, continued interoperability with the USN.

The original budget for this project was $358 million in December 1996 dollars and is currently $425 million* in December 2003 dollars. According to Defence the difference is due to inflation increases and variations in the Australian US dollar exchange rate, not project budget increases.

The original in-service date was December 2006 while the current in-service date is listed as 2006/07. Re-equipping all the Collins Class will take about four years depending on submarine availability.

Australian Industry Involvement (AII)
Defence will acquire the new torpedo under an Armaments Cooperative Project with the US Government. The terms of the Armaments Cooperative Project provide an opportunity for the RAN to influence future development of the new torpedo, increase self-reliance through access to all software source code and technical data, and is an opportunity afforded no other submarine-operating nation. There will be scope, albeit limited, for Australian industry to participate through submarine integration, testing and evaluation activities and through in-service support of the new weapon.

*Current budget figure from the DMO

JP 2043 – High Frequency Modernisation

Project overview and key issues
On completion the High Frequency Modernisation project will provide a modernised high frequency radio communications system (MHFCS) for the command and control of deployed Australian Defence Force (ADF) assets. It will be delivered in two major stages:

Stage 1 (the Core Network) will provide a replacement capability for the existing Navy and Air Force high frequency communications networks, and
Stage 2 (the Final Network) will provide enhanced information transfer capabilities to some ships, ground mobile stations and aircraft.

The system will comprise a fixed high frequency radio communications network of four stations in the Riverina, Darwin, Townsville and North West Cape with centralised control being exercised through main and backup network management facilities in Canberra. The new system will be backwards compatible with the existing systems and will retain interoperability with Australia's allies.

Deployed ADF forces are critically dependent on long range communications for command and control and the timely dissemination of intelligence. High Frequency (HF) radio and communications satellites provide these long-range communications with HF radio an essential complement to satellite communications systems. Although HF radio has a lower capacity to pass information than satellites, it has the advantages of being under national control, on Australian territory, and covers a larger geographical area than any single satellite.

Until the ADF has a mature satellite communications capability, HF radio will continue to provide primary and survivable long range tactical communications. Thereafter, HF radio, with its greater survivability, will provide an essential redundant capability should satellite communications be disrupted.

Stage 1 of the prime contract, awarded to Boeing Australia Limited at the end of 1997, will replace existing single service high frequency radio facilities by the second half of 2004 allowing the closure of some existing fixed network stations in Canberra, Sydney, Townsville Darwin and Perth. The capability provided at the end of Stage 1 is the Core System.

Stage 2 of the Prime Contract will provide enhanced capabilities over HF radio such as automatic link establishment, secure digital voice, facsimile, imagery and data. Following re-baselining of the project, provision of these enhanced facilities and upgrades to some HF radio equipment in ships, aircraft and land mobiles will not now be completed until late 2007. This capability is known as the Final System. Notwithstanding these delays, from a Defence perspective the project is expected to be completed on budget.

ADF operators will be phased out in a rolling program after Defence accepts the Core System however they are not scheduled to be fully phased out until delivery of the Final System in late 2007. The Network Operation and Support Contract will provide civilian operators and maintainers and is for a period of five years from final acceptance of the network. There will be an ADF headquarters element for communications planning and supervision as well as some Commonwealth personnel for the handling of sensitive information.

The new system will employ automatic techniques and improved communications protocols to provide higher quality connections than have been achievable in the past without the need for skilled operators. It will also provide higher capacity communications links than the present high frequency system.

Much of the physical infrastructure for the new network is in place and is currently undergoing installation testing prior to being commissioned for network testing. During test transmissions the first contact with mobiles was established in December 2003. Integration and testing of the Core System is continuing with delivery expected in the second half of 2004.

Of the approved budget total of $585m nearly $280m will have been spent by June 2004.

Australian Industry Involvement (AII)

The equipment contract requires Australian Industry Involvement amounting to approximately 75% of the contract price. Contract implementation is being carried out using an integrated product team approach rather than the more conventional functional organisation with the teams involving both contractor and Commonwealth personnel.

Project Air 5376 PhII – Hornet Upgrade

Project Overview and Key Issues
The F/A-18 Hornet is a twin engine high performance jet fighter of which the RAAF has a fleet of 71. The RAAF originally acquired 75 Hornets over a five year period beginning in late 1984. The Hornet is armed with both air-to-air and air-to-ground missiles, a 20mm rapid firing cannon and can carry a number of aerial bombs; this versatility gives it a strike capability in addition to its air superiority role.

Phase two of the Hornet upgrade program is building on the capability enhancements established under the now completed first part of the program and consists of two sub phases.

The overall goal is to improve the aircraft's ability to resist electronic attack (eg the jamming of its radio, radar or other systems), increase its radar detection and targeting ranges, and its ability to accurately identify targets. The upgrade will also give the aircraft greater connectivity to improve its ability to operate with other ADF elements and coalition forces.

The centrepiece of phase 2.1 was the installation of a new APG-73 radar which features better performance, greater reliability, easier maintenance and the flexibility to meet future threats. Also included in phase 2.1 was an encrypted communication capability, upgraded mission computer software and a crash data recorder.

Installation of the phase 2.1 modifications commenced in August 2002, some eight months behind the original schedule and was completed in August 2003. The slippage was caused by cumulative schedule delays which saw phase 1 of the program run eight months late.

Phase 2.2 is contracted to Boeing as of December 2001 and will develop colour cockpit displays along with the integration of a moving map capability, an improved counter measures dispensing system, the joint helmet-mounted cueing system and a multifunction information distribution system. Fleet modification under phase 2.2 was scheduled to begin in early in 2005 and continue through to the scheduled in service date of 2006, but work now commences in Australia in January 2006 with full fleet incorporation by December 2007.

The helmet mounted cueing system essentially allows the pilot to aim a highly manoeuvrable missile at a target by looking in its direction, obviating the need to align the aircraft in the precise direction of the target. Increased pilot situational awareness combined with a more lethal weapon system are the main benefits from the overall upgrade.

Successful and timely development of the colour displays represents this projects greatest outstanding technical risk, while there is also some risk involved with the integration of the Electronic Warfare Self Protection suite of equipment into the aircraft.

An originally planned phase 2.3 which comprised an electronic warfare upgrade was deferred because of a change in Defence's priorities, however, in April this year it

was announced that the Hornet's Radar Warning Receiver and Countermeasure Dispensing System would be upgraded and the current jamming system would be augmented. A decision on a new RF jammer is anticipated next year.

The original budget approval for Phase 2 was $1300 million in December 1998 dollars while the current amount is $1500 million*.

Australian Industry Involvement (AII)
Integration of the various phase 2 components into the airframes will be carried out in Australia by the Hornet Industry Coalition with assistance from Boeing St Louis and the US Navy as in phase 1.

The Hornet Industry Coalition has been able to take on a substantial amount of routine airframe maintenance work, which is to be done in conjunction with the upgrade work to ensure aircraft availability requirements can be met during the modification program.

*Current DMO figure

Note: The Hornets are scheduled to be withdrawn from service in the 2012-2015 timeframe, but will require work on their airframes in regard to fatigue to meet that date.

HUG Phase 3.1 is approved and incorporates discrete modifications and inspections required by no later than about half the aircraft's fatigue life. A number of modifications will be undertaken to ensure all airframes will reach 72% of their fatigue life. The prototype aircraft has been completed and the first two aircraft have begun Low Rate Initial Production in Australia. A contract will be in place by the end of this year for full rate production.

Phase 3.2 will see some centre barrel replacements and other discrete modifications undertaken on selected aircraft to ensure the fleet reaches its planned withdrawal date. A contract worth about $230 million will be in place by the end of this year and modification of aircraft will commence in 2007. The Air Force is working to contain the number of centre barrel replacements by careful management of airframe fatigue accrual.

The ability of the Hornet fleet to meet or exceed its planned withdrawal date is important, particularly in the context of exactly when next decade the new F-35 JSF becomes available to the RAAF.

JP 2070 - Lightweight Torpedo

Project overview and key issues
Joint Project 2070 aims to introduce a new generation of lightweight torpedo to upgrade the anti-submarine capabilities of the ADF. It has also become a 'pathfinder' for the concept of Alliance Contracting by Defence, the DMO and industry and has therefore attracted considerable scrutiny within and outside Defence.

The ADF's existing Mk46 lightweight torpedo, which is carried by RAN frigates and helicopters and RAAF AP-3C Orion maritime patrol aircraft, is approaching obsolescence and a new weapon is needed to counter the growing proliferation of quiet, diesel-electric submarines operated by countries in Australia's region.

In 1999, after a competitive tender, Defence selected the Eurotorp MU90/Impact. This is a versatile, highly capable weapon with greater performance than the Mk46 but requiring less logistic support. It is 3m long, weighs 300kg, has a range of up to 10km and is designed to track and attack submarines at depths ranging from 25m to more than 1,000m. The navies of France, Italy, Germany, Denmark and Poland have selected it also. Its manufacturer, Eurotorp, is a joint venture between French naval and systems houses Thales and DCN and Italian torpedo manufacturer Whitehead Alenia Sistemi Subacquei

The need to integrate the new torpedo with a wide and diverse range of combat platforms meant an alliance approach was the most flexible, efficient and economical way to handle several complex integration programs concurrently. The Djimindi alliance contract was signed by Defence and the Australian industry stakeholders in 2000 and the project is now into the third of four phases.

Phase 1 was a Project Definition Study. Phase 2, whose budget including the prime contract itself is $301 million, will see initial acquisition of the MU90 and associated logistic support, and the integration of the weapon into the RAN's ANZAC and upgraded FFG-7 frigates and the RAAF's AP-3C Orions, followed by the Seahawk and Super Seasprite helicopters. Initial operational capability is scheduled for 2005.

Weapons acquired under Phase 2 are being manufactured in Europe. However, this phase will also establish an in-country MU90 Torpedo Final Assembly Facility, which will be used to assemble torpedoes acquired in Phases 3 and 4 and to support and upgrade the torpedo through its life of type.

Phase 3, which was approved by Minister for Defence Robert Hill in December 2003, and the as-yet-unapproved Phase 4 will acquire the full war stock of MU90 weapons. The Phase 3 contract, worth an estimated $215 million, will be signed later this year.

The Djimindi Alliance has attracted both scrutiny and criticism, principally for the slow progress in finalising the financial aspects of Phase 2. Delays were attributable mainly to lack of experience in Australia of implementing such an unorthodox contracting regime. However, the alliance approach has fostered genuine cooperation and collaboration and enabled savings in time and money which would have been impossible with a more traditional project architecture.

The protracted Phase 2 negotiations have not delayed significantly the introduction of this new capability, whose schedule is driven in part by platform integration and availability issues. The MU90 has been installed and integrated aboard two ANZAC frigates to date with the remainder scheduled for completion by late-2006 – considerably ahead of the original schedule. Integration and installation plans are being finalised for the AP-3C and the FFG-7 frigates.

Alliance Contracting and Australian Industry Involvement (AII)
Alliance contracting is designed to create a formal partnership between Defence and industry in order to make the acquisition process cheaper, faster and more outcome-focused.

JP2070 lends itself to this approach due to the need to manage and mitigate the significant risks associated with integrating the MU90 torpedo with five quite different ADF platforms.

Lessons learned on this project are now being applied to other Alliance Contracting projects, and also to candidate projects to determine whether Alliancing is the most appropriate approach to these projects.

