



Cut Capability Last

Responding to a Defence Budget Crisis

An ASPI Decision Makers' Brief



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Introduction

We understand Defence has advised Government that there are major problems in affording both current and future capability within the current and projected budget. In our recent publication *Sinews of War* we gave our take on how the Defence budget got to be the way it is. This paper, prepared for distribution only to officials, presents our estimate of the current situation and what can be done about it based on public information.

Our key message is to make sure we understand the problem before rushing to a solution in which current capability is lost.

Understanding the problem

Revenue

Over the last eight years Defence appropriations have increased by 25% in real terms, of which around 4% correspond to supplementation for current deployments. At the same time \$1.15 billion¹ in savings have been programmed for redirection to military capability. Together, these represent an increase of some 37% in the amount of money available for capability. Under current plans funding will continue to rise for the remainder of the decade.

At the core of this increased revenue is the underlying 3% real growth provided by the White Paper. This injected roughly \$507 million, \$1,039 million and \$1,465 million across the first three years of the decade. Of these funds, \$509 million, \$829 million and \$1,181 million was allocated to major capital investment projects respectively across the same three years.

Expenditure

Personnel

Throughout the 1990s rising personnel costs put pressure on the Defence budget because the indexation received by Defence did not kept pace with actual per capita cost increases. The White Paper recognised this and promised 2% real growth for per capita personnel costs (Defence 2000 p. 120). However, this 2% personnel supplementation does not commence until 04-05. So that for the first three years of the White Paper, Defence has had to find around an additional \$100 million per annum (compounding to a shortfall of \$300 million) from elsewhere in the budget to cover the real cost of personnel. In 2004-05 the 2% supplementation will commence. But if the recent strong growth in housing, workers compensation and health costs continue, this may still not address all the pressures on the personnel budget. Given that the number of military personnel is effectively fixed as an output, it's especially important to ensure that the indexation of military per capita costs is adequate.

Civilian personnel numbers have grown well beyond initial budget estimates over the last two financial years. And civilian per capita expenses have also grown rapidly over the same period in part due to a rapid increase in the number of middle managers. Reasons have been given for the increasing number and cost of civilian personnel including the civilianisation of military positions. Nevertheless, the fact that Defence imposed a hiring freeze earlier this year confirms that some of this growth was unplanned (fortunately, much tighter controls are now in place). Thus, while the cost pressure on the military side in recent years is largely beyond Defence's control, the number of civilian positions is another matter.

¹ Including \$145 million from 'Administrative Savings Measures', \$758 million from 'Defence Reform Program', \$200m from 'White Paper Savings Efficiencies' and \$50 million in 'Administrative Savings'. All figures in FY 2002-03 \$ relative to CPI.

Operating Costs

The White Paper set Defence the *target* of containing the operating cost of capability at 0% real growth but provided extra funds for the net additional operating cost of new capabilities. This was a deliberate move to impose discipline on operating costs. In retrospect this appears to have been too optimistic. From the first budget after the White Paper onwards there were continuing claims of a logistics shortfall across all three Services. Finally, the 2003-04 budget provided an additional \$1.1 billion over five years for logistics which amounts to around a 10% increase on existing levels. This problem arose due to a mixture of increasing costs for old equipment, unanticipated costs for new equipment and some new costs due to boosted preparedness and activity levels. This problem has been made worse by DRP savings initially allocated to logistics being redirected to personnel following the decision to maintain the strength of the ADF at 50,000.

However, the recent 'logistics short fall' arose when administrative overheads were 'growing at unsustainable levels including civilian personnel numbers, professional service providers and travel'. These increasing administrative costs unavoidably reduce the money available for capability related logistics. Consequently, the problem of funding capability related operating costs needs to be considered in tandem with attempts to rein in administrative operating costs.

As an aside, it's worth noting the unanticipated cost of new equipment. Many new platforms were purchased, like the C-130 J, on the understanding that the more modern platform would be cheaper to operate than the earlier model it replaced. It's important to understand why new platforms are costing more because it could alter the business case for replacing (rather than upgrading) many of our current assets. Alternatively, it may be a sign that the contracting-out of support for new platforms is having trouble delivering value-for-money. In any case, there is probably an important lesson to learn.

Capital Costs

The prospective cost of new projects is going up. While this is disappointing, it should not be too surprising. As projects get closer to fruition greater clarity and reality set in. Initial 'ball park' figures provided by industry grow, as do the expectations of what will be delivered.

But we should not be too sanguine about this. An assurance is needed that gold-plating has not occurred and that every effort has been made to explore innovative and lateral capability solutions. It's important that discipline is maintained over capability aspirations. Clarifying some of the outstanding aspects of strategic guidance would assist this.

Where does that leave us?

