Review of Australia's defence capabilities

March 1986
FOREWORD

This is an edited version of the report presented to the Minister for Defence in March 1986. Editing has been limited to the removal of some classified material, including technical details on equipment performance and some of the discussion of defence intelligence capabilities. Minor stylistic changes have also been made. The deleted material is less than 24 pages, or 8 percent of the original report. The deletions do not affect the conclusions of the Review and all significant recommendations are discussed in full in this public version.

An Annex containing a detailed discussion of military contingencies is not included in this public version. The conclusions of the Annex are referred to in the Executive Summary.

This Report is not a statement of endorsed government policy. Nor does it necessarily represent the views of either the Department of Defence or the Australian Defence Force.
The Honourable Kim C. Beazley, M.P.
Minister for Defence
Parliament House
Canberra, A.C.T. 2600

Minister,

In February 1985 you asked me to undertake a review of Australia's defence capabilities. You directed me to examine the content, priorities and rationale of defence forward planning and to advise you on which capabilities are appropriate for Australia's present and future defence requirements. I was to make judgements on the appropriate balances between equipment, personnel numbers, facilities and operating costs, between current readiness and long-term investment, and between the relative priority given to responding to various levels of possible threats.

The Report

My completed Report is attached. It provides a basis and rationale for the structure of the Australian Defence Force (ADF) over the next decade. An Executive Summary precedes the Report proper. The Report starts with Australia's strategic circumstances and an analysis of our defence planning deficiencies, then examines our capability requirements, and concludes by making specific force structure recommendations and costs them. I have taken this approach because I believe it provides the Government with the necessary overview of the relevant strategic, defence capability, and financial considerations. It is only by considering these factors together that rational decisions can be made about Australia's future defence requirements.

Foremost in my mind has been the need to provide the nation with a credible level of defence, and to indicate the directions in which our Defence Force should develop to meet Australia's unique needs. Financial considerations have not driven this Review, although I was aware of the requirement to take due notice of the Government's financial planning guidance. It was rather more important, in my view, to identify clearly any deficiencies in our force structure and to allocate appropriate resources to them in the current Five Year Defence Program and beyond. Where capabilities currently in the force structure no longer command such a high priority, I have recommended some reductions.

In general I see no need for precipitate change: adjustments to our force structure can be made progressively over the next five years and more. We have time to develop Australia's defence force structure to a more self-reliant basis, because we are not imminently threatened. There are some lesser possibilities of conflict, however, involving the region, which are more credible in the shorter term, and where we would need to have an independent combat capability. The Review gives particular attention to the implications of these contingencies for our force structure.
Official strategic guidance indicates that we would receive at least 10 years' warning of a substantial military threat. Beyond that time-frame our security outlook is necessarily less certain. We should continue to maintain a core of skills which could be expanded in the event of deterioration in our strategic circumstances. In this context, the concept of warning time adopted in this Review is particularly important to our defence posture. It demands constant monitoring and assessment by our national intelligence agencies of developments in our region. A central defence policy requirement should be to continue to maintain a military advantage in appropriate capabilities and technology.

Another important consideration is that this Review is predicated on the assumption that Australia continues to have close defence relations with the United States. I have assumed that if the United States decides formally to suspend its commitments to New Zealand under the ANZUS Treaty, the United States–Australia ANZUS relationship will continue, as will bilateral Australian–New Zealand defence relationships.

At present we have privileged access to United States' intelligence, surveillance, defence science, weapons and logistic support arrangements. If our status should change in this respect, many of the judgements in this Review would have to be reconsidered. The financial costs, let alone the strategic implications, of not having a close defence relationship with the United States would be very considerable.

It may appear to be a contradiction, but if Australia is to become more self-reliant in its defence capabilities it will continue, for the foreseeable future at least, to require the tangible benefits of defence co-operation with the United States. To be able to defend credibly a continent the size of ours, and with our small armed forces, demands access to intelligence, high-technology sensors and military equipment. For much of this the United States is the best source by far, and for some, indeed, it is the only source.

Some problem areas

One of the problems encountered by the Review was arriving at satisfactory estimates of the size of force elements we need to meet our particular strategic circumstances. For much of our force structure this issue has not been comprehensively addressed. The Review could obtain no material centrally endorsed by the higher Defence structure which explained, for example, the strategic rationale for a 12-destroyer Navy, three fighter squadrons, six Regular Army battalions and an Army Reserve target of 30 000.

Few of the documents made available to the Review examine, in any rigorous, analytical way, the size of forces we should have for credible contingencies and as a contribution to the expansion base. Most focus on justifying the present force structure rather than estimating what our strategic circumstances require.

The key difficulty here is that the Department and the ADF do not agree on the appropriate level of conflict against which we should structure the Defence Force. Ultimately, of course, Government will determine the size of our defence forces. But when there is no common understanding between the Government's military and civilian advisers about what the ADF should be structured to do, decisions about our defence priorities cannot be properly informed.