The Djimindi Alliance partners are the DMO, Thales Underwater Systems Pty Ltd and EuroTorp. Three sub-partners also play key roles: ADI Ltd manufactures MU90 components and will perform FFG-7 integration and CSC will coordinate the integration of the torpedo onto RAN helicopters. RLM Systems Pty Ltd was intended to integrate the torpedo onto the Orion aircraft, but the company has been broken up and the Alliance expects to sign an integration contract with an alternative contractor later this year.

In addition, the ANZAC Alliance (DMO, Tenix Defence and Saab Systems) and the Djimindi Alliance have formed an integrated project team to integrate the MU90 onto the ANZAC-class frigate.

Thales Underwater Systems (TUS) is already building 575 sets of MU90 homing head transducers and electronic boards in Sydney for European customers on a sole-source basis. It will also assemble the torpedoes acquired under Phases 3 and 4 of this project. This investment resonates with the ‘global supply chain’ philosophy which Defence is increasingly applying to AII considerations and recognises the competitive advantage of TUS's Australian-based design and production capability. This assembly facility will provide a sustainable, local through-life support and upgrade capability for the MU90.

JP 2009 - Military Satellite Communications

Project overview and key issues
Joint Project (JP) 2008 was introduced in the early 1990s for the development of military satellite communications (MILSATCOM) capabilities. The project has been progressively implemented in a series of phases to meet the growing demands of the Australian Defence Force (ADF) for flexible, mobile, high data rate communications to support its increasingly dispersed operations within and beyond Australia.

Evolving changes in the operational command of the ADF, and the need to share strategic and tactical data in increasing volumes from the soldier in the field to higher-level commanders have re-enforced the need for such a satellite-based system. But these factors have made difficult the task of defining a long-lasting operational requirement and phased development and implementation has been necessary to address the project’s evolving requirements and continuous changes in technology.

Early phases provided an initial limited capability satellite communications system for the ADF, using purchased services on the since replaced Optus B1 and the Intelsat and Inmarsat satellites. These capabilities provide voice, fax and data services for land elements and selected RAN ships and RAAF aircraft. The satellite ground terminals for this network were provided by Defence and commercial Telcos with terrestrial distribution provided by a range of existing networks that are also owned by Defence or leased from Telcos.

A key element of Phase 2 was the Defence Mobile Communications Network (DMCN) that provided a realtime satellite mobile communications capability at strategic, operational and tactical levels to all ADF Services. DMCN amply demonstrated its value during the East Timor action with the extensive fielding of a large number of terminals. It was also used at the Sydney Olympics.

Phase 3C has seen the development by DSTO of a high bandwidth Theatre Broadcast System (TBS) used in East Timor with excellent results. Currently an interim operational system the TBS has been used in several Defence exercises as well as current deployments to the Gulf (using both naval and land versions of the TBS). The TBS will remain as an interim operational system until the end of 2004 when delivery and deployment of the mature (fully operational) capability commences.

Phase 3D provided an initial MILSATCOM capability under the control of the ADF using the Optus C-1 satellite launched in June 2003. The Defence payload on the satellite comprised X, Ka and UHF band channels and a number of littoral, earth and steerable spot beam antenna footprints. The satellite's footprint will essentially provide coverage from Sri Lanka to the west and Hawaii to the east, the littoral coverage will support operations in mainland Australia and the littoral zone and the steerable spot beams will be approximately 2000km in diameter.

Phase 3E now in progress is for the provision of a minimum level of terrestrial SATCOM infrastructure needed to fully utilise the Defence payload on the Optus C-1 satellite. Key activities include the adoption of the Theatre Broadcast System, the introduction of a fleet SATCOM command and control capability and provision of selected ground infrastructure.

The mature maritime command and control SATCOM capability will be progressively introduced to high priority platforms from late next year (2005). High priority Navy platforms will be fitted with a dual X and Ka-Band SATCOM capability which will be achieved under Advanced Satellite Terrestrial Infrastructure System (ASTIS) contracts for the Army and the Navy.

The $75 million Navy ASTIS capability contract, awarded to BAE Systems Australia late last year, will furnish the satellite communications infrastructure to give mobile and deployed forces the capability to transfer information for Command Control and the capability to access other information. It is anticipated that the mature maritime command and control SATCOM capability will be progressively introduced to high priority platforms from late next year.

Phase 3F, the final activity in this phase, concerns further development to improve the robustness and capability of the initial system delivered under Phase 3E. Phase 4, with a year of decision out to FY 2013/14 will focus on options for a mature satellite communications capability for the ADF.

Of the approved budget of $378m some $347m will have been expended by June 2004. Approximately $32 million has been spent to date on Phase 3E.

Australian Industry Involvement
This project has seen extensive involvement by Australian industry in the development and implementation of communications systems and in their ongoing support and upgrade.

Minehunter Coastal (Project Sea 1555)

Project overview and key issues
The RAN's Minehunter Coastal project has been a success story for the RAN, DMO and Australian industry. The six Huon-class minehunters constructed under this project by ADI Ltd in Newcastle, NSW, have all now been accepted into naval service. They were delivered on time, with only minor agreed variations to the original contracted schedule, within budget and with their key sensors and combat data systems working at or close to their full potential. The total project budget is $1,250 million at December 2003 prices.

The Huons and their associated mine warfare command and control facilities are a critical operational capability for Australia. They provide a robust counter to the threat of naval mines which remain a cheap and relatively simple way of seriously disrupting naval operations and maritime trade.

The Huon-class Minehunter Coastal (MHC) is a 52.5 metre, 720 tonne vessel made of glass fibre-reinforced plastic (GFRP) with a crew of 38. The Huon-class ships, like the US Navy's similar Osprey-class minehunters, are based on the Italian Gaeta-class design. The Huon-class MHCs are the first from the Gaeta family to be equipped with the Thales Underwater Systems Type 2093 variable-depth mine hunting sonar and BAE Systems Nautis IIM Tactical Data System.

The Type 2093 sonar is capable of detecting mines in both shallow coastal waters and on the continental shelf. This can be lowered to varying depths below the keel to hunt for tethered and 'ground' mines laid on the seabed itself.

Once a mine has been detected the MHC deploys one of its two remotely-operated vehicles carrying its own sonar and TV camera to identify the mine and a demolition charge to destroy it. The Huons also carry a recompression chamber and other facilities to embark clearance divers in support of minehunting operations.

The DMO, RAN, ADI and its subcontractors addressed the most risky element of the project – development and integration of the large quantity of combat/mission system software - early on. ADI established a land based test site at Newcastle to undertake

these activities well before installation of the combat and mission systems in the ship. The result was that the first of class, HMAS Huon, was delivered on time with her mission-critical systems operational. The last, HMAS Yarra, was also delivered on time in December 2002.

During the course of the project the Commonwealth and ADI negotiated a four per cent increase in the scope of the original contract, but this resulted in only a one per cent slip in the original ship delivery schedule.

The Huons started performing operational tasks as part of their Operational Test & Evaluation process. The OT&E process highlighted potential well beyond what was contracted for and also exposed some areas of marginal system performance. Following resolution of the majority of these performance issues the class as a whole was accepted into naval service – in effect, certified as fully operational and satisfying most of the service's operational requirements - in November 2003.

ADI's shore-based test site was transferred from Newcastle to the RAN's mine warfare headquarters in Sydney, HMAS Waterhen, in 2000 to support crew training. This, and the remainder of the shore-based support and training infrastructure acquired under this project, has been all delivered and is now in service.

ADI was awarded the contract to provide in-service support for the Huons in 2000. However, the Commonwealth's decision in late-2003 to lay up two of the six Huon-class ships to save money and release manpower for other commitments is likely to impact on the scope and budget of this contract. The full impact will not be known until the options have been considered and a final decision made by Navy.

Australian Industry Involvement (AII)
The contracted AII target was for 68.7 per cent local content in the construction phase, and the establishment of in-country support capabilities for the platform, sensors and combat system. These targets have been met. there are currently two in-service support contracts – one with ADI for the Platform and Combat Systems and one with Thales Underwater Systems for the Sonar System. ADI also carryied out some functional design and all of the detailed design work for the Huons in Australia.

Thales Underwater Systems and BAE Systems both undertook a considerable amount of software and hardware design and development in Australia to match the sonar and combat system to the RAN's requirements and help create an indigenous software support capability. The establishment of local construction and support activities has reduced repair turn around times and equipment and spares holdings as well as creating a sustainable capability to perform software support and development through the life of the ships.

A study by Tasman Economics, sponsored by the DMO and Australian Industry Group (AIG) Defence Council, has identified significant operational capability and national economic benefits from building these ships in Australia. The study found that the nine-year construction program for the minehunters contributed up to $887 million to Australia's GDP, maintained over 1,800 full-time equivalent jobs each year throughout Australia, and boosted the technology base, management skills and export prospects of participating companies.

Project Land 106 – M113 Upgrade

Project Overview and Key Issues
This project will carry out a comprehensive upgrade on 350 of the Army's M113 armoured personnel carriers.

The role of an armoured personnel carrier is to take soldiers into battle in comparative safety from landmines, shrapnel and bullets. A major advantage of a tracked vehicle such as the M113 is their ability to traverse extremely rough and difficult terrain and to advance close behind artillery fire support. An armoured personnel carrier is not a tank.

The upgraded M113s will have better armour and improved mine blast protection while a new Australian designed and manufactured turret will provide for greater and more accurate firepower. The vehicles' mobility is to be enhanced through replacement of the drive train and suspension; while its habitability will be improved through heat mitigation in the passenger compartment along with better seating and equipment stowage. Some 259 vehicles are being extended in length to provide more room.

Extensive delays were encountered over several years in actually getting this project underway. Reasons for this include:
- changing from a multi phase project schedule that commenced with a minimum upgrade first approved in the 1993/94 Budget to a single phase comprehensive project approved in 1999;
- a misunderstanding between the Commonwealth and its prime contractor Tenix over the amount of available budget;
- difficulties in reaching a final specification for the vehicles,
- development problems with the turret; and,
- the need to have the project re-approved after White Paper driven acquisition priorities were enunciated in 2000.

To manage development risk, which the DMO has assessed as medium, the project is planned in three stages:
- stage 1 for two vehicles to demonstrate the concept, perform gross level performance testing, and obtain user feedback, and this took place during the latter months of 2003;
- stage 2 for 14 initial production vehicles to prove manufacturing processes and perform complete performance and reliability testing, due for completion in 2005; and,
- stage 3 for full production which is due for completion in 2010/11.

Manufacture of the initial production vehicles is presently on schedule.

The 2000 Defence White Paper said that the upgraded vehicles would enter service from around 2005. However, when the project was subsequently approved following project definition, it was agreed that an initial in-service capability - one complete company group - should be operational by around the end of 2006. The project remains on target to meet this date. Planned life of type for the upgraded vehicles is 2020.

The project budget remains at the level proposed in the 2000 White Paper and subsequently approved by Government. The only variation has been standard adjustments for inflation and exchange rates. The current budget approval is $547million in February 2004 dollars.*

Risks facing the project include turret development, heat management and load characteristics in the logistics variant. However, the design so far is said to be satisfactory – representing a good balance between the performance requirements and the constraints of space and weight imposed by the vehicle.

Australian Industry Involvement (AII)
According to the DMO AII will represent 48% of contract value and comprise vehicle design and testing, turret design and manufacture, external fuel tank design and manufacture, and vehicle assembly. Up to 80 upgraded M113s will be produced each year from the government owned Tenix operated facility at Bandiana near Albury-Wodonga.