There is no denying that there are some cost pressures on the Defence budget that are beyond Defence's control (like per capita military personnel costs). Further pressures have arisen from rapid growth in various overheads that were within Defence's control (like professional service providers). And prospective capital costs have grown due to things that Defence does not control (vendor prices) and does control (capability creep).

The extent to which these various factors are responsible for the overall budget pressure is hard to judge on the basis of public data. It will be important for the Government to look closely at the underlying reasons before deciding what to do.

Cut capability last

As a working hypothesis we propose that any cut to current capability should be a last resort. In our current circumstances we should be looking at more, not fewer, options for the Government.

With this in mind we have prepared some ideas based on unclassified sources that may help in managing cost pressures within Defence. These are not fully developed proposals and we lack

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the detailed data needed to make them so. Instead, they are simply areas that we think are worth looking into. They fall into three categories that are explored within the annexes that follow:

Annex 1: Short and medium term options to free up money for capability.

Annex 2.: Long term options for Defence reform.

Annex 3: Ideas for the DCP.

Many of these ideas are not new. Indeed, some of them have been dragged out time and time again. But with capability on the chopping block perhaps now is the time to make the hard decisions.

Annex 1 – Short and Medium Term Options to Fund Capability.

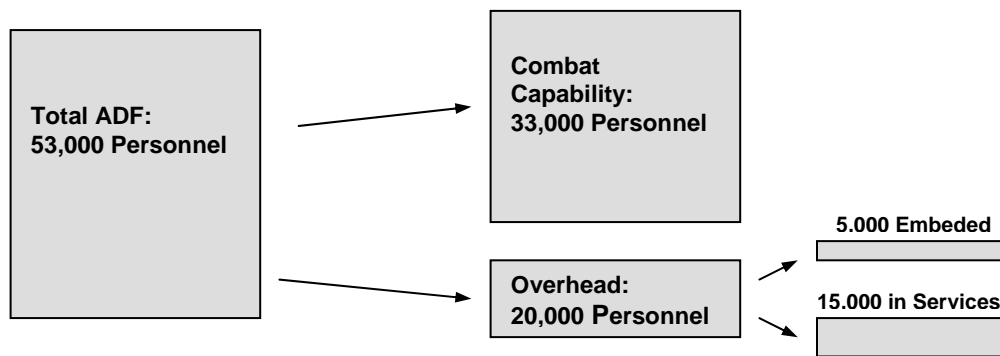
1.1 Make better use of personnel.

Personnel spending accounts for the largest single slice of the Defence budget and therefore it warrants detailed consideration. A lot has been done over the last fifteen years to get uniformed personnel out of non-combat jobs and into the sharp end. At the same time, a lot of civilian and military jobs have been replaced by more cost effective contracted support.

Defence views its personnel as a 'total workforce' where military, civilian and professional service providers all play a part in the support and delivery of capability. Within this construct, military personnel are unambiguously viewed as capability, that is, as an output rather than input. This is reflected by the fact that there are targets for the number of military personnel. In contrast, civilian and professional service providers are managed more through budget constraints than numerical targets.

Why are there so many ADF personnel in administrative and non-combat roles?

Of the roughly 53,000 full time ADF personnel we understand that only around 62% or 33,000 are directly involved in the delivery of combat capability. The remaining 20,000 uniformed personnel can be grouped roughly into two categories. First, around 5,000 personnel are 'embedded' within non-combat groups like Defence Material Organisation (~2,300 positions), Corporate Services Group (~1,500 positions) and Defence Personnel Executive (~1,200 positions). Second, there is around 15,000 personnel either under training, delivering training or otherwise employed on non-direct capability roles within the Services.



5,000 Embedded Uniformed Personnel

Many of the around 5,000 uniformed positions embedded within Defence agencies are justified on the basis of requiring specialist military expertise to perform the job – especially within DMO. In other cases the positions represent an opportunity for respite posting. These positions also provide a surge capacity at times of high operational tempo. Maintaining this component of the overhead is one way to structure the uniformed workforce – but not the only way.

To begin with, the argument for specialist expertise has limitations – especially in the case of the Personnel Executive and Corporate Services. Even in DMO it is unclear how much uniformed participation can be justified – especially when it means that Service personnel trained as war-fighters end up running projects in place of career procurement professionals. The logistics function in DMO is probably an important exception to this.

The notion of respite posting is a difficult one since it is increasingly the case that the ADF requires much of its personnel and their families. But there are ways around it. Mining and oil companies operate in harsh remote conditions, and merchant marine operations require long periods at sea, both without providing multi-year respite periods. Their approach is to intersperse

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work with time at home using fly-in fly-out strategies. And commercial airlines manage to get high output from their crews and support personnel on a continuous basis.

As for providing a surge capacity for operations, this severely begs the question of why a Reserve force of 20,000 personnel is being maintained. (We shall return to this issue later.)