To a large extent, these different views on how to interpret our strategic circumstances for the purposes of force development are the cause of much of the adversarial relationship that exists between the Department and the ADF. The Department believes that priority should be given to credible low-level contingencies and the expansion base as force structure determinants. The ADF considers that these requirements are best met in the context of planning force development on the basis of preparing for larger-scale contingencies.

These are important disagreements, which the Review has attempted to address both in terms of the intellectual arguments and by making some recommendations for institutional and organisational changes.

With regard to the argument about levels of threat, the Review has sought to narrow the options and to limit the scope for subjective judgement about our force structure needs. It focuses on those fundamental geographic and strategic factors, including current and prospective regional military capabilities, which provide a sound basis for analysis. This leads the Review to a position that accepts the priority need to prepare for credible contingencies below the level of major assault—but not at as low a level as the Department argues for, nor at the higher levels supported by the ADF.

Areas not addressed

Some people have indicated that they would expect the Review to address such issues as the morale and motivation of Service personnel, conditions of service, and the problems of particular defence industries. I regard such factors as relevant to our defence effort, but they are beyond my Terms of Reference. To comment on them more than superficially would have required me to introduce very complex issues that, while important, are not central to Australia's force structure requirements.

Acknowledgements

I would like to record my appreciation for the high level of co-operation, freely given, by the Secretary to the Department of Defence, the Chief of the Defence Force, the Chief of Naval Staff, the Chief of the General Staff, the Chief of the Air Staff, and their senior officers. I invited them to comment on successive drafts of this Report. Their detailed comments have been most helpful and, as a result, the content and balance of the Report have improved considerably. Responsibility for the judgements in the Report, of course, remains mine alone.

I have also received a number of submissions from industry, various national organisations, State governments, retired officers and private individuals, some of which have assisted the findings of this Review.

During the Review, I have visited military units and bases around Australia. Without exception, I was impressed by the high level of professionalism and the co-operation of our service personnel. I have had the good fortune to speak to all of them.

I would like to thank the staff of the Australian Signals Directorate for their help in the drafting and preparation of the Report. I would also like to thank Mr J. M. M. Brady, Mr R. G. Brabin-Smith, Mrs F. L. Beazley and Dr R. G. Brabin-Smith for their hard work in preparing the various draft reports which formed the basis of this Review.

The loyalty and support I have received from my staff have been outstanding. Without the hard work of Dr R. G. Brabin-Smith, Mr J. M. M. Brady, Colonel W. J. Crews and Mrs F. L. Beazley this Report would never have been completed on time.

Paul Dibb
Ministerial Consultant
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TERMS OF REFERENCE

Review of Australia's Defence Capabilities

1. You are to prepare a report for the Minister for Defence, to be completed within 12 months, on Australia's defence capabilities.

2. As much of the report as possible is to be written so that the Minister can make a major public statement on Australia's future defence capabilities.

3. The Terms of Reference of your report are:
   (a) to undertake a review of the content, priorities and rationale of defence forward planning in the light of the strategic and financial planning guidance endorsed by the Government;
   (b) to advise on present and future force capabilities and on the present and future balance between resource elements such as manpower, activities, operating stocks, facilities and equipment—where appropriate that advice should indicate priorities for changes to particular defence force elements within various time-frames; and
   (c) to advise on whether strategic guidance by Government can be made more explicit for the purposes of future defence forward planning.

4. You should advise where appropriate on such matters as:
   (a) in the light of strategic guidance, the relative priority to be given to preparations for responding to various levels of threat, and their significance for defence preparedness and force expansion;
   (b) the appropriateness of existing military command arrangements;
   (c) the significance of the Reserves as a component of the force structure;
   (d) in the light of the Government's defence policy for Australian industry, ways in which Australia's defence industry capacities should be enhanced; and
   (e) any other matters which have an important bearing on the desirable future direction of Australia's defence capabilities.

5. In developing the above advice you should look as far forward as practicable. An appropriate time-frame could be the next 10 years, in which decisions will need to be taken that will shape major defence capabilities to the year 2000 and beyond.

13 February 1985

KIM C. BEAZLEY

1 In a letter to Mr Dibb dated 19 February 1985, the Minister reiterated that the report would need to provide a basis and rationale for the structure of the Australian Defence Force.

2 The subject of war reserves was subsequently added to this list.
EXECUTIVE SUMMARY AND FORCE STRUCTURE PROPOSALS

EXECUTIVE SUMMARY

Australia is one of the most secure countries in the world. It is distant from the main centres of global military confrontation, and it is surrounded by large expanses of water which make it difficult to attack. Australia’s neighbours possess only limited capabilities to project military power against it.

But it would not be prudent to assume that we will always be able to conduct our affairs without challenge. Our strategic circumstances might change and become less favourable than today. There are risks inherent in our strategic environment that could pose difficult problems for the nation’s defence.