*Current budget figure from the DMO

Project Air 6000 – New Air Combat Capability

Project Overview and Key Issues
The new air combat capability to be acquired under Air 6000 will be Australia's most expensive defence procurement to date, with an anticipated budget of up to $15.5 billion. Phase 2 of the project as outlined in the Defence Capability Plan, deals with acquisition and is divided into three sub phases with years of decision falling in 2006/07, 2010/13 and 2018/20 respectively. The government is seeking the "capability equivalent" of 100 current aircraft. In-service delivery of phase 2a is expected to occur between 2012 and 2014, while the possibility exists that phases 2a and 2b may be combined.

Earlier stages of Air 6000 were abrogated when the government announced in June 2002 that Australia was joining the System Development and Demonstration (SDD) phase of the F-35 Joint Strike Fighter, a multi role aircraft being constructed in conventional, carrier-borne and short take off vertical landing versions for the US, UK and other air forces by Lockheed Martin. The SDD phase will be followed by Low Rate Initial Production (LRIP) and then the full production run. The US and UK have a requirement for some 3,000 F-35s and it is expected that export orders will lift total production over 4,500.

The main benefit to Australia from successful introduction of the F-35 is intended to be the maintenance of regional air combat superiority. Air combat is cited as the ADF's single most important capability in the Defence 2000 White Paper as it is critical to all types of operation that would be undertaken in defence of Australia.

When announcing that Australia would join the JSF SDD phase at a cost of $US150 million the Minister for Defence, Senator Robert Hill, said that the Government had

decided that the United States' Joint Strike Fighter is the most likely aircraft to satisfy Australia's needs, but many analysts remain to be convinced.

A recent ASPI policy report ("A Big Deal," February 2004) says that whether or not the JSF achieves the government's air combat requirements is dependant on the complex interrelationship between key factors such as the threat environment, JSF weapon system characteristics and enabling ADF combat capabilities such as air-to-air refuelling tankers and airborne early warning and control aircraft. The lack of a stand off-missile and a dedicated anti ship weapon on the first JSFs likely to be available to Australia were also cited as concerns.

Among the main risks facing this project are achieving the required capability within weight and budget parameters, and doing so on schedule. The RAAF's F-111s are due to retire from 2010 and the first of the F/A-18 Hornets from 2012-2015. If the JSF's entry to service were to be delayed, as has proven to be the case with other major combat aircraft programs, then some additional systems upgrades may become necessary.

Australian Industry Engagement
The other main reason given by the government for entering the JSF SDD phase was the opportunity this would provide the Australian aerospace industry to join the global supply chain for military fast jet aircraft and associated support capabilities.

So far, 12 Australian companies have won work in the SDD phase. According to Industry Minister Ian McFarlane's office the total estimated value of the contracts is $US380 million, an amount that includes projections on the value of various work packages should they roll over into LRIP and then the full production run.

The type of work won by Australian industry to date includes fabricating machined parts, making wing components, design work, software development and technical assistance with the development of simulation and training packages. Again, many analysts remain to be convinced of the operational utility of such work when it comes to supporting the JSF once it has entered service.

Project AIR 5276—P-3C Upgrade Implementation

Project overview and key issues
The RAAF's fleet of P-3C Orion Maritime Patrol Aircraft is nearing the end of a substantial upgrade program designed to enhance their maritime surveillance capability and prolong their service lives to around 2015. The 18 upgraded aircraft are designated AP-3C to reflect their unique Australian capability.

Project Air 5276 Ph.2A, dubbed Sea Sentinel by the prime contractor, L-3 Communications Integrated Systems, is a major avionics and mission system upgrade, replacing outdated and difficult to maintain equipment with more capable sensors, processors and displays and lightening the aircraft significantly to improve performance and reduce airframe fatigue.

The total approved project cost for Project Air 5276 is $903 million, of which $757 million had been spent by June 2003.

The Ph.2A prime contract includes the development of ground based support facilities including an Operational Mission Simulator (OMS) for crew training, a Systems Engineering Laboratory (SEL) for software maintenance and technical research and a mission analysis facility for crew briefing/debriefing, all located at RAAF Edinburgh, SA, where the Orions are based.

So far 13 aircraft have been upgraded. The final aircraft is scheduled for delivery in December this year. However, the complex task of developing the new mission system software resulted in a three-year delay in delivery of the first upgraded aircraft.

L-3 Communications (formerly E-Systems Inc. and then Raytheon) signed the $600 million fixed-price prime contract for Ph.2A in January 1995. The first aircraft was inducted into the program in January 1997 and underwent prototype modification and testing at L-3 Communications' Greenville factory in Texas. Software integration difficulties meant it wasn't until October 2001 that the prototype aircraft, together with the first of the aircraft to be modified in Australia, were delivered to the RAAF. All subsequent aircraft were upgraded in Australia.

Two other phases of Air 5276 ran concurrently with Ph.2A. Phase 2B provided for the acquisition of three TAP-3 (Trainer Aircraft P-3) Orion aircraft to reduce non-operational training hours flown by the P-3C fleet; and Phase 3 acquired an Advanced Flight Simulator (AFS).

An upgrade of the fleet's electro-optic detection system under Ph.5 of the project was announced by the Minister for Defence in April 2004. As yet unapproved phases include enhancements to the AP-3C's electronic warfare self-defence and surveillance systems and upgraded data links. The AP-3Cs will also be integrated in due course with the MU90 lightweight torpedo and Follow-On Stand-Off Weapon (FOSOW) under separate acquisition projects.

The $37.7m contract for the AFS was awarded to Thales Simulation & Training in October 1998 but the simulator was not delivered until January 2003. Although it is still in the final stages of the acceptance process it has been used heavily to train pilots for the AP-3C. The mission system software delays slowed competion of the Operational Mission Simulator (OMS) which was accepted by the Commonwealth in December 2002. The Software Engineering Laboratory (SEL) was delivered in September 2003, though some residual documentation and licensing issues remain outstanding.

As the TAP-3s were never configured to train pilots for the AP-3C, and are approaching the point where they need expensive maintenance, these aircraft have been withdrawn from service.

Despite the delays, the RAAF has expressed its satisfaction with the AP-3C which has proven itself to be among the best maritime patrol aircraft in service today. Two AP-3Cs have been deployed in the Gulf since late-2003 to carry out airborne surveillance

over both land and sea in support of the US-led coalition. Reports state the AP-3C and its crews have performed extremely well in both roles.

Australian Industry Involvement (AII)
Worth some 55% of the contract value, Australian industry content in this program is considerable. Only the prototype was modified in the United States. All other aircraft have been upgraded at Avalon Airport, Vic, by L-3 Communications Australia Pty Ltd.

In July 2003 Australian firm Tenix acquired most of L-3's assets at Avalon and established a new company, Tenix Sea Sentinel Project (Avalon) Pty Ltd, which was awarded a sub-contract by L-3 Communications Integrated Systems to complete the upgrade of the remaining aircraft in the fleet.

Under a sub-contract from L-3 BAE Systems Australia was responsible for the design, systems integration and development of the OMS, providing environmental simulation suites in the Integrated Test & Training Facility at RAAF Edinburgh.

Project Sea 1444 - Replacement Patrol Boat

Project overview and key issues
This project will acquire a fleet of 12 Armidale-class patrol boats to replace the RAN's existing 15-strong fleet of Fremantle-class patrol boats from 2005 under a contract worth $553 million.

To be built by Austal Ships Ltd in Fremantle and supported throughout their service lives by Defence Maritime Services Pty Ltd (DMS), these lightly-armed 56.8m boats will be home ported in Darwin and Cairns. They will be constructed from aluminium to merchant classification rules, rather than to a military specification. DMS, a 50:50 joint venture between P&O Maritime Services and SERCo, is prime contractor with Austal and Canberra-based CEA Technologies Pty Ltd as sub-contractors and partners.

The RAN's Patrol Boat Force carries out search and rescue, surveillance and interception of vessels suspected of illegal fisheries, quarantine, customs or immigration offences. They are the principal maritime patrol and response element of Australia's Civil Surveillance Program, which is managed by Coastwatch in consultation with the RAN.

The new boats will be available for 3,000 sea days per year, of which 1,800 days will be in support of Coastwatch, with a surge capacity of 600 additional days per year to meet short notice contingencies. The Fremantle-class boats have an average availability rate of about 2,700 days per year.

The Armidale-class boats are a significant improvement over the Fremantles in most areas. Their 3,000 nautical mile range is 20 per cent greater; being some 15m longer and equipped with stabilisers they can operate in worse sea conditions; they also carry two 7.24m rigid inflatable boats, rather than one, to enable concurrent boarding operations and these can be launched and recovered in higher seas. However, they are

not designed to serve in the Southern Ocean. They have a crew of 21 with accommodation for eight extra personnel if the mission demands it.

The Armidale-class boats will be equipped with the same M242 Bushmaster 25mm gun as the Army's ASLAVs, though on a Typhoon stabilised naval mount designed by Israeli firm Rafael.

Canberra-based CEA Technologies Pty Ltd will provide the boats' communications and sensor suite based on proven, existing equipment and technology derived from systems aboard the RAN's Huon-class minehunters.

The Fremantle-class boats entered service from 1979. In 1999 plans to extend their service lives by a further eight years were cancelled because it was found to be more cost-effective simply to replace them.

The tendering process was slowed by Defence White Paper considerations but eventually saw three shortlisted contenders - ADI, Tenix, and DMS - submit tenders in November 2002. The tender was based on a functional specification stating the required capability and rate of effort and invited tenderers to provide innovative and cost effective solutions to meet it.

DMS was named preferred tenderer in August 2003 and the 19-year contract worth $553 million was signed in December. The first of the Armidale-class boats will enter service in May 2005 with the last due to be delivered in mid-2007. The contract value includes the cost of building all 12 boats by Austal at its Henderson yard in Western Australia and 15 years in-service support (from 2007) by DMS which is responsible for all training, logistics and maintenance throughout their operational lives.

The technical risks associated with this project are slight – the Armidale-class boats will be constructed to merchant classification rules with a simple, low-risk communications and sensor suite. Austal has a worldwide reputation as a designer and builder of aluminium-hulled merchant and military craft.

The greatest risk is financial and relates to the efficient and sustainable provision of in-service and logistics support throughout the service lives of the Armidale-class boats. In this area prime contractor DMS has unique experience among Australian contractors – in 1997 it won the RAN's 10-year, $320 million Port Services and Support Craft (PSSC) contract under which it has successfully operated over 100 small craft of widely differing types, including tugs and supply tenders, to support the RAN in every major Australian port and harbour in which it operates.

Australian Industry Involvement (AII)

AII Target: The essential target was for 65 per cent AII in the construction of the boats and 90 per cent in maintenance and in-service support. The DMS/Austal bid meets these targets: the boats and their communications and sensor equipment were designed and will be built in Australia. DMS will provide in-service support using Australian staff organised in Ship Management Teams located at Darwin and Cairns.

SECTION 9 –THE FINANCIAL STATEMENTS EXPLAINED

Section 9.1: Defence Resourcing

Total Defence Resourcing has been clearly summarised at Table 2.1 in the PBS. While much of the Defence Budget can be understood without recourse to the financial statements, it is through the financial statements that the key financial aspects of the Budget are consolidated, including the impact on future years. Therefore it is useful to understand the relationship between Total Defence Resourcing as presented in the PBS and the budgeted financial statements.

Table 2.1 [PBS p.23] shows that Defence receives funding in a number of different ways, and pays money back to Government in several way as well. The Government purchases some 28 Outputs from Defence, which are grouped into six Outcomes. A seventh Outcome/Output covers administered appropriations. (During 2003-04 Defence amalgamated outputs 4.3 and 4.4 to new output 4.3 Capability for Surveillance and Response Operations reducing their outputs from 29 to 28).