15,000 Uniformed Personnel in non-Capability Roles

Many, if not most, of these positions are unavoidable. With a roughly 10% annual turn over of personnel there are at least 5,300 new personnel to be trained each year. On top of this, there is the impost of the ongoing training of existing members for promotion and skills development. Given the specialist nature of many military skills it is simply impossible to recruit trained personnel from outside (except for lateral recruits from allied nations).

Nevertheless, there are three areas to look at closely before concluding that no better use of the 15,000 personnel can be made. First, not all of the positions are involved in training. Some are akin to the embedded positions outside of the Services and are amenable to the same sorts of strategies discussed above. Second, many ADF personnel are involved in the delivery of training. Although, great strides have been made in contracting out training functions since the DRP, there are probably some areas where the use of the ADF could be reconsidered. Third, some of these personnel are engaged in tasks whose relevance to a modern ADF is unclear (see item 1.7 below).

Remember

In looking at the employment of ADF personnel it's important to remember that the current goal of 54,000 was built on the basis of the late 1998 decision to keep the ADF at 50,000 rather than pursue the full DRP draw down to 43,000. While there is no doubt that the combat component of the ADF has grown in recent years, it's hard to credit this decision with adding 7,000 new combat positions. The question is – can the strategies envisaged by the DRP to create a leaner more capability focused ADF be applied today?

Why has the number of civilians grown?

Civilian numbers have grown due to the civilianisation of military positions, the requirements of new capability (like intelligence) and governance requirements. However, much of this growth has exceeded planned levels resulting in the hiring freeze earlier this year. Under a renewed approach to fiscal discipline in Defence, civilian numbers will fall further to around 17,200 from 18,300 in 2002-03 over the next couple of years.

Given the recent volatility in civilian numbers we need to be sure that the new goal is right. Ultimately, any such assessment must rest on an analysis of how many people are required in the civilian workforce to support and deliver delivery capability.

What's going on with Professional Service Providers?

The growth in expenses for Professional Service Providers over the last couple of years has been strong – over 300% since 1998-99. The most recently recorded expenditure of \$273 million for 2001-02 would equate to some 2,730 personnel assuming a per capita rate of \$100,000 (which is well above the current \$77,000 civilian per-capita).

Year	PSP Expenses
97-98	No earlier data
98-99	\$67 million
99-00	\$167 million
00-01	\$176 million
01-02	\$273 million
02-03	undisclosed

Once this undeclared component of the Defence workforce is taken into account, the nominal net reduction in civilian personnel numbers from before the DRP disappears. Much of the recent growth was unplanned, with PSP actually being nominated as an area for savings in 01-02.

Under current plans the administrative savings program will cut spending on non-capability related suppliers including PSP by \$42 million per annum from 2004-05 onwards. (This may grow when the unallocated portions of the administrative savings program are finalised.) The question must be whether this reduction is sufficient given the recent rapid growth? As with civilian personnel, the answer depends on a considered analysis of workforce needs. In doing so, it will be important to ask why full-time civilians cannot replace many of these PSP. A key issue has got to be the tenure and skills of the PSP workforce currently employed.

1.2 Streamline Defence Management.

It's sobering to compare the number of middle and senior managers in Defence from 1995-96 – prior to the Defence Reform Program (DRP) – to the latest available figures for 2002-03. Civilian senior executive numbers have grown by 18.5% although senior (star-ranked) military officer numbers have declined by 6.9%. Most startling has been the increase at deputy secretary level from 4 to 6 after the DRP suggested a reduction to 3. At the middle manager level things are more acute. Military middle ranks (colonel and Lt colonel) has grown by 8.6% while civilian middle managers has grown in number by 29.9%. (While at the same time the total civilian workforce has shrunk by 8%). This is somewhat surprising given that the DRP was expected to deliver flatter management structures. Some of these additional management positions have arisen through the civilianisation of uniformed positions, but this does not explain the net growth of civilian plus military middle manager jobs.

When compared with other Government departments Defence's proportion of senior and middle managers is not excessive, in fact the proportion of SES is low. However, the growth in numbers of middle and senior managers needs to be understood. The key is to compare the breakdown of personnel involved in policy verses service delivery roles (data which we do not have).

If the issue were simply the direct cost of these additional middle and senior managers then this would not be a pressing issue. The marginal cost of an additional 500 middle managers would only amount to less than \$40 million per annum. More serious is the bureaucratic gridlock caused by so many administrators. More managers do not necessarily translate into better management. Before any capabilities are cut from the ADF the number and function of the large number of personnel in Russell Offices (and the increasing number of sites further afield in Canberra) should be closely examined.

1.3 Find an Alternative to ADFA

Defence runs a private university for 650 undergraduate officer cadets. In doing so, Defence incurs the cost of the university itself and that of ADF staff and the students themselves. The alternative would be to sell ADFA and provide HECS vouchers for prospective officers. There is no doubt that this would provide substantial recurrent savings above the money gained through the sale of the ADFA site. In addition, it would ensure that future ADF leaders spent some of their formative years as members of the broader community rather than being cloistered away in a military academy.