DEFENCE PLANNING AND STRATEGIC GUIDANCE

Prospects for threat

Australia faces no identifiable direct military threat and there is every prospect that our favourable security circumstances will continue.

Global war between the Superpowers is most unlikely and provides no basis for planning our force structure. Our best protection against the risk of nuclear war is a government policy of support for the system of mutual deterrence and effective arms control.

There is no conceivable prospect of any power contemplating invasion of our continent and subjugation of our population. If a capable, unfriendly external power acquired a strategic lodgement in our region it would be possible to conceive of substantial military pressure or attack upon Australia. But the regional security situation would have to change dramatically and the interests of nations other than Australia would be threatened by the arrival in the region of such a power. United States interests would be directly affected in respect of both its own supremacy in the region and its obligations under the ANZUS Treaty.

It would take at least 10 years and massive external support for the development of a regional capacity to threaten us with substantial assault. But there are possibilities for lower levels of conflict—some of which could be very demanding—arising within shorter warning times.

These judgements about warning time, which have been endorsed by official strategic guidance for over a decade now, are key concepts for our defence planning.
and they require regular review and testing. They allow our shorter-term preparations to be focused on the requirements of lower-level contingencies. But our planning and force structure development also should take account of the possibility that, at some future time, we may need to prepare against the prospect of more substantial threat.

Can strategic guidance be made more explicit?
If Australia is to have better defence planning we need a clearer understanding of the levels of threat that we could credibly face. The effects of geography and the constraints of regional military capabilities impose limits on what is practicable.

A thorough understanding of the physical characteristics of the sea and air gap to our north, and of Australia’s northern hinterland, will enable us to take account of the limitations and risks that geography places on any opposing force. We also need to understand long-term trends in regional military capacity and potential, as well as those of external powers.

The significance of maritime trade
The potential for threat to our shipping needs to be better understood. No country has ever blockaded a continent surrounded by seas such as Australia. Yet there is a tendency to believe that the Australian economy is particularly vulnerable to an interdiction of our overseas trade, and that therefore we need a capacity to protect sea lanes to a considerable distance from our mainland.

Most military activities involving disruption of Australian trade could be handled by evasive routing. Moreover, Australia has the potential to become highly self-sufficient in basic commodities. There is a need to study these matters in more detail and to identify which routes and cargoes are most important, and what alternatives are available to us.

Future planning processes
Strategic guidance, military concepts, and force structure analysis are not properly drawn together under present arrangements. This leads to inadequate advice being available to Government, and makes it difficult to plan ahead with clarity. Consideration should be given to new arrangements in which strategic and force planning concepts are integrated in a single planning document—perhaps along the lines of this Review.

Institutional difficulties
Defence planning is not made easier by the adversarial attitudes that exist within the Defence community. The main reason for these differences is that the Department and the Australian Defence Force (ADF) do not agree on the appropriate level of threat against which we should structure the Defence Force. The Department believes that priority should be given to credible low-level contingencies and the expansion base as a basis for force structure determination. The ADF considers that these requirements are best met in the context of planning force development on the basis of preparing for larger-scale contingencies.

These are quite fundamental disagreements. The recommendations made in this Review emphasise the weight to be given to credible contingencies—but not at as low a level as the Department supports. If the Government accepts these recommendations the basis on which our force structure is determined will be settled. Within the Defence community, a conscious reduction in the amount of separate force structure work that takes place in civilian and military areas and an increased joint planning process would be helpful in developing agreed advice to Government.

This Review also believes that while the Service Offices should retain an advisory role, the centralisation of military planning and policy under the Chief of the Defence Force (CDF), working in close association with civilian staff under the Secretary, is the only way in which an integrated ADF policy can be developed effectively. The Review recommends that the policy staff of ADF Headquarters should be increased and the operational requirements and force structure planning staffs of the single Services should be abolished.

THE BASIS FOR A NATIONAL DEFENCE STRATEGY

Australia must have the military capacity to prevent any enemy from attacking us successfully in our sea and air approaches, gaining a foothold on our soil, or extracting political concessions from us through the use of military force. To do this, we must develop our own solutions to our unique strategic circumstances.

Defence priorities
There are clear limits to our defence capacity and influence. We are a large country with a small population and industrial base. But through a strategy based on the fundamentals of our geographic location we can maximise the benefits of an essentially defensive posture in our region. The security interests at stake in the range of more credible threats facing us are primarily Australian interests. We must therefore have the independent military capability to defend these interests. Australia’s vital defence interests are compact and easily identified. The exercise of authority over our land territory, territorial sea and airspace is fundamental to our sovereignty and security. We must also be able to protect our resource zones and defend our maritime approaches.