The price Government pays for these Outputs is the Output Appropriation. Additional funding for the Outputs comes from Defence's own source revenues. Defence also receives funds to invest in capital assets. This comes from the Government's equity injection and from net capital receipts being the proceeds of sales of existing assets after capital withdrawal by Government.

PBS Table 2.1: Total Defence Resourcing

Serial No	2003–04 Projected Result $'000		2004–05 Budget Estimate $'000	2005–06 Forward Estimate $'000	2006–07 Forward Estimate $'000	2007–08 Forward Estimate $'000
	Departmental					
1	14,569,666	Revenue from Government for Price of Outputs	15,625,941	15,254,845	15,807,771	16,600,178
2	617,634	Equity Injection	299,025	876,037	1,103,867	1,319,381
3	15,187,300	**Total Revenue from Government (1+2)**	**15,924,966**	**16,130,882**	**16,911,638**	**17,919,559**
4	328,791	Own-Source Revenue	330,562	339,629	343,126	349,991
5	106,484	Net Capital Receipts	91,980	40,000	40,000	40,000
6	**435,275**	**Sub-Total (4+5)**	**422,542**	**379,629**	**383,126**	**389,991**
7	15,662,575	**Total Departmental Funding (3+6)**	**16,347,508**	**16,510,511**	**17,294,764**	**18,309,550**
	Administered					
8	2,016,900	Administered appropriation	2,336,900	2,436,900	2,436,900	2,636,900
9	17,639,475	**Total Defence Resourcing (7+8)**	**18,684,408**	**18,947,411**	**19,731,664**	**20,946,450**

The key sources of funding for Defence are explained in more detail as follows:

Revenue from Government for Price of Outputs (Output Appropriation): In 2004–05 the Government will appropriate $15,626 million towards the price of the Defence Outputs. This is the 'Price to Government of Defence's Outcomes'. In 2003-04 the projected appropriation for outputs is $14,570 million. It appears as Appropriations from Government in Revenue in the Budgeted Statement of Financial Performance PBS Table 2.12.

Equity Injection: In 2004–05 the Government will appropriate $299 million to supplement investment in specialist military equipment ($2,875 million) and land and buildings, vehicles and other equipment ($619 million). The equity injection is shown

in the Budgeted Statement of Cash Flows PBS Table 2.14 and also appears in the Capital Budget Statement PBS Table 2.15.

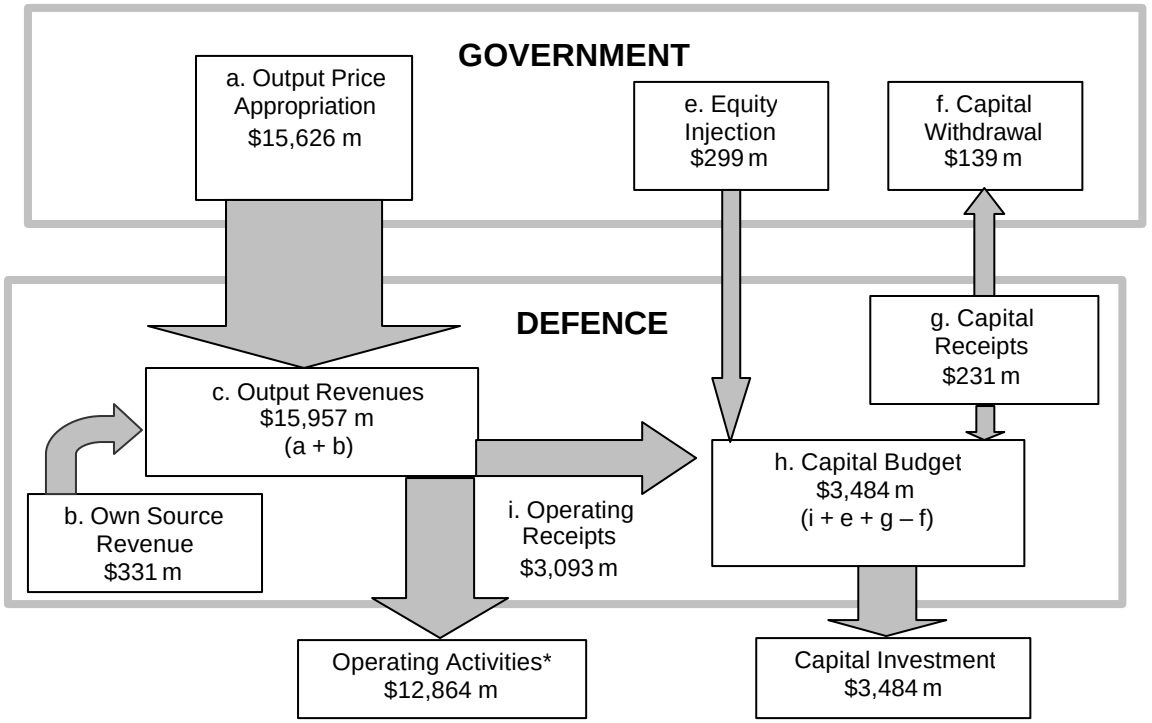
Own Source Revenue: In 2004–05 Defence has budgeted to raise $331 million of 'own source' revenue which is made up of sale of goods and services $243 million and other revenue $88 million. In 2002–03 a total of $385 million was raised including $19 million in interest, $100 million in housing and other property rentals, $37 million in rations and quarters charged to personnel, $40 million from fuel sales to foreign governments and $32 million from sales of other goods and services. With the cessation of the agency incentive banking scheme in 2003 Defence is no longer able to earn interest on cash balances and this is reflected in the 2004-05 budget. Own source revenue appears as Revenue in the Budgeted Statement of Financial Performance PBS Table 2.12.

Net Capital Receipts: In 2004–05 Defence have budgeted to receive $231 million in capital receipts from the sale of assets (mainly buildings and property). The capital receipts appear as cash receipts from investing activities in the Budgeted Statement of Cash Flows PBS Table 2.14 and within the Capital Budget Statement PBS Table 2.15.

Defence will only retain about $92 million of these sales, after the Government takes $139 million through a capital withdrawal in 2004-05. This is the mechanism through which the Government as owner takes back some of its equity in Defence and is used when assets like property are sold.

Figure 9.1.1 shows the flows of these resources between the Government and Defence. This illustrates the linkage between output revenues and the capital budget via operating receipts. These operating receipts include the left over cash from output revenue (price) due to non-cash expenses like depreciation and inventory consumption. (Figures not exact due to correction for GST, banking and timing shift.)

Figure 9.1.1 Defence Funding Schematic



Accrual Accounting

Accrual accounting is *activity* driven. It accounts for all resources when they are consumed and not necessarily when the corresponding cash is transacted. This can result in non-cash expenses such as depreciation and inventory consumption resulting from the consumption of resources previously paid for. Accrual accounting also includes expenses associated with unpaid obligations like creditors and employee entitlements.

The first step to understanding accrual accounting is to understand the language used. Some of the terms are obvious but others are not.

At the most basic level are the **resources** that are used in Defence. This includes **cash**, **inventory** (eg bullets, soap and uniforms), **capital assets** (eg tanks, buildings, and even software), the labour of staff and goods and services from the market place.

The earning of income is called **revenue**. Defence earns revenues through sales and the output appropriations from the Government. The consumption of a resource is called an **expense**.

Some resources are paid for and used within the accounting period (eg salaries); other non-cash expenses arise through the use of resources previously paid for called **assets** such as **inventory**, which is consumed. Another non-cash expense arises when **capital assets** are consumed through their **depreciation** in value over time. This yields an annual expense roughly equal to the value of the capital asset divided by its economic life. The difference between **revenues** and **expenses** is called the **net operating result**. A positive operating result is a profit, and a negative result is a loss. Defence budgets for a zero operating result.

The subtraction of expenses from revenues is done in the **Budgeted Statement of Financial Performance** [PBS Table 2.12], more commonly called the Operating Statement or Profit and Loss Statement. Resources that are presently owned are called **assets**. These can be either financial (eg cash, investment or monies owed) or non-financial (eg capital assets, inventory). Obligations to pay for resources in the future are called **liabilities** (eg accumulated employee entitlements and bills to be paid). This includes liabilities associated with non-cash related expenses such as increases in employee entitlements (long service leave) which have arisen through the use of resources which have not been paid. The difference between **assets** and **liabilities** is the **net assets** or **equity**.

The subtraction of liabilities from assets to calculate equity (net assets) occurs on the **Budgeted Statement of Financial Position** [PBS Table 2.13], more often called the Balance Sheet. The balance sheet captures resources not yet used (**assets**) and resources used but not yet paid for (**liabilities**).

Even in the accrual framework cash is important. The **Budgeted Statement of Cash Flows** [PBS Table 2.14] often called the cash flow statement tracks the flow of cash through Defence. It reports on the cash received and used for the **operating activities** that deliver the Defence outputs. It also reports on the cash used for **investing activities** like the purchase of tanks, buildings and other capital assets, as well as the cash received from the sale of assets. Finally it reports on the **financing activities** that include cash received from, and paid to, Government. This includes the equity injection and capital withdrawal. These peculiar artefacts of the framework are explained on the next page.

The Defence financial statements also include a Capital Budget [PBS Table 2.15] that reports the **expenditure** of cash on capital assets. It also reports on how the capital assets are funded and reports on the cash **receipts** gained from the sales of capital assets, and the various payments to and from Government associated with capital investment. As with the cash flow statement, all the entries refer to cash transactions. The Capital Budget provides insight into the investing and financing aspects of the Statement of Cash Flows.

9.2 Budgeted Financial Statements Explained [PBS Chapter 2]

The financial statements provide some insight into the planned financial performance of Defence for the current year 2004-05 as well as the impact on future years.

While public sector agencies such as Defence do not have a profit imperative, it is still useful to discuss the financial statements as if Defence was a profit-making company. Defence, as an organisation, must manage such issues as 'what is the net cost to the Government for the delivery of services (outputs)' and 'what is an appropriate level of capital to hold in the business to sustain operations', just as a profit-making company must.

The financial statements in Chapter 2 of the 2004–05 PBS detail an estimate of the current year result, the planned financial performance for the next 12 months and 'forward estimates' for the next 3 years. Revised estimates of budgeted performance are published later in the year in the PAES, and the actual financial performance is reported in October in the Annual Report.

The Defence PBS essentially provides three sets of budgeted financial statements:

- The 'departmental' statements [PBS Table 2.12 to 2.16] for the Department of Defence. These describe the resources that the department controls to deliver outputs. In the ordinary sense, these are the revenue and costs associated with running Defence;
- The 'administered' statements, referred to as schedules, [PBS Table 2.17 to 2.19] for the funds administered on behalf of Government primarily used for military superannuation schemes; and
- Financial statements for the Defence Housing Authority [PBS pp.250–254]. The Defence Housing Authority which forms part of the Defence Portfolio is not consolidated into the Defence financial statements and are not analysed in this brief. DHA charges Defence for rent and housing-related services and pays a dividend to government.

We explain the departmental statements below. The other two sets of statements are of less interest and we will only touch on them briefly. The departmental financial statements include:

- Budgeted Statement of Financial Performance (also known as the Operating Statement or Profit and Loss Statement – records revenues and expenses) [PBS Table 2.12];
- Budgeted Statement of Financial Position (also known as a Balance Sheet – records assets, liabilities and equity) [PBS Table 2.13];
- Budgeted Statement of Cash Flows [PBS Table 2.14]; and
- Capital Budget Statement (shows the budgeted spend on capital and the source of funding) [PBS Table 2.15].

In addition to the key statements and notes, a *summary of movement of non-financial assets* which shows the movements in property, plant and equipment and specialist military equipment is also included. [PBS Table 2.16].