1.4 Make Better use of the Reserves

The Government has done a lot to provide a legislative framework that supports Reserve members and their employers. And they have given the Reserves a credible role in sustaining

and augmenting the permanent ADF on operations. However, with some important exceptions, the 20,000 strong Reserve is still largely structured along the lines of providing a long-term mobilisation base through six infantry brigades each with its own HQ, two or three infantry battalions, an armoured reconnaissance unit and combat and logistics support units. Thus, although the role and legislation has changed, things look much the same as they were. Having said that

There are two issues to explore:

- Do we really need 20,000 personnel to fulfil the designated role? Would it be better to have a smaller number of personnel at a higher state of readiness? If not, what is the contingency that this very large force is being held in anticipation of?
- Second, is the existing structure optimal given the new role? Why do we have Reserve brigade HQ? Is there a serious proposal to work-up and deploy a Reserve Brigade?

With an excess of \$500 million per annum being spent on the Reserves (excluding capital investment in new equipment) these issues are worthy of careful consideration. Restructuring the Reserves to meet its new role, rather than leaving it structured for mass mobilisation, may result in both efficiencies and higher effectiveness in supporting and sustaining ADF deployments.

1.5 Seek commercial replacement of non-combat ADF activities

Within the ADF outputs there are a number of activities currently undertaken by ADF personnel that are sufficiently removed from the sharp end as to allow the tasks to be contracted out. These include:

Hydrographic Survey. With the exception of some possible beach survey work during operations, the bulk of the hydrographic output undertakes a civil survey task that could be done by civilian contractors.

JORN. The JORN network employs around 200 RAAF personnel as radar operators (in South Australia). This could be done by either civilians or contractors thereby delivering savings through cheaper salaries and greater workforce continuity. This would not be unprecedented, many aspects of surveillance and intelligence collection are undertaken by civilian contractor staff in the US.

VIP Transport. The pilots and crew could be provided by a commercial airline thereby taking advantage of their economies of scale and freeing up precious RAAF pilots for combat capabilities.

1.6 Scale the Size of ADF Command Bureaucracy to the Task

In addition to Defence's large administrative bureaucracy, the ADF maintains an extensive system of strategic, theatre and operational command headquarters. The following list covers only the upper echelons of command and excludes the many lower HQ at the Brigade and Force Element level:

Strategic Command Division in Canberra
HQ Australian Theatre in Sydney
Land Command in Sydney
Maritime Command in Sydney
Special Force Command in Sydney
Air Command in Glenbrook
Northern Command in Darwin

Deployable Joint Force HQ in Brisbane

We do not know how many people are employed in this system of higher level headquarters but it is certainly in excess of 1000 personnel. The planned construction of a purpose built HQ Australian Theatre outside of Canberra will draw together the existing Land, Maritime, Air and Special Forces Commands into a single integrated HQ. This provides an excellent opportunity for the Government to consider the scale and capability of the new command arrangement to ensure it matches the task.

When most ADF deployments amount to only 1000 - 2000 personnel it's worth asking whether we need more than a 1000 people back in Australia to command them.

1.7 Abandon Defence Anachronisms

There are a variety of activities undertaken by Defence for the purpose of encouraging esprit d' corps and recruitment. All of them have some attraction but it's debatable whether they should be accorded a priority ahead of direct combat capability. If there really is a budget crisis, we need to ask whether the ADF should continue 'nice to have' activities. These include:

- The 159 strong Tri-Service Federation Guard: <http://www.defence.gov.au/afg/>
- The six regular Army bands, seven Army Reserve Bands, two Navy Bands, RAAF band and the ADF School of Music. With each band typically having up to 30 members this amounts to several hundred military positions tied up.

Navy Bands:	http://www.navy.gov.au/6_facts/1_navyband.htm
Army Bands:	http://www.defence.gov.au/army/dfsmb/bands.html
RAAF Band:	http://www.defence.gov.au/RAAF/bands/central_band/about.htm
ADF School of Music:	http://www.defence.gov.au/army/dfsmb/about.html

Annex 2 – Defence Reform

Defence is actively pursuing a range of measures to improve their financial and performance management. Hopefully this will eventually translate into an ongoing capacity to improve the efficiency with which outputs are delivered. But there are real limits to what can be achieved within the current framework. What's required is a fundamental rethink of some basic issues followed by a revitalised reform program much like that pushed by Ministers McLaughlan and Moore.

Here are some suggestions to get the ball rolling:

Align Accountability and Control

Defence is working to mature their business model through a variety of initiatives to deliver better cost visibility and more focused output budgeting. In the context of the broad business strategy that is in place they are doing all the right things. But the question must be asked, is the broad strategy right?