Most countries exert such sovereignty as a matter of routine. In our case it is a daunting task, considering the vastness and harshness of our territory, the length of our coastline, the size of our fishing and resource zones, the distance away of our offshore territories, and the disproportionately small size of our population. A strong stable region free from external pressures is a fundamental security interest. We thus seek to co-operate with South East Asian and South Pacific friends in the development of their defence capabilities, and to exercise and train with them. The objective of this activity should be to promote a sense of shared strategic interests. Defence activities can thus contribute usefully to closer relations with our regional neighbours, but they are only one element in the network of political, trade, immigration and other relationships that we have with the region.

Peacetime tasks such as peacekeeping, preparing for counter-terrorist operations or naval visits to distant countries should not determine the structure of our defence forces.

Main areas of operations
An important and recurring theme of the Review is the need to concentrate force structure priorities on our area of direct military interest, where we should seek to exert independent military power. This area stretches over 4000 nautical miles from the Cocos Islands in the west to New Zealand and the islands of the South West Pacific in the east, and over 3000 nautical miles from the archipelago and island chain
in the north to the Southern Ocean (see Map 1 at the end of this Report). It represents about 10 percent of the earth’s surface.

The Review also recognises a sphere of primary strategic interest encompassing South East Asia and the South Pacific generally. Developments here can affect our national security, but any military threat to Australia would be indirect. Our defence activities and projection of military power in this wider region should not determine our force structure, as they do in our area of direct military interest.

We have some security interests outside this region, but these are beyond the effective exercise of our military power. Our influence on developments in areas such as mainland Asia must rest primarily with diplomatic efforts undertaken in association with others. Although our economic interests are world-wide we cannot expect to protect them by military means.

If Government wished, there would always be an option to make a modest military contribution in support of our more distant diplomatic interests and the military efforts of others. But this should be seen essentially as a gesture of support, not as a contribution that could materially affect the outcome. Our forces should not be specifically structured or equipped to undertake such tasks.

**Alliance relationships**

The practical benefits of the ANZUS relationship for our defence effort are recognised in the Review. We would not have the same access to intelligence information, logistic support arrangements, weapons acquisition programs, and defence science and technology transfer from any other country.

But there is no requirement for Australia to become involved in United States contingency planning for global war. The presence of the joint facilities, together with the access that we provide to visits by United States warships and the staging through Australia of B-52 bombers, are a sufficient tangible contribution to the Alliance.

A suspension by the United States of its defence relationship with New Zealand under the ANZUS Treaty will not mean the end of the ANZUS relationship between Australia and the United States, or prevent close bilateral defence co-operation between Australia and New Zealand. Indeed, the importance of our shared strategic interests suggests that there is scope for the further development of our defence relationship with New Zealand, which might include joint military planning.

**Regional considerations**

In defence terms, Indonesia is our most important neighbour. The Indonesian archipelago forms a protective barrier to Australia’s northern approaches. We have a common interest in regional stability, free from interference by potentially hostile external powers. At the same time, we must recognise that, because of its proximity, the archipelago to our north is the area from or through which a military threat to Australia could most easily be posed. This would require a fundamental change in present circumstances, which are characterised by a stable government in Indonesia.

In defence terms, the other ASEAN states do not have the geographical proximity to involve our military interests so closely. Any future military involvement that we might have in South East Asia would reflect an Australian judgement on the balance of our interests at the time. Our defence efforts in South East Asia should focus on the continuing development of relationships and associations that foster a sense of shared concerns for regional security.

In the South Pacific we are perceived as being by far the largest power. Our fundamental national security interest is to maintain the benign strategic environment that currently prevails, free from unwelcome external pressures. Our foreign policy, aid programs, and defence policy should be co-ordinated carefully with other regional states, in particular New Zealand, so as to discourage Soviet naval visits, or other unwelcome military access in the South Pacific.

**A STRATEGY OF DENIAL**

These components of our national defence interests need to be drawn together into a single force structure concept. The Review has examined a number of possible strategies for the defence of Australia. Most of them, including the concept of deterrence, do not provide a basis for detailed force structure decisions. The ‘core-force’ concept, which has been used for the last decade, is not a strategy but it is a useful way of approaching force structure priorities in the absence of threat. But a more deliberate framework is required which focuses on our area of direct military interest and credible levels of conflict.

The Review proposes a layered strategy of defence within our area of direct military interest. Our most important defence planning concern is to ensure that an enemy would have substantial difficulty in crossing the sea and air gap.

This emphasises the need for good intelligence and surveillance capabilities and air and naval forces capable of denying the sea and air gap to an adversary, thus preventing any successful landing of significant forces on Australian soil. Closer to our shores, we require a range of defensive capabilities, including air defence assets, surface ships and mine countermeasures. To the extent that lesser enemy forces might land we will need highly mobile land forces capable of dispersed operations and having the ability to protect our military installations, infrastructure and civilian population in the north of the continent.