The departmental financial statements only report at the most aggregate level and refer to the total financial performance of Defence as a whole. There is no information on the individual outputs, services or the Defence groups in these statements. However, at PBS Chapter 4 Planned Outcome Performance prices to government are given for each of the Government Outcomes and their associated Outputs, including a profile of the associated revenue and expenses for each Outcome and Output and performance targets.

An important part of the financial statements are the accompanying notes [PBS pp.56-71]. Note 1 provides explanatory notes on accounting policy and Note 2 provides explanations for material variations between the 2004–05 budget and previous 2004–05 revised estimates published in the 2003–04 PAES in February 2004. The notes on variations only report marginal changes and give no insight into the 'base' of the Defence budget.

The Defence Annual Report provides a much more extensive set of notes that break down many of the items in the financial statements into sub-categories. If you want to understand the budgeted financial statements it helps to have a recent copy of the annual report at hand so that you can refer to the notes to the financial statements.

Revenues and expenses in the Budgeted Statement of Financial Performance are calculated using the accrual basis of accounting. Appropriations to fund expenses therefore include amounts for both cash and non-cash items.

The Budgeted Statement of Financial Performance – The Operating Statement [PBS Table 2.12]

The Statement of Financial Performance reports on the accrual revenues and expenses involved in the delivery of the Defence Outputs during the financial year. It does not include what is spent on the investment in capital assets. Capital assets held are reported in the Statement of Financial Position PBS Table 2.13.

In simplest terms, the Statement of Financial Performance subtracts Defence's total expenses from it total revenues to calculate the net operating result (profit or loss) for the financial year. For 2004-05 Budget this is represented as:

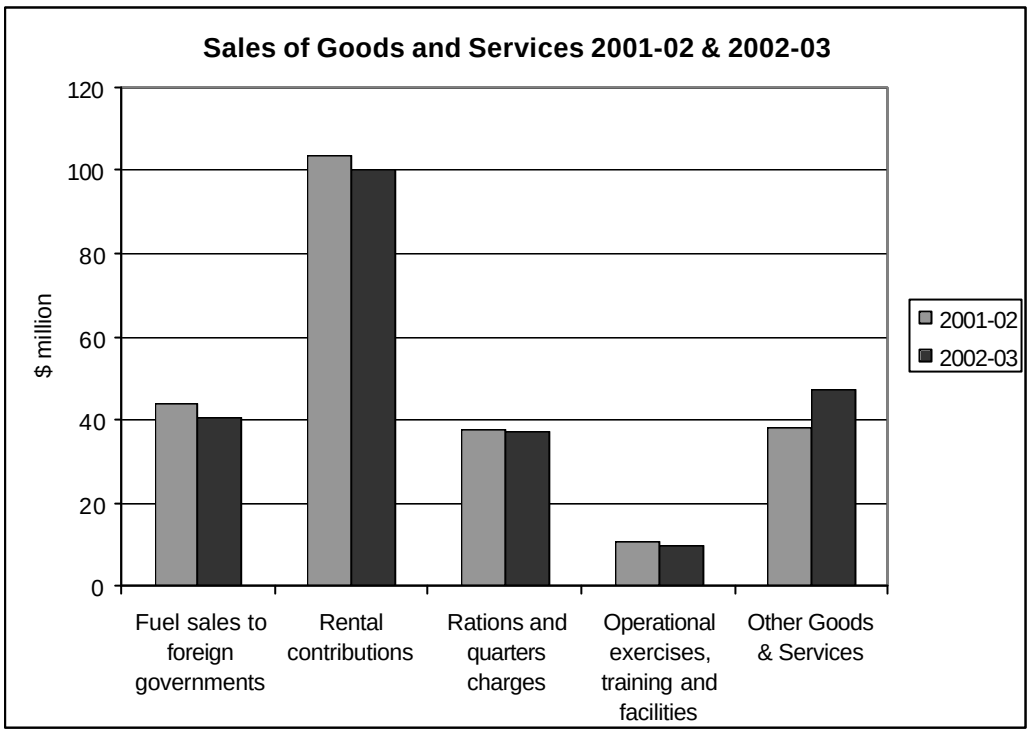
NET OPERATING RESULT $21 million	=	REVENUES $16 189 million	–	EXPENSES $16 168 million

Budgeted Revenues, or income, for 2004-05 broadly comprises:

- **Appropriations from Government** ($15,626 million) includes the Price for Outputs Appropriation and funds the operational expenses of Defence. This appropriation, together with revenue from other sources (such as sale of goods and services and other revenue), covers both cash related (eg employee expenses and suppliers) and non cash related expenses (eg depreciation and inventory consumption). Explanations for variations to budget for appropriations are provided at PBS pp.67-70 in Note 2 of the Notes to the Budgeted Financial Statements.

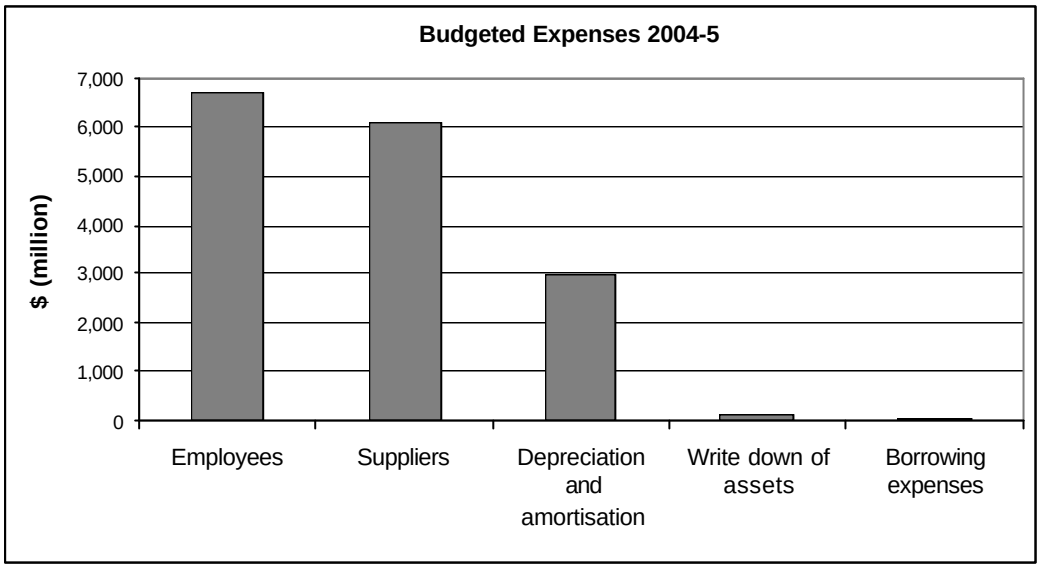
- **Sales of Goods and Services** ($246 million) includes revenue from goods and services provided to organisations other than the agreed outputs to Government. A detailed breakdown is not provided however, the nature of these revenues is demonstrated using 2001-02 and 2002-03 actual revenue in Table 9.2.1.

Table 9.2.1 Revenue from Sales of Goods and Services 2001-02 and 2002-03



- **Assets Now Recognised** is the revenue associated with corrections in accounting for assets found or recognised and not previously recorded. The Budget for 2004-05 is nil against actual results of $ 866 million in 2002-03 and a projected result of $278 million for 2003-04.
- **Other Revenue** ($86 million) includes foreign military sales refunds, excise refunds, settlement of damages and other miscellaneous items.
- **Budgeted Expenses** for 2004-05 broadly comprises the five components in Table 9.2.2.

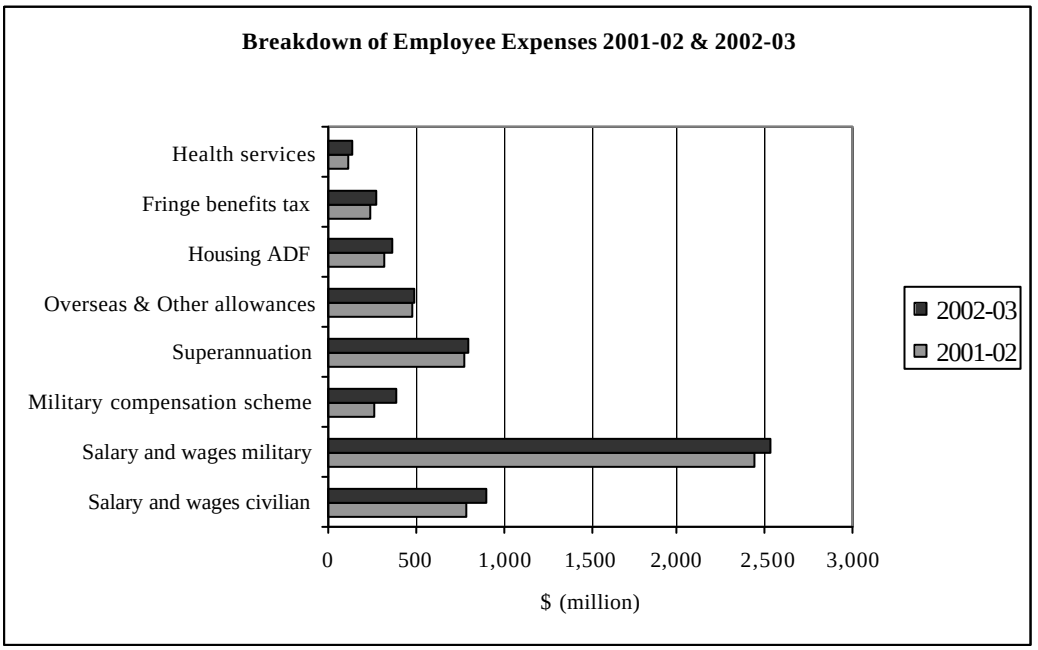
Table 9.2.2 Budgeted Expenses 2004-05



The key components are:

- **Employees** represent all costs associated with the employment of military and civilian personnel. A detailed profile of the components of this expense is not provided however the nature of these costs is well demonstrated using the 2001-02 and 2002-03 actual costs in Table 2.2.3. In 2004-05 the function of the Military Compensation Scheme will be transferred to the Department of Veteran's Affairs which is expected to reduce employee expenses by $143.3 million.

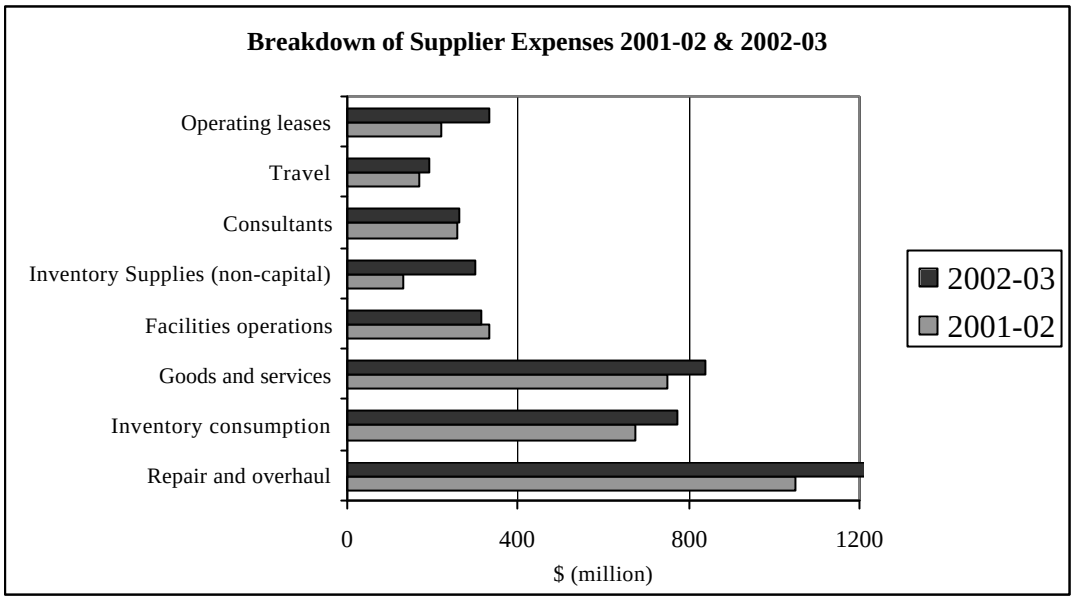
Table 9.2.3 Employee Expenses 2001-02 and 2002-03



- **Suppliers** include all costs associated with the supply of goods and services to Defence for use in delivering the Outputs. It also includes consumption of

inventory costs. The actual expenses for 2001-02 and 2002-03 appears in Table 9.2.4.