We would argue that a more decentralised arrangement would have real merits especially if it gave those who are responsible for delivering capability more control over the resources employed. Managers and commanders need to be able to trade-off inputs to optimise the delivery of outputs and drive substantial efficiency gains. Only then can the initiative and imagination of individuals be harnessed through sanctions and rewards. The current centrally planned regime places a natural limit on the level of efficiency that can be delivered.

Boost Expertise in the Workforce

The skills and experience of the Defence workforce is essential to the delivery of capability. Initiatives underway to boost personnel development and retention in critical areas are being pursued in Defence. Managers and commanders need to have the flexibility to achieve this. Ultimately, many of the senior and specialist jobs in Defence are more akin to those in the commercial world than the traditional APS. This may require that Defence match market rates of pay. This is particularly the case in DMO.

Deepen Commercial Support

After almost fifteen years of market testing there is a sentiment that Defence has contracted most of what can sensibly be done. This proposition needs to be strongly tested in two areas. First, we need to ensure that the limitations we are setting on contractor support are correct. Other militaries make more extensive use of contractor support in operational areas than we do. Second, we need to look and see if administrative tasks like procurement, personnel administration and even financial management are best undertaken in-house or not.

Rationalise the Defence Estate.

The DRP did a lot to rationalise the use of facilities by Defence resulting in the sale of many properties. In the process, most of the low hanging fruit has been harvested. What remains is more difficult but potentially more valuable. For example, the current disposition of RAAF units to sites up and down the East Coast as well as the South and West Coasts prohibits economies of scale and results in posting disruption when personnel move from location to location. A similar statement applies to training establishments and bases more generally.

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Annex 3 – Options for restructuring the DCP

General

Defence 2000 made the important point that the Defence Capability Plan (DCP) will not remain immutable over the next decade. In fact delaying capital investment projects is not uncommon in Defence planning. And general Defence budgetary pressures or project mismanagement are only two reasons for such delays. Others have included:

- The capability may no longer be relevant to Government priorities as a result of changing strategic circumstances or it being overtaken by a new capability or technology.
- In some cases the relevant technology is simply not available and projects have to be delayed as a result. For example in the 2000 White Paper process the electronic warfare self protection (EWSP) for the F/A-18 aircraft was delayed due to the relative lack of mature technology at the time. This allowed the Armed Reconnaissance Helicopters (ARH) to be brought forward and the Airborne Early Warning and Control (AEW&C) project to be funded.
- In other cases latter phases of projects can be usefully delayed to allow the Australian Defence Force (ADF) to assimilate the lessons from previous phases, particularly where this involves the development of new capabilities. This has been relevant to some communications and command projects.

The following examples are of projects that could be usefully delayed, restructured or even cancelled to relieve some of the stated pressures on the DCP. They are mostly projects with a year of decision (YOD) and in service date (ISD) in the next five years and with an expenditure of more than \$100m. They are based on the unclassified versions of the DCP (Defence Capability Plan 2001-2010 & Defence Capability Plan Supplement - 2002) backed up by other relevant unclassified sources such as Parliamentary Hansard.

PROJECTS THAT COULD BE CANCELLED

Project		YOD	ISD	Cost
AIR5418-1	Follow-on Stand Off Weapons Capability	04/05	2007	\$400m

To supplement the earlier (but not yet realised) purchase of AGM-142 missiles this project would procure an anti-radiation stand off weapon, and area stand off weapon and a maritime stand off weapon for littoral areas. The in service date is 2007. However spending \$400m procuring missiles for the F/A-18 and F-111 remains questionable when both aircraft are being replaced by the JSF F-35 in the 2012-2015 time frame and while the ultimate weapons fit out of the F-35 remains unknown. A better option would be to delay this project to coincide with procurement of the F-35 while bringing forward AIR5409/1 Bomb Improvement Program (YOD 04/05, ISD 2008, cost \$75m) which seeks a precision guided (GPS) capability for unguided bombs.

Project		YOD	ISD	Cost
AIR5190-2	Light Tactical Aircraft Capability	04/05	2010	\$750m

This aircraft would replace the Caribou, albeit with enhanced capability and performance characteristics. Given the anticipated increased lift requirements of the additional troop lift helicopters (AIR5046-5/6) its debateable whether this capability is still required, or whether a better option would be to procure a small number of additional Chinook helicopters (say 4 for a fleet total of 10).

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Project		YOD	ISD	Cost
JP117-2	Ground Based Air Defence	04/05	2006	\$350m

This project seeks to acquire a new ground based air defence system to replace the current Rapier System, that is capable of defending area targets from attack my aircraft. In service date is 2009. In May 2003 the Minister announced the signing of contracts for the upgrade of existing RBS-70 short-range air defence systems and the acquisition of further units. At the time the Minister stated these additional missiles would also replace the Rapier system which reaches it end of life in 2005. As a result this project could be cancelled or at least delayed until the RBS-70 reaches its life of type in 2015.