A strategy of denial would be essentially a defensive policy. It would allow our geography to impose long lines of communication on an adversary and force an aggressor to consider the ultimate prospect of fighting on unfamiliar and generally inhospitable terrain.

**Levels of conflict**

These priorities need to be qualified by consideration of the levels of conflict that are credible now and for the foreseeable future, and the time that would be available to develop our defences in response to possibilities for higher levels of conflict.

In this Review three levels of conflict are considered. The first two levels represent a range of low-level contingencies and escalated low-level contingencies that are credible on the basis of current regional military capacity. They cover a scale from low-level harassment and raids through to more concentrated conflict, but well below the level of an attempt to lodge and sustain substantial forces in Australia. At the third level of conflict there are possibilities for more substantial conventional military action—but well below the level of invasion.

The Review considers that priority should be given to more credible low-level conflict, which would be limited because of limited regional military capabilities. More substantial conventional military action against us could only occur were regional countries to develop over time the necessary capacity. This would take many years.
Our defence priorities must ensure that the ADF has available sufficient equipment, support and trained personnel to respond to credible military situations. We must also take some account of the possible demands of more substantial threats. The basic skills necessary for higher-level conflict should be available, to be expanded and further developed within warning time. But any tendency to prepare for unrealistically high levels of threat should be resisted.

CAPABILITY REQUIREMENTS FOR THE DEFENCE OF AUSTRALIA

In analysing our force structure requirements we must consider the numbers needed for particular elements of the Defence Force. For much of our force structure this issue has not been comprehensively addressed, and there has often been little agreement between the ADF and the Department of Defence on how strategic factors should inform judgements on the numbers of aircraft, ships or soldiers we require. The conclusions recorded in this Review thus represent its own judgements based on consideration of the enduring features of our geographical environment and our strategic priorities. Further refinement will be required in some areas.

Intelligence and surveillance
Our strategic intelligence capacity is central to our maintaining an advantageous military position. Our national intelligence assets and analytical effort should be oriented mainly to our sphere of primary strategic interest. Defence should ensure that its specialised intelligence and analytical requirements are satisfied independently. Special care needs to be given to the allocation of intelligence assets between current intelligence reporting, and the more demanding longer-term tasks of strategic warning and the maintenance of an intelligence data base on the region.

Defence needs for maps, charts and infrastructure information command a high priority so that military operations can be conducted effectively. The production of high-quality maps and charts is time-consuming, and best undertaken in circumstances of peace. The current state of mapping, charting, and environmental knowledge of nearby maritime areas of importance is less than satisfactory.

Australia requires a manifest ability to detect, identify, and track potentially hostile forces within our area of direct military interest. Until recently this was an almost impossible task, but modern technology in the form of over-the-horizon radar (OTHR) offers the prospect for the first time of broad-area real-time surveillance of our air and sea approaches out to 1500 nautical miles. Another promising new surveillance technology is the towed acoustic array, which is especially useful against submarines in favourable water conditions, in conjunction with our Orion long-range maritime-patrol (LRMP) aircraft.

For surface surveillance in credible low-level contingencies, we would need to operate our LRMP aircraft in response to OTHR and intelligence information. Surface vessels with helicopters could also make a contribution.

Our national intelligence assets and analytical effort should be maintained capable weapons platforms equipped with modern sensors and stand-off weapons systems would provide an advantageous military capability.

The Review supports retention of the F-111 strike force to replace the present Oberon boats will satisfy the requirement for submarines. There would place least demands on an aggressor's maritime capabilities, although submarine operations would be constrained by the shallow waters. Any enemy attacks in waters other than in the north would probably be by submarine.

A force of about six submarines, able to operate concurrently from both our west and east coasts, would be a major inhibition on an enemy's use of surface assets against us at all levels of threat. Current plans to acquire new high-capability conventional submarines—with marked improvements in performance and availability—to replace the present Oberon boats will satisfy the requirement for submarines. There is some scope for lesser capabilities if cost pressures require this.

Anti-submarine warfare
An adversary might see interference with or interdiction of Australia's coastal and overseas shipping as a practical option, less demanding in resources than substantial assault of the mainland. Operations against coastal shipping in northern waters would place least demands on an aggressor's maritime capabilities, although submarine operations would be constrained by the shallow waters. Any enemy attacks in waters other than in the north would probably be by submarine.

The South-east waters carry coastal traffic highly important to the national economy and our defence effort. Unless capable defensive systems were provided, shipping losses to modern, quiet, diesel-electric submarines could be considerable. There would and to the mapping and charting programs. There is a strong case for considering at least a further two OTHRs.

Strike and interdiction
The possession by Australia of strike and interdiction capabilities is one of the most evident means of demonstrating our military advantage. But these forces would not play a significant part in low-level contingencies, except for display and patrol purposes to inhibit escalation. The widespread and intensive use of such capabilities would be most relevant to a threat of major attack on Australia, a contingency judged at present as remote and improbable. The warning time for such a contingency would be sufficient to allow considerable expansion of our strike capabilities.