Table 9.2.4 Suppliers Expenses 2001–02 and 2002–03



- **Depreciation and amortisation** represents the annual cost of using up assets over time – approximates the asset value divided by remaining life.
- **Value of assets sold** represents the written down value of the assets being sold. This value is offset against revenue from the sale of assets to arrive at the gain or loss on sale.
- **Write Down of Assets** is the reduction in the value of assets which are no longer used or exist such as specialist military equipment and inventories which are obsolete.

The 2002–03 Annual Report provides more detailed information on actual expenses and revenues.

Net Operating Result

The net operating result shows the net financial impact on Defence's resources of the operating activities undertaken during the year. The budgeted result for 2004-05 is a surplus of $21 million as compared with a projected operating loss of $810 million for 2003-04. Contributing to the projected loss for 2003-04 is the projected increase in employee expenses of approximately 12% against actual results for 2002-03. This in part would appear to be due to adjustments to salaries and leave liability calculations resulting from wage rises and costs associated with operations for 2003-04.

The Equity Interests part of the Statement of Financial Performance summarises the net change to Accumulated Surpluses at 30 June. This also appears on the Statement of Financial Position as a component of equity. The accumulated surpluses amount is the sum of the past operating results that have occurred since the start of accrual reporting by Defence reduced by capital withdrawals of asset sales proceeds and dividends by way of the now discontinued Capital Use Charge (CUC) prior to July 2003.

The balance of accumulated surpluses is calculated in two steps:

- First, the net operating result is added to the 'accumulated surplus' from the beginning of the financial year, called the Accumulated Surplus at 1 July, to give the **Total Available for Appropriation**; and

- Then the accumulated surplus at the end of the financial year is calculated by subtracting Capital Withdrawals ($139 million: $200 million projected in 2003–04). Note that the Accumulated Surpluses amount on the Statement of Financial Performance PBS Table 2.12 does not include the adjustment for the transfer of the liabilities associated with the Military Compensation Scheme ($1,701million). The accumulated surpluses amount on the Statement of Financial Position does include the recognition of this revenue for the loss of liability. The impact of this is a loss of visibility of this adjustment to the reader.

The Budgeted Statement of Financial Performance PBS Table 3.1 is demonstrated on the following page.

The Budgeted Statement of Financial Performance – The Operating Statement [PBS Table 2.12]

Revenues
Income earned through the delivery of Defence's Outputs and from other sources

The price of outputs

Expenses
Resources consumed in the process of delivery the Defence Outputs to Government. This is largely employee expenses, suppliers (including inventory use) and depreciation

PBS Table 2.12: Budgeted Statement of Financial Performance

2003–04 Projected Result $'000		2004–05 Previous Estimate $'000	2004–05 Budget Estimate $'000	Variation %	2005–06 Forward Estimate $'000	2006–07 Forward Estimate $'000	2007–08 Forward Estimate $'000
	REVENUES						
14,569,666	Appropriations from Government	14,929,723	**15,625,941**	4.7	15,254,845	15,807,771	16,600,178
243,085	Sales of goods and services	242,093	**245,670**	1.5	251,200	253,449	258,993
306,384	Revenue from sale of assets	242,312	**230,980**	(4.7)	40,000	40,000	40,000
278,000	Assets now recognised	–	–	–	–	–	–
87,706	Other	86,250	**86,892**	0.7	88,429	89,677	90,998
15,484,841	**Total Revenues**	**15,500,378**	**16,189,483**	**4.4**	**15,634,474**	**16,190,897**	**16,990,169**
	EXPENSES						
6,932,305	Employees	6,777,338	**6,710,346**	(1.0)	6,993,119	7,118,776	7,197,428
5,552,967	Suppliers	5,362,434	**6,109,274**	13.9	5,726,334	6,062,832	6,696,137
1,874	Grants	1,911	**1,250**	(34.6)	1,275	1,301	1,327
3,091,654	Depreciation and amortisation	2,984,937	**2,984,937**	–	2,742,171	2,835,282	2,928,394
306,384	Value of assets sold	242,312	**239,980**	(4.7)	40,000	40,000	40,000
378,000	Write-down of assets	100,000	**100,000**	--	100,000	100,000	100,000
–	Other	–	**–**	–	–	–	–
16,263,184	**Total Expenses**	**15,468,932**	**16,136,787**	**4.3**	**15,602,899**	**16,158,181**	**16,963,286**
31,263	Borrowing cost expense	31,446	**31,446**	--	32,075	32,716	26,883
(809,606)	**Net Operating Result**	**-**	**21,250**	**100.0**	**(500)**	–	–
	EQUITY INTERESTS						
37,144,689	Accumulated surpluses at 1 July	37,272,189	**36,335,083**	(2.5)	36,356,333	36,355,833	36,355,833
36,335,083	**Total Available For Appropriation**	**37,272,189**	**36,356,333**	**(2.5)**	**36,355,833**	**36,355,833**	**36,355,833**
--	Capital withdrawal	-	**--**	--	--	–	–
36,335,083	**Accumulated Surpluses At 30 June**	**37,272,189**	**36,356,333**	**(2.5)**	**36,355,833**	**36,355,833**	**36,355,833**

See Statement of Financial Position

Net Operating Result
The net profit or loss calculated by subtracting Expenses from Revenue

Total available for appropriation
The equity from the start of the year adjusted for the operating result made during the year

Surpluses at 1July
Defence's total accumulated surplus at start of year

Capital Withdrawal
Cash returned to the Government from the sale of assets, mainly property. The capital withdrawal has been offset against capital in the Statement of Financial Position. See Table 7.9 for detail.

Accumulated Surplus 30 June
Accumulated results at the end of the year shown as part of equity on Statement of Financial Position

The Budgeted Statement of Financial Position – The Balance Sheet [PBS Table 2.13]

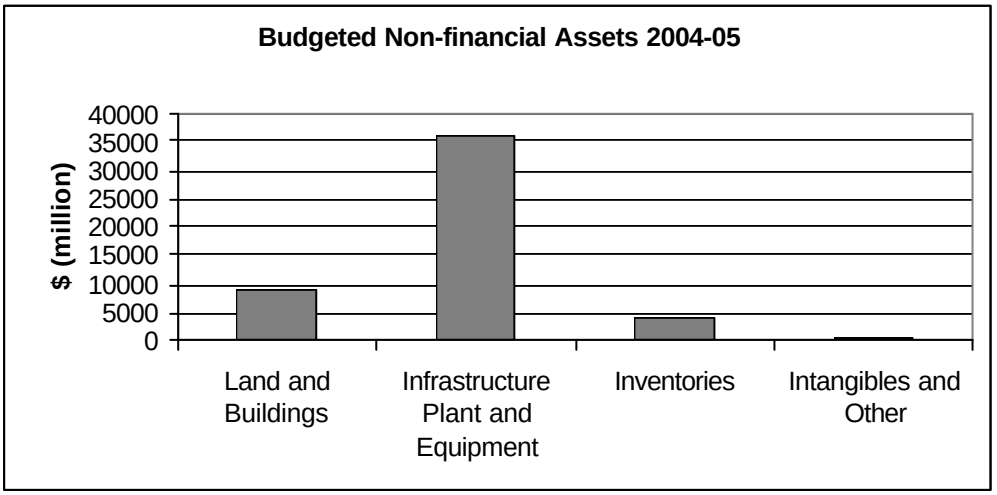
The Statement of Financial Position projects a snapshot of Defence's assets, liabilities and equity (net assets) at the end of the financial year. This is calculated by subtracting the total liabilities from the total assets to arrive at net assets. For 2004-05 this is represented as:

NET ASSETS $47 billion	=	ASSETS $51 billion	–	LIABILITIES $4 billion

Budgeted assets for 2004-05 comprise:

- **Financial Assets** of $971 million is essentially made up of cash and receivables.
  - **Cash** is estimated to be negative or overdrawn by $90.4 million in 2004-05 and this remains unchanged for the three forward years to 2007-08. This arises through the payment of $190 million for a 27th payday in 2004-05, normally there are 26 pays. Defence is seeking to address this issue at Additional Estimates, although from an accrual perspective, funding would have been received in the output price for the full salary expense for the year or could be funded from appropriation receivable.
  - **Receivables** in 2004-05 ($1 061 million) which includes cash reserves held as an appropriation receivable of $779 million. This is after the re-programmming almost that amount again of $700 million capital spend to future years. Defence is able to use the appropriation receivable to meet existing employee and supplier liabilities.
  - Receivables for 2002-03 also included an amount for GST receivable of $115 million and advances and loans of $60 million.
- **Non-Financial Assets** of $49 843 million are broken down in Table 9.2.5.

Figure 9.2.5 Budgeted Non Financial Assets 2004- 05



Non financial assets include:

- **Land and Buildings** $8 924 million, and **Infrastructure Plant and Equipment** $36 259 million which primarily includes Specialist Military Equipment of $31,383 million (including equipment in-service as well as under construction).

- **Intangibles** ($86 million) including software and patents, copyrights and licences.

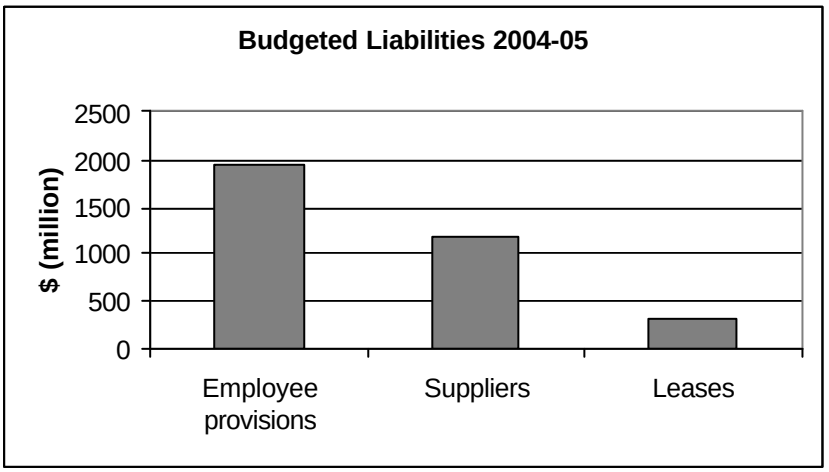
  Expenses incurred as a result of the use of these assets includes depreciation ($2 895 million) and write down of assets ($100 million) shown on the Statement of Financial Performance. As assets are sold the difference between the value of assets sold (expense) and the revenue from the sale of assets (revenue) represents the profit or loss on sales. Defence has not budgeted for any profit or loss on sale. The proceeds from asset sales are also reported in the Statement of Cash Flows PBS Table 2.14

- **Inventories** are budgeted at a net value of $3,837 million after a reduction for obsolescence (this breakdown not shown in the PBS). As inventories are used they are recorded as an expense in the Statement of Financial Performance in the suppliers category. Again this consumption of inventory is not shown separately although it does appear in the analysis of outputs at PBS Chapter 4.