Project		YOD	ISD	Cost
SEA1102-3	Laser Airborne Depth Sounder (LADS) Replacement	05/06	2007	\$100m

This seeks to maintain and enhance the current Airborne Laser Bathymetry capability for both the ADF and the Australian maritime industry. LADS provides accurate, high density digital depth and position data of coastal waters up to 50m in depth. It remains to be seen why the ADF continues to provide this capability as opposed to contracting the service out to a commercial provider.

Project		YOD	ISD	Cost
LAND135	Armoured Mortar System	04/05	2006	\$150m

For explanation see below. Considerable uncertainty still surrounds the utility of this capability, not least in introducing a new calibre of munitions (120 mm mortar) into the ADF logistics system. Army should choose between this project and the 105 mm howitzer replacement.

Project		YOD	ISD	Cost
SEA1390-4	FFG SM-1 Replacement	01/02	2005	\$600m

For explanation see below. While the DCP allocation for this project is only \$300m it is understood that the total project cost has now doubled for equipping all six ships. Given the FFG's air defence capability are already being enhanced Navy should choose between this project and delaying the AWDs.

Project		YOD	ISD	Cost
AIR5421-1	F-111 Tactical Reconnaissance & Strike Support	04/05	2007	\$65m
AIR5426-2	F-111 Strike Capability Enhancement	05/06	2008	\$250m
AIR5416-3	EWSP for F-111	05/06	2008	\$175m

Over the next 2-3 years an additional \$500m is proposed to be spent on improving the capability of the F-111s at a time when considerable uncertainty exists as to the RAAF's ability and willingness to support the aircraft in service. This does not include the actual cost of operating the aircraft or the cost of future structural refurbishment that might yet arise again without warning. Since RAAF can only guarantee maintaining the aircraft to 2010 it seems questionable to spend some \$425m in enhancements for only 2 years of capability. Should the RAAF seek to withdraw the F-111 from service earlier, it should not do so before the new AAR capability is in service.

PROJECTS THAT COULD BE DELAYED OR RESTRUCTURED

Naval Construction Projects – General

The current program of amphibious and afloat support vessel construction is based upon the nominal life-of-type of the vessels. This should not be taken as a given. If money is in short supply then the possibility of life-of-type extensions should be fully explored to confirm the latest practicable withdrawal date.

In looking at the program of ship construction it is also important to remove the inefficient gaps in the construction schedule of both the amphibious and afloat support fleets. The current 5-year gaps (in both programs) destroy any hope of maximising economies of scale. This can be remedied by life-of-type extensions or innovative interim replacement strategies.

Also, a close watching brief should be kept on the emerging Littoral Combat Ship program. As it stands, the program does not match any current ADF capability requirements but the modular design philosophy may provide an innovative solution in the future. The key participation of the Australian firm Austal in this large US program is noteworthy.

Project	YOD	ISD	Cost
SEA1405-3/4 Seahawk Mid Life Upgrade and Life extension	02/03	2007	\$600m

Designed to enable the aircraft to operate through to, and possibly beyond their current life of type, 2015-2018 with improved reliability. The upgrade is seeking to increase aircraft reliability, reduce operating costs, improve commonality, increase capability and achieve a life of type extension to 2025. However on current plans the ships the helicopters equip, the six FFG-7 frigates, are due to be phased out in the period 2013-2020. This raises the question of whether the phasing out of the Seahawks should be tied to that of the FFG-7s. The project should be separated between the upgrade and life extension. While the upgrade could proceed the need for the life extension is open to question.

Project	YOD	ISD	Cost
AIR5402-1 Air-to-air refuelling	02/03	2006	\$2000m

This project will acquire up to five new air-to-air refuelling aircraft for the ADF. The project costs is based on responses to requests for information to industry. The Request For Tender (RFT) was intended to be open and not restrict the project to new aircraft or to traditional companies who might tender (Boeing and Airbus). It remains unknown how seriously Defence looked at the option of using used aircraft nor of the savings this would have provided (some estimates say at least \$600m could be saved using used aircraft - which would also give greater capability - though the difference in operating costs is unknown). Private financing was also supposed to have been retained as an option unless it was clear that it offered no advantages or would push out the ISD, however only direct purchase is included in the RFT. In any event \$2 billion for up to 5 tanker aircraft (more likely to be only 4 if the Boeing B767 aircraft is chosen) seems high.

The US is currently arranging to lease new KC 767 AAR aircraft. We could do the same thing (although the long-term cost would be greater) if we want to free up money in the near-term for alternative use.