In the development of our strike capabilities preference should be given to strike against maritime targets because of the strategic importance of the sea and air gap. The development of land-strike capabilities is a lesser priority. Acquisition of any strike capabilities with ranges greatly in excess of 1000 nautical miles from our northern coast could not be justified. Air strike or naval interdiction capabilities that could contribute to our allies in more distant areas should not be a force determinant.

Land-based aircraft and submarines are preferred for strike and interdiction in Australia's area of direct military interest. An Australian force structure that maintained capable weapons platforms equipped with modern sensors and stand-off weapons systems would provide an advantageous military capability.

Taking account of training needs in both the land and maritime modes, and the limited number of potential military targets, we need up to two squadrons of strike aircraft, oriented primarily towards maritime strike but also capable of strike against maritime targets on land.

The Review supports the current priority given to intelligence, electronic-warfare and maritime surveillance forces. It considers that additional resources should be applied to the Jindalee OTHR program to exploit further this promising technology.
be a particular requirement to protect focal areas in southern waters, such as the approaches to Sydney, Newcastle and Wollongong, Bass Strait, Fremantle, and near Cape Leeuwil.

A mid-ocean submarine threat against our trade by a regional power is most unlikely, and the need for mid-ocean escort of shipping should not be given priority in Australia’s force structure.

In view of the very limited regional submarine capability, there is no need to enhance our already considerable ASW forces beyond the need to introduce surface-towed acoustic arrays and to complete the program of helicopters for the guided missile frigates (FFGs). The acquisition of high-cost destroyers primarily for ASW has a low priority in present strategic circumstances.

Surface maritime forces
Risks inherent in our maritime environment, where we claim an extensive resource and fishing zone and have important offshore installations and territories, could pose demanding problems for the nation’s defence. These could be exploited by an adversary possessing only modest maritime capabilities.

In low-level contingencies we are likely to want to operate maritime surface forces dispersed over broad areas of the northern and north-western approaches. Their most valuable characteristics would be their manifest military presence, endurance and good surveillance and communications capacities.

The Review recommends a new class of ocean patrol ship, perhaps to be known as the light patrol frigate, built in Australia, to complement our FFGs and guided missile destroyers (DDGs) and our Fremantle class patrol boats. The new vessels would perform ocean patrol and sovereignty tasks in our key maritime areas, for which smaller patrol boats would be unsuitable. In some circumstances they would be able to relieve higher-capability destroyer-type vessels for more demanding duties.

The Review judges that there might be a requirement in credible contingencies for up to about 24 surface platforms, including between 6 and 8 higher-capability destroyers and up to 10 of each type of light patrol frigate and patrol boat, depending on the circumstances. The higher-capability destroyers would provide a skill base for more substantial conflict in ASW, air defence, and the associated command and control. In low-level conflict, they would provide insurance against local escalation.

A practical matter the number of higher-capability ships will be sustained at nine (six FFGs and three DDGs) through the 1990s, unless the modernisation of DDG HMAS Hobart is cancelled. Studies should be conducted over the next few years to help inform judgements in the early 1990s on new destroyers possibly to replace the DDGs. The introduction of the light patrol frigate will allow both a reduction in patrol boat numbers and deferral of a decision on a replacement type.

Mine countermeasures
At all levels of contingency, mining, or the threat of mining, could be employed against us. Many of our northern approaches are susceptible to mining, and their closure would have substantial political and economic effect. Ports such as Dampier, Port Hedland, Darwin, Gove and Weipa could be seen as particularly attractive for mining operations. The major ports of the south, essential for national survival, are also vulnerable.

At present Australia has a single, token mine countermeasures vessel, suitable only for training. This has resulted from poor planning and procrastination over many years. This deficiency is unacceptable and Australia needs, as a matter of priority, a capability to clear mines. It is important to ensure that all further delay to the minehunting catamaran program is avoided, and to prove quickly the Navy’s new concept of minesweeping based on craft of opportunity. While the use of Naval

Reserves in mine countermeasures is attractive, the central element must be a core of the Permanent Naval Forces.

Maritime air defence
In all credible contingencies Australian maritime activity would be predominately in our area of direct military interest. Land-based aircraft would be expected to provide maritime air defence where necessary. Land-based fighters can be complemented by surface ships equipped with air defence missiles, but we should avoid policies that require naval surface vessels to be placed at risk of air attack without access to our own defending aircraft.

Our fighter force should be able to deploy and operate readily across the northern maritime approaches. The consideration of our air superiority over these waters is imperative. To meet the needs of maritime air defence, two fighter squadrons would be a minimum requirement for the force-in-being and as an expansion base, noting the limited offensive air power available in the region.