- **Other** ($718 million) includes prepaid expenses and prepaid capital items.

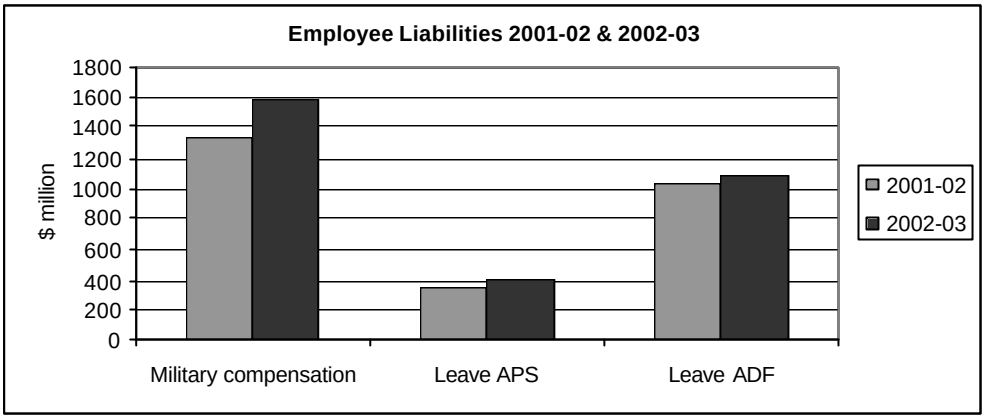
- **Budgeted liabilities** represent amounts owing to other parties and comprises three components, employee provisions, suppliers' liabilities and leases. These are graphed in Figure 9.2.6.

Figure 9.2.6 Budgeted Liabilities 2004-05



- **Employee Provisions** is $1,955 million for 2004-05 after the transfer of the employee liabilities associated with the Military Compensation Scheme ($1,701.4 million) and is the major liability for Defence. Actual employee provisions reported for 2001–02 and 2002-03 appears in Figure 9.2.7.

Figure 9.2.7 Actual Employee Liabilities 2001- 02 and 2002- 03



- **Suppliers** estimated at $1,200 million remains consistent with previous periods despite an increases in supplier expenses. Actual creditors reported in 2002–03 included non-capital trade creditors ($856 million) and capital trade creditors ($364 million). No change in total suppliers and other payables is projected in the PBS from 30 June 2004 to 30 June 2008.

  – **Leases** ($318 million) being mainly a finance lease arrangement with the Defence Housing Authority for the supply of housing to ADF personnel.

- The **Net Assets** also represent the **Total Equity**. The total equity represents the Government's overall owner interest in Defence. In the Equity part of the Statement of Financial Position the total **equity** is broken down into three somewhat artificial categories:

  - **Capital** ($1,662 million) is the accumulated result of equity injections since 1999 less capital withdrawals. Capital withdrawn relates to the Government's share of the proceeds from property sales.

  - **Revaluation Reserves** ($7,248 million) which result from the revaluation of assets. For accounting purposes, where the value of assets has been revised and increased, Defence is required to account for these increases through increasing the asset as well as a special 'revaluation reserve'; and

  - **Accumulated Surpluses** is the accumulated results from previous years plus the initial value of net assets (or equity) when accrual reporting was introduced. For 2004-05, the accumulated surpluses also include a revenue arising from the transfer of liabilities of the Military Compensation Scheme to the Department of Veterans' Affairs of $1,701.4m. Small variations occur in the forward estimates.

Finally on the Statement of Financial Position PBS Table 2.13 the assets and liabilities are broken down into current and non-current. Current assets and liabilities are those that those which are expected to be realised within the next twelve months, whereas non-current ones are expected to be realised beyond that time.

The Budgeted Statement of Financial Position is demonstrated on the following page.

The Budgeted Statement of Financial Position – The Balance Sheet [PBS Table 12.13]

Assets (what Defence owns)
(resources that will bring future benefit) The financial and non-financial assets budgeted to the end of the financial year

Liabilities (what Defence owes)
(resources that have been used but not paid for) Payments that Defence is required to make at some time in the future

PBS Table 12.13: Budgeted Statement of Financial Position

2003–04 Projected Result $'000		2004–05 Previous Estimate $'000	2004–05 Budget Estimate $'000	Variation %	2005–06 Forward Estimate $'000	2006–07 Forward Estimate $'000	2007–08 Forward Estimate $'000
	ASSETS						
	Financial Assets						
99,557	Cash	99,557	**(90,433)**	(190.8)	(90,443)	(90,443)	(90,443)
923,255	Receivables	1,358,178	**1,061,322**	(21.9)	1,006,222	930,922	833,922
1,022,812	**Total Financial Assets**	**1,457,735**	**970,879**	**(33.4)**	**915,779**	**840,479**	**743,479**
	Non-Financial Assets						
9,129,857	Land and buildings	8,912,396	**8,923,728**	0.1	8,873,234	8,817,185	8,756,376
35,873,509	Infrastructure, plant and equipment	37,892,245	**36,258,966**	(4.3)	37,362,407	38,601,479	40,080,577
130,637	Intangibles	85,847	**85,847**	–	65,663	44,796	23,166
19,047	Heritage and cultural	19,047	**19,047**	-	19,047	19,047	19,047
3,886,800	Inventories	3,749,395	**3,836,895**	2.3	3,763,612	3,788,731	3,796,831
718,548	Other	718,548	**718,548**	–	718,548	718,548	718,548
49,758,398	**Total Non-Financial Assets**	**51,377,478**	**49,843,031**	**(3.0)**	**50,802,511**	**51,989,759**	**53,394,545**
50,781,210	**Total Assets**	**52,835,213**	**50,813,910**	**(3.8)**	**51,718,290**	**52,830,238**	**54,138,024**
	LIABILITIES						
	Debt						
331,177	Leases	317,570	317,570	–	303,090	287,670	271,310
331,177	**Total Debt**	**317,570**	**317,570**	**–**	**303,090**	**287,670**	**271,310**
	Provisions and Payables						
3,758,183	Employees	3,478,248	**1,955,018**	(43.8)	1,895,861	1,807,792	1,694,847
1,200,066	Suppliers	1,200,066	**1,200,066**	–	1,200,066	1,200,066	1,200,066
373,729	Other	373,729	**373,729**	–	373,729	373,729	373,729
5,331,978	**Total Provisions and Payables**	**5,052,043**	**3,528,813**	**(30.2)**	**3,469,656**	**3,381,587**	**3,268,642**
5,663,155	**Total Liabilities**	**5,369,613**	**3,846,383**	**(28.4)**	**3,772,746**	**3,669,257**	**3,539,952**
45,118,055	**Net Assets**	**47,465,600**	**46,967,527**	**(1.0)**	**47,945,544**	**49,160,981**	**50,598,072**
	EQUITY						
1,501,827	Capital	2,945,499	**1,661,852**	(43.6)	2,537,889	3,641,756	4,961,137
7,281,144	Reserves	7,247,911	**7,247,911**	–	7,247,911	7,247,911	7,247,911
36,335,084	Accumulated surpluses	37,272,190	**38,057,764**	(2.1)	38,159,744	38,271,314	38,389,024
45,118,055	**Total Equity**	**47,465,600**	**46,967,527**	**(1.0)**	**47,945,544**	**49,160,981**	**50,598,072**
Represented by							
2,024,551	Current assets	1,962,474	**1,964,958**	0.1	1,898,611	1,827,166	1,731,409
48,756,659	Non–current assets	50,872,739	**48,848,952**	(4.0)	49,819,679	51,003,072	52,406,615
2,868,562	Current liabilities	2,462,218	**2,233,182**	(9.3)	2,211,972	2,180,556	2,140,354
2,794,593	Non-current liabilities	2,907,395	**1,613,200**	(44.5)	1,560,774	1,488,701	1,399,598

Net Assets = Total Equity
This is simply the difference between the assets and the liabilities and represents the value of the owner's interests. Note that capital is net of capital withdrawals.

Here the equity (net assets) are broken up in terms of the source or nature of equity

The Budgeted Statement of Cash Flows [PBS Table 2.14]

The budgeted statement of cash flows reports the actual receipt and expenditure of cash in Defence. It is however, just as complex as any of the other statements.

The cash flows are broken into three categories and the net impact of cash movements for each category is then brought together to literally show the net impact on Defence's bank account at the end of the financial year. In broad terms the 2004-05 budget shows the movements in cash as follows:

Change to cash -$190 million	=	Net cash from/to operating activities $3 648 million	+	Net cash from/to investing activities -$3,984 million	+	Net cash from/to financing activities $146 million

Net Cash from/to Operating Activities is the net cash remaining after the delivery of the Defence outputs. As is shown, from the total cash received from operating activities of $16 921 million about $6 812 million is spent on employees and $6 110 million is spent on suppliers. The composition of these amounts are similar to the corresponding *expenses* in the Statement of Financial Performance – although the numbers will differ slightly due to goods and services tax (GST) and timing differences between expenses are incurred and when the cash is paid. The total unused cash from operating activities is around $3,648 million.

Movements to and from the Official Public Account relate to the implementation of an 'as required' cash drawdown arrangements. Cash reserves are able to be drawn down through an appropriation receivable. Defence is able to maintain $100 m daily cash balance.

Net Cash from/to Investing Activities is the difference between the gross receipts from the sale of assets including equipment, property and buildings ($231 million), and the purchase of specialist military equipment ($2 875 million) and other property, plant and equipment ($609 million). The specialist military equipment includes the major and minor capital equipment programs, while other property, plant and equipment includes much of the capital facilities program. Note the inclusion of capital inventory purchases in this section of cash flow $731 million.

Investing activities consume $3,984 million more cash than they generate from capital receipt activities. The difference is funded from the excess operating activities cash and equity appropriation. It is possible to see how much of the excess operating cash is used to purchase capital items by looking at PBS Table 2.15 Capital Budget Statement. Of the $3,648 million net operating cash, $3,093 million is budgeted to be used as funding for capital, referred to as 'operating receipts' within Total Capital Funding. This amount represents funding in the output appropriation for depreciation and other non cash amounts that is being applied to buy assets.

Net Cash from/to Financing Activities is mainly concerned with accounting for the various cash transactions between Defence and the Government related to capital investment.

Net cash from/to financing activities $146 million	=	Equity injection $299 million	–	Capital withdrawal $139 million	–	Repayment of debt $14 million

Finally, the three net cash changes over the financial year are brought together to project the cash held by Defence on 30 June 2005 on the basis of the starting balance at 1 July 2004.

Cash held 30 June 2005 -$90 million	=	Cash held 1 July 2003 $100 million	+	Change to cash -$190 million

This arises due to the payment of a 27th pay (ordinarily there are 26 pays) in 2004-05 amounting to $190m. Defence are seeking to address this issue at additional estimates.

The Budgeted Statement of Cash Flows is demonstrated on the following page.

The Budgeted Statement of Cash Flows [PBS Table 2.14]

The *cash* received for operating activities is the collection of the *revenues* on the Statement of Financial Performance. The difference is due to timing of transactions.