Project	YOD	ISD	Cost
SEA1100-4 Surface Ship Towed Array	04/05	2007	\$300m

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Also known as the Low Frequency Active-Passive Sonar (LFAPS), this project is a sensor to detect and track torpedoes and submarines. The project began as a project definition study in 1988/91. Phase 3 is the evaluation phase and has been in progress for the past five years. Given delays in torpedo defence systems for the ANZAC frigates due to limited regional capabilities (see below) this project could be further delayed without undue risk.

Project		YOD	ISD	Cost
SEA1348-3B	ANZAC Frigate Torpedo Self Defence System	05/06	TBD	\$100m

This project would give the ANZAC frigates a new capability to detect and defeat incoming anti-ship torpedoes. Previously this project has been delayed because of limited regional submarine capability in the region in the short term, its more developmental nature and the relative simplicity of its eventual installation compared to other aspects of upgrades to the ANZAC frigates.

Project		YOD	ISD	Cost
JP2062	Global Hawk	04/05	2006	\$125m

This project aims to procure the Global Hawk unmanned aerial vehicle (UAV) to provide the ADF with an enhanced aerial surveillance capability. While there is a definite case for advancing the tactical UAV project there are valid arguments for delaying the eventual purchase of Global Hawk, not least until its becomes a more mature system. There are also concerns that the project cost could at least double.

Project		YOD	ISD	Cost
JP5408	GPS Protection	04/05	2007	\$350m

This project is to upgrade ADF aircraft to protect their Global Positioning System (GPS) navigation systems against jamming and deception. The overall project costs seems to be inordinately high and while the requirement is in part based on civil regulatory requirements a question of priority could be cast over this project, at the very least there should be scope to limit the number of aircraft to be upgraded. It remains unknown as to what threat Australia currently faces from GPS jamming. There is also a project that will enable the ADF to degrade and jam other GPS systems (JP5411-2, YOD 07/08, ISD 21010, cost \$50m). Some trade-offs may be possible.

Project		YOD	ISD	Cost
LAND121-2C	Enhanced Combat Force Field Vehicle Fleet	03/04	2007	\$150m
LAND121-3	Enhanced Combat Force Field Vehicle Fleet	07/08	2012	\$1500m

Project Overlander is the ADF project for field vehicles and trailers. Phase 2C provides service life extensions to 20% of the ADF's fleet of field vehicles (wheeled, non-armoured field vehicles and trailers). Phase 3 seeks to replace the full number of ADF vehicles that will reach the end of their service life between 2008 and 2015. The current fleet is said to consist of approximately 6500 vehicles, 3100 trailers and 450 motorcycles. On current projections it will do so at a cost of over \$200,000 per vehicle for what might or should be considered commercial standard vehicles

Project		YOD	ISD	Cost
JP2085-1	Explosive Ordnance Warstock	02/03	2004	\$120m

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Included in the 02/03 budget this project is supposed to address what was considered to be critical deficiencies in warstock levels of key munitions, in particular the more urgent deficiencies. However these urgent deficiencies were measured against planning scenarios that have not been sighted or approved by Government. The \$121m is understood to include very large increases in armour piercing ammunition for tanks and high explosive ammunition for 155mm howitzers, questionable priorities. Furthermore, \$26m of the \$121m was to purchase additional RBS-70 surface to air missiles. In May 2003 the government signed a contract worth \$83 million for additional RBS-70 missile systems. It's unknown whether this represents double-dipping.

Approximately \$1145m was provided in logistics funding over five years in the 03/04 budget, said to augment logistics and support funding for a range of platforms and equipment including F/A-18, and C-130J aircraft, Collins class submarines and Army vehicles. Recent answers to Senate Estimates QON indicate that \$183.2m of this funding will be spent on explosive ordnance operating stocks over the next three years. The Budget PBS also states that the new spending will also fund a substantial increase in stocks of explosive ordnance, including that required for enhanced training for Army personnel.

Project		YOD	ISD	Cost
LAND125-3	Soldier Combat System	03/04	2007	\$600m
LAND125-4	Soldier Combat System	07/08	2010	\$400m

Otherwise known as Project Wundurra, this seeks to develop and acquire a Soldier Combat System for the Australian Army by integrating the functions and equipment of the individual soldier into an effective system. To date the project has trailed a number of concept and technology demonstrators. Phase 3 is to further prototype and acquire the initial system. Phase 4 will continue the technological development of the system and extend the system to other elements of the ADF. Overall the system is still highly developmental and has yet to be subject to extensive trials. The concept itself seems somewhat premature, not least as the ADF has yet to develop a concept for Network Centric Warfare (NCW). The systems and concepts don't seem to be advanced enough to justify expenditure of the amount sought in the current timeframe.

These figures are based on the DCP. Recent answers to Senate Estimates QON indicate that LAND125 Phase 3 has been restructured into a revised Phase 2B/C, YOD 2003/04, cost \$75m, which will progress studies and acquire an initial capability. Main acquisition will proceed under Phase 3 (previously Phase 4) which has a YOD of 2007/08. It is also understood that rescheduling of these projects was predominantly used to allow the funding of new main battle tanks. In any event the projects would seem to contain considerable possibilities for savings through restructuring and rescheduling.