The need to provide air cover for surface vessels is the strongest consideration affecting our priority now for aerial refuelling. While the F-111 can perform the role of a long-range air interceptor, the provision of aerial refuelling for the F/A-18 would allow greater assurance that air cover for the Navy would be available.

Continental air defence
A minimum of two fighter squadrons would be sufficient for continental air defence in credible contingencies, and as a basis for expansion. There is a related requirement, identified earlier, for two fighter squadrons for maritime air defence. These tasks overlap and current plans for the introduction of 75 F/A-18 aircraft will satisfy our air defence requirements and maintain an advantageous military position. Of the planned three F/A-18 squadrons, two should specialise in the air-to-air role, while the third should specialise in the air-to-surface role including maritime strike.

The successful operational performance of OTHR would dramatically enhance our air defence alert and early warning capabilities by the end of this decade. OTHR has a good prospect of proving generally sufficient for early warning and control in low-level contingencies. But there is some doubt as to whether OTHR would be sufficiently capable for the full range of credible contingencies. Investigation of airborne early-warning and control (AEW&C) options should go ahead, but there should be no acquisition of these systems until the ability, or otherwise, of OTHR to provide adequate targeting information to the F/A-18 is determined.

The acquisition of two additional mobile ground-based radars is proposed, to provide air traffic control and high-definition targeting close to airfields and major installations in northern Australia.

Our primary air defence capability resides in the Tactical Fighter Force. Surface-to-air missile systems are required in limited numbers only to develop co-ordinated command and control procedures appropriate for more substantial conflict, and to meet any low-level conflict needs.

Ground force priorities
Australia’s needs for ground forces are strongly influenced by our being an island nation. The sea and air gap to our north would present a formidable obstacle to any aggressor. There is an important discontinuity in the progression of land force threats between low-level raids and the incredible prospect of major assault on Australian territory.

Even so, we could not expect in all conceivable circumstances to set up an impermeable barrier, and an adversary could expect some success in inserting small-scale ground forces. But any attempt by an enemy to assemble, transport and resupply
the larger forces needed for more conventional ground force operations could not escape detection. And the exercise of our air and maritime power would make its failure highly likely.

The priority demands on our ground forces are for the protection of military and infrastructure assets that support the projection of our air and maritime power, and the defence of civilian population and key points in the north of Australia from a protracted campaign of dispersed raids. Our forces must also provide an offensive capability to contain incursions and defeat enemy forces close to their landing areas. These are challenging tasks given the vast areas of likely operations in the north and the need to be seen to be providing a visibly adequate defence.

The possibility of fighting a conventional land battle in Australia is not so entirely improbable that we should not retain some limited skills and expansion capacity against such an event. But the appropriate forces for such circumstances should be developed within the framework of a force giving priority of manning and equipment to the needs of credible contingencies.

Ground force organisation and disposition

The minimum number of Regular infantry battalions that we require is six. A lesser number of Regular battalions could be faced with an impossible operational task. A similar number of Reserve battalions would also be required, to be available for early deployment from a Reserve Force of at least 10 battalions.

Army’s main avenue of expansion will be through call-up of the Reserves. In due course, it would be appropriate to review again both the size of the Regular Army and the balance between Regulars and the Reserves.

To facilitate exercising in the north, to gain greater familiarity with the area, and in general recognition of its priority in credible contingencies, consideration should be given to the basing in the north of additional elements of the Regular Army. In the longer term this should be a brigade-sized formation, but practical considerations suggest first a Regular reconnaissance unit, based in the Darwin/Tindal area.

Ground force mobility

The need to move quickly and effectively against raiding groups suggests that our emphasis would be on forces able to operate over vast distances, and needing the minimum of logistic support. Our ground forces will be predominantly infantry, lightly armed and air mobile.

It is now timely to develop further the Operational Deployment Force (ODF) concept. The Review supports Army’s initiative to consider ways in which the priorities for 6 Brigade should be brought closer to those of the ODF. It also supports Army’s intention that the parachute capability now under development should be associated with the ODF.

There is a need to upgrade substantially the tactical mobility of our ground forces, principally by significant expansion of the utility helicopter force. This will provide greater deployment flexibility and fire support for units operating over wide areas in our inhospitable northern regions.

There is also a need for light armoured fighting vehicles in credible contingencies. While the current M113 may not be ideal, it is suitable for training and operations in the shorter term, perhaps with some modifications. An appropriate planning base would be that each battalion should have available a company group lift, some fire support, and a reconnaissance element. Current M113 numbers are more than adequate and some reductions are recommended.

In the long-term program for the replacement for the M113 there is time and scope for practical experimentation with different vehicle types. There may also be a place for specialised-mobility vehicles.

Mechanised forces

Mechanisation involves the integration of infantry mounted in armoured personnel carriers (APCs) with tanks, artillery, and with supporting arms and services also mounted. The benefits of this integration increase as the conflict becomes more conventional and intensive.