The *cash* used for operating activities is less than the *expenses* recorded for operating activities on the Statement of Financial Performance because of non-cash expenses (eg depreciation)

PBS Table 2.14: Budgeted Statement of Cash Flows

2003–04 Projected Result $'000		2004–05 Previous Estimate $'000	2004–05 Budget Estimate $'000	Variation %	2005–06 Forward Estimate $'000	2006–07 Forward Estimate $'000	2007–08 Forward Estimate $'000
	OPERATING ACTIVITIES						
14,569,666	Appropriations from Government	14,929,723	**15,625,941**	4.7	15,254,845	15,807,771	16,600,178
263,991	Sales of goods and services	262,913	**266,798**	1.5	267,624	269,924	275,828
--	Interest	--	–	--	–	–	–
794,868	Net GST refund	851,109	**872,561**	2.5	844,694	903,808	988,403
85,706	Other	84,250	**84,892**	0.8	88,429	89,677	90,998
938,972	Cash transfer from Official Public Account	*34,800*	71,100	104.3	55,100	75,300	97,000
16,653,203	**Total cash received**	**16,162,795**	**16,921,292**	**4.7**	**16,510,692**	**17,146,480**	**18,052,407**
6,491,833	Employees	6,689,073	**6,812,081**	1.8	6,949,796	7,095,265	7,192,663
5,509,433	Suppliers	5,341,872	**6,110,472**	14.4	5,654,842	6,008,449	6,780,906
1,874	Grants	1,911	**1,250**	(34.6)	1,275	1,301	1,327
107,154	Inventory	108,162	**109,276**	1.0	111,713	129,972	120,714
31,263	Other	31,446	**31,446**	--	32,075	32,716	26,883
709,686	Cash transfer from Official Public Account	*143,367*	**209,167**	45.9	--	–	–
12,851,243	**Total cash used**	**12,315,831**	**13,273,692**	**7.8**	**12,749,701**	**13,267,703**	**14,122,493**
3,801,960	**Net cash from/(to) Operating Activities**	**3,846,964**	**3,647,600**	**(5.2)**	**3,760,991**	**3,878,777**	**3,929,914**
	INVESTING ACTIVITIES						
306,384	Proceeds from sales of property, plant and equipment	242,312	**230,980**	(4.7)	40,000	40,000	40,000
306,384	**Total cash received**	**242,312**	**230,980**	**(4.7)**	**40,000**	**40,000**	**40,000**
2,585,499	Purchase of specialist military equipment	3,370,074	**2,874,945**	(14.7)	3,325,512	3,658,838	3,977,148
483,991	Purchase of property, plant and equipment	636,713	**608,743**	4.4	589,422	478,573	487,932
717,111	Purchase of inventory	723,854	**731,310**	1.0	747,614	869,813	807,855
3,786,601	**Total cash used**	**4,730,641**	**4,214,998**	**(10.9)**	**4,662,548**	**5,007,224**	**5,272,935**
(3,480,217)	**Net cash from/(to) investing activities**	**(4,488,329)**	**(3,984,018)**	**(11.2)**	**(4,662,548)**	**(4,967,224)**	**(5,232,935)**
	FINANCING ACTIVITIES						
617,634	Equity appropriation	830,804	**299,025**	(64.0)	876,037	1,103,867	1,319,381
617,634	**Total cash received**	**830,804**	**299,025**	**(64.0)**	**876,037**	**1,103,867**	**1,319,381**
12,561	Repayments of debt	13,607	**13,607**	–	14,480	15,420	16,360
926,816	Capital withdrawal	175,832	**139,000**	(20.9)	--	–	–
939,377	**Total cash used**	**189,439**	**152,607**	**(19.4)**	**14,480**	**15,420**	**16,360**
(321,743)	**Net cash from/(to) financing activities**	**641,365**	**146,418**	**(77.2)**	**861,557**	**1,088,447**	**1,303,021**
	Net Increase/(Decrease) in Cash Held	**--**	(190,000)	**(100.0)**	–	–	–
99,557	Cash at 1 July	99,557	**99,557**	--	(90,443)	(90,443)	(90,443)
99,557	**Cash At 30 June**	**99,557**	**(90,443)**	**(190.8)**	**(90,443)**	**(90,443)**	**(90,443)**

Cash received, mainly for the sale of property, plant and equipment

Here is where generally payments to and from Government are shown

Here is where the net change in cash in the bank between the start and the end of the financial year is calculated

The purchase of assets including capital assets and buildings

Cash balance held in Defence's bank account

The Capital Budget [PBS Table 2.15]

The Capital Budget Statement [PBS Table 2.15] is largely a restatement of the Budgeted Statement of Cash Flows relating to capital investment. It spells out where the funding for the capital budget comes from.

The **Capital Expenditure** is presented just as it is in the Budgeted Statement of Cash Flows. The **Capital Receipts** are also sourced from the Budgeted Statement of Cash Flows and the calculation of the **Net Capital Receipts** simply subtracts the Capital Withdrawal from this cash received for investing activities. The interesting part of the statement is the calculation of the **Total Capital Funding**.

The **Total Capital Funding** shows the three separate sources of cash funding for capital investment. This includes the equity injection, or equity appropriation, from the Government ($299 million), and the net capital receipts of $92 million, being the proceeds from the sale of assets after the capital withdrawal by Government. Finally, the Operating receipts provide the balance of the capital funding of $3,093 million from what is *in effect* cash from operating activities.

Capital funding $3,484 million	=	Equity injection $299 million	+	Operating receipts $3,093 million	+	Net capital receipts $92 million

Further details on the Capital Budget can be found in PBS Table 2.15.

PBS Table 2.15: Capital Budget

Capital expenditure as given in the Statement of Cash Flows

2003–04 Projected Result $'000		2004–05 Previous Estimate $'000	2004–05 Budget Estimate $'000	Variation %	2005–06 Forward Estimate $'000	2006–07 Forward Estimate $'000	2007–08 Forward Estimate $'000
	CAPITAL EXPENDITURE						
2,585,499	Purchase of specialist military equipment	3,370,074	**2,874,945**	(14.7)	3,325,512	3,658,838	3,977,148
483,991	Purchase of property, plant and equipment	636,713	**608,743**	(4.4)	589,422	478,573	487,932
3,069,490	**Total Capital Payments**	**4,006,787**	**3,483,688**	**(13.1)**	**3,914,934**	**4,137,411**	**4,465,080**
	Funded from:						
617,634	Equity injection	830,804	**299,025**	(64.0)	876,037	1,103,867	1,319,381
2,345,372	Operating receipts	3,109,503	**3,092,683**	(0.5)	2,998,897	2,993,544	3,105,699
106,484	Net Capital receipts	66,480	**91,980**	38.4	40,000	40,000	40,000
3,069,490	**Total Capital Funding**	**4,006,787**	**3,483,688**	**(13.1)**	**3,914,934**	**4,137,411**	**4,465,080**
	CAPITAL RECEIPTS						
--	Proceeds from sale of specialist military equipment	–	**--**	–	–	–	–
306,384	Proceeds from sales of property, plant and equipment	242,312	**230,980**	(4.7)	40,000	40,000	40,000
(199,900)	Less: Capital withdrawal	(175,832)	**(139,000)**	(20.9)	--	–	–
106,484	**Net Capital Receipts**	**66,480**	**91,980**	38.4	**40,000**	**40,000**	**40,000**

This is where the **net capital receipts** are calculated by subtracting the capital withdrawal from the receipts from the sales of property plant and equipment

This is the interesting bit where the various sources of funding for capital investment are brought together. Note the funding of $3 billion in operating receipts

ABOUT THE AUSTRALIAN STRATEGIC POLICY INSTITUTE

ASPI is an independent, non-partisan research institute on strategic policy. It has been set up by the Government to provide fresh ideas on Australia's defence and strategic policy choices. It will help Australians understand the critical strategic choices which our country will face over the coming years, and will help Government make better-informed decisions. ASPI is charged with the task of informing the public on strategic and defence issues, generating fresh ideas for government, and fostering strategic expertise in Australia.

ASPI is therefore a policy-focused organisation, and its products are above all else contributions to the policy debate, both inside and outside Government. For more information, see ASPI's website at www.aspi.org.au.

ASPI's Research Program

Each year ASPI will publish a number of policy reports on key issues facing Australian strategic and defence decision-makers. These reports will draw on work by external contributors.

Strategy: ASPI will publish up to 10 longer studies, including a series of annual publications on key topics, such as the defence budget, regional capabilities and Australian Defence Force capabilities.

Strategic Insights: A series of shorter studies on topical subjects that arise in public debate.

Commissioned Work: ASPI will undertake commissioned research for clients including Commonwealth ministers and departments, State Governments, foreign governments and industry.

ASPI'S PROGRAMS

Strategy and International Program

This program covers ASPI's work on Australia's international security environment, the development of our higher strategic policy, our approach to new security challenges, and the management of our international defence relationships. It is also responsible for relationships with overseas institutions and the international visitors program.

Operations and Capability Program

This program covers ASPI's work on the operational needs of the Australian Defence Force, the development of our defence capabilities, and the impact of new technology on our armed forces. It also covers the major capability investment issues, and on higher-level workforce issues such as Reserves.

The Budget and Management Program

This program covers the full range of questions concerning the delivery of capability, from financial issues and personnel management to acquisition and contracting out – issues that are central to the Government's policy responsibilities, but receive very little outside attention.

Outreach Program

One of the most important roles for ASPI is to involve the broader community in the debate on defence and security issues. The thrust of these activities will be to provide access to the issues and facts through a range of activities and publications.

ASPI's events program

ASPI's event program is planned to include major lectures, conferences of senior opinion leaders in the wider community, summer schools, informal seminars for the policy community, and seminars and other events in centres around Australia. We also host prominent international experts on defence and strategic issues to Australia for visits.

ASPI will also undertake dialogues on strategic issues with a number of key regional countries.

GLOSSARY

ADF	Australian Defence Force
AES	Additional Estimates Statements
AEW&C	Airborne Early Warning & Control
ANAO	Australian National Audit Office
APS	Australian Public Service
CDF	Chief of the Defence Force
CSP	Commercial Support program
CUC	Capital Use Charge
DCP	Defence Capability Plan
DFRB	Defence Force Retirement and Death Benefits
DHA	Defence Housing Authority
DMO	Defence Materiel Organisation
DRP	Defence Reform Program
DSTO	Defence Science and Technology Organisation
EWSP	Electronic Warfare Self Protection
FADT	Foreign Affairs Defence and Trade
FBT	Fringe Benefits Tax
FMA	*Financial Management and Accountability Act 1997*
GDP	Gross Domestic Product
GST	Goods and services tax
MSBS	Military Superannuation and Benefits Scheme
PAES	Portfolio Additional Estimates Statements
PBS	Portfolio Budget Statement
SES	Senior Executive Service

Erratum to the 2004-05 ASPI Defence Budget Brief

1 Table 2.2.1 on page 15 incorrectly calculates the real value of defence spending prior to 2004-05. Consequently, the calculated rate of growth is wrong for all years prior to and including 2004-05. A revised table appears below.

Table 2.2.1 Total Defence Funding – real and nominal growth

	99-00	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08
Funds (nominal)	12,445	12,648	14,501	14,738	15,623	16,348	16,511	17,295	18,310
Growth (nominal)		1.6%	14.6%	1.6%	6.0%	4.6%	1.0%	4.8%	5.9%
Funds (real)	14,474	14,142	15,906	15,711	16,013	16,348	16,187	16,623	17,253
Growth (real)		-2.8%	12.5%	-1.2%	1.9%	2.1%	-1.0%	2.7%	3.8%

2. Table 2.3.4 on page 32 lists major capital equipment projects to be approved in 2004-05 and highlights the absence of *AIR 5409 – Bomb Improvement Program* compared with the published 2004-14 Defence Capability Plan. However, we now understand that the reason the project will not be approved in 2004-05 because it was approved ahead of schedule in 2003-04.