Project		YOD	ISD	Cost
JP2030	ADF Joint Command Support System (JCSS)	01/02	2003	\$325m
LAND75-3	Battlefield Command Support System	02/03 05/06	TBD TBD	\$100m
LAND75-4	Battlefield Command Support System	09/10	TBD	\$100m
JP8001-2B	HQAST	02/03	2006	\$150m
JP8001-3B	Deployable Joint Force HQ	01/02	2003	\$12m
JP199	Special Operations Command	03/04	2004	\$100m

It is understood that Defence has recently completed a study on Command and Control arrangements in the ADF, particularly with a view to rationalising the number of headquarters in the ADF. It would seem premature to commit further funding to any command projects until the

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results of that review have been sighted and approved by the Government. Furthermore the requirement for a ADF Special Operations Command is also highly debateable. The proposal seems to mirror one in the US, although the US Special Operations Command has approximately 46,000 personnel and has been designated the lead command for prosecuting the US war on terror. The ADF has approximately 1500 personnel in its Special Forces and nowhere near the operational responsibilities of its US counterparts. In fact a good proportion of ADF SF elements are focussed towards domestic contingencies.

Project		YOD	ISD	Cost
SEA1390	FFG Upgrade	97/98	TBD	\$1445m
SEA1390-4	FFG SM-1 Replacement	01/02	2005	\$600m
SEA1428-2/4	ESSM	01/05	04/07	\$350m
SEA1448-2	ANZAC ASMD	02/03	2007	\$550m
SEA4000	Air Warfare Destroyers	05/06	2013	\$4000m

Almost \$7 billion has been and is to be committed over the next 3-4 years to improve our maritime air defence capabilities that would suggest some scope for rationalisation and prioritisation. For example it's debateable whether the FFG frigates require both the ESSM and the Standard SM-2 surface to air missiles. They don't have that capability at present, no other country seems to be attempting to develop that degree of capability improvement to their FFGs, not least given the technical risks involved into integrating new weapon systems on old platforms. By the same token if we proceed with SM-2 acquisition for the FFG's this raises the question of whether the procurement of the AWD shouldn't be delayed. Doubt still remains as to whether the ANZAC ASMD will be realised. And if an option for the lease of USN DDG-51 destroyers then all upgrades with the FFGs as well as procurement of AWDs should be cancelled.

Project		YOD	ISD	Cost
LAND40-1	Direct Fire Weapon	02/03	2005	\$160m
LAND135	Armoured Mortar System	04/05	2006	\$150m
LAND17-2	105mm artillery replacement	05/06	2008	\$200m
LAND18-2	155mm artillery replacement	05/06	2008	\$200m
LAND40-2	Direct Fire Support	06/07	2008	\$300m

Over the next 4 years more than \$1 billion dollars will be committed on improving Army's fire support capabilities (not including \$1.9 billion for Armed Reconnaissance Helicopters (ISD of 2004) and an undisclosed amount - said to be 500-900 million - for replacement main battle tanks). Such an amount should realise some savings through rationalisation and more holistic identification of our requirements. For example it's debateable whether we need both a replacement for the 105mm howitzer as well as an Armoured Mortar System.

Project		YOD	ISD	Cost
SEA1429-2	Replacement Heavyweight Torpedo	01/02	2006	\$500m
SEA1439-3	Collins Sustainability/Reliability Enhancements	01/02	>2001	\$250m
SEA1439-4	Collins Replacement Combat System	01/02	2005	\$450m
SEA1439-5	Collins Continuous Improvement Program	05/06	>2006	\$500m*

Over \$1.2b is expected to be spent on the Collins Class submarine in order to achieve full operational capability while some doubt exists whether the solutions chosen will be able to achieve the desired and expected level of capability. The replacement combat system in particular, while in service with the US Navy, is largely developmental for a submarine of Collins

size and capability. Given the satisfactory nature of the upgrades to date, delays could be made in any further upgrades without undue risk in future capability. The fact that Defence has decided to allocate \$250m of SEA1439-5 funds to fund the extra cost of the heavyweight torpedoes indicates that some flexibility exists within the Submarine projects for reprogramming of funds.

Possible New Project

New Tanks

If a decision is made to further upgrade or replace our existing Leopard I tanks two things should be kept in mind. First, care should be taken in judging the full cost of acquiring second hand Leopard 2 and especially US Abrams. New ammunition and facilities alterations to accommodate the heavier vehicles could be expensive. Second, the option of using add-on armour kits for the existing Leopard I vehicles should be fully explored. Such kits were employed successfully by the Canadian on their Leopard I vehicles in Kosovo to provide protection against medium calibre cannon armour-piercing and RPG fire.