The Review concludes that Army’s current mechanisation plans rest on premises that are at variance with Australia’s strategic circumstances. Our warning time for large-scale conventional operations, to which mechanisation is principally relevant, would be very long. The Review does not see priority for the mechanisation of 5/7 RAR and elements of HQ 1st Brigade and supporting arms to the extent already achieved. It recommends that the emphasis of 5/7 RAR’s training and development should be towards the priority needs of dispersed operations in credible northern contingencies. The integration of tanks with the mechanised infantry, and the support of medium guns, is not a priority.

Tanks

There is a need for a critical examination of our requirement for heavy armour. Tanks are relevant only as part of the expansion base. The Review proposes that the Regular component of 1st Armoured Regiment be reduced and that it become an integrated unit with a substantial Reserve component.

Artillery

Field artillery (105 mm) should be available in limited numbers to provide fire support to ground forces, but opportunities for the traditional use of artillery against concentrated targets will be infrequent. Medium artillery (155 mm) is an asset more appropriate to the expansion base.

Ground surveillance forces

There would be a priority for surveillance and reconnaissance elements, particularly for the timely identification of enemy activity during a period of heightened tension or in the early stages of hostilities. The Review encourages the further development of the largely Reserve regional force surveillance units, including the possibility of increasing the Regular component.

Close air support

There is little priority now for extensive skills in close air support. In present circumstances there is no need for specialised ground-attack aircraft or helicopters. Our requirements for close air support can be met with the F/A-18 force, and by the proposed inclusion of helicopter gunships within our expanded utility helicopter force.
Northern facilities
If we are to project credible military power in the most vulnerable part of the continent, we require a larger permanent presence in the north of Australia. While there has been significant base development in recent years, we should proceed now with a bare-base airfield on Cape York Peninsula, a modest naval facility on the north-west coast of Western Australia, and the basing of a Regular Army unit in the Darwin/Tindal area.

Fleet support
The substantial expenditures and dislocation involved in an accelerated move out of Sydney Harbour would not be justified by any pressing strategic requirement, although there are some operational benefits. The move should be designed as far as possible to meet the needs of Navy, and the opportunity taken to select the most desirable locations for particular maritime forces. Strategic considerations favour the location of the main submarine base at Cockburn Sound.

As our naval presence in the west of the continent builds up, the purchase of a low-cost tanker to help support two-ocean deployments should be considered.

Army training areas
Because of the range of complex practical considerations involved, this Review is not in a position to comment with finality on current proposals for new Army training areas and facilities in New South Wales. The Review notes that its proposals for a reduced emphasis on mechanised and armoured operations may affect the basis of selection of a new field firing and manoeuvre area.

Ground force logistic support
We can use both civil and military assets to carry materiel to forward northern bases from major support areas in the south-east. But we need integral ADF logistic capacities within operational areas in the north. There is a need to conduct a program of sustained exercises in the north, supported from bases in the south, to test and identify weaknesses in our logistic train.

The RAAF’s current airlift capacity (four B707s, 24 Hercules, 22 Caribou and 12 Chinooks) is generally adequate for current circumstances. But we should plan on increasing our airlift capacity as part of the program to improve ground force mobility. We should keep in mind the potential of new technologies such as the tilt-rotor.

Current amphibious capabilities are adequate for credible contingencies. Any additional sea transport required could be by civil vessel on charter.

Civil infrastructure and support
Because our forces would draw on civil assets, it is important that defence considerations influence civil infrastructure developments particularly in the north. Defence should also have a detailed awareness of the potential for civil support through the maintenance of a National Defence Infrastructure Directory.

Infrastructural, logistic support and industry

Civil industry should contribute to the maintenance, adaptation, and through-life support of defence equipment. This is especially appropriate where a system is designed or manufactured in Australia, and where it has a priority use in credible contingencies.

If the ADF is to become more dependent on the civil sector in these crucial areas, it will need to be reassured about the co-operation of the trade union movement and the dependability of the work-force in the event of a national emergency. This requires the development of better relations between the ADF and the union movement.

Industry for defence
In the range of credible low-level conflicts facing Australia, there is a considerable likelihood that overseas resupply would be available. Military action to deny Australia overseas sources of important defence supplies is well beyond the capacity of regional states. Isolation from virtually all sources of overseas supply is possible only in the very unlikely circumstances of global superpower conflict.

Nevertheless, a measure of protection against restriction of overseas supply is appropriate. For credible contingencies, the industrial capacity to maintain, repair and adapt defence equipment to the Australian environment would be fundamental to our combat effectiveness. Comprehensive local capabilities in this category are of high strategic priority.

Too much of the debate about industry for defence is about designing and producing platforms and weapons in Australia. A substantial premium for indigenous design and production is justified only in the few cases where there is a unique Australian requirement, or where local participation contributes to an important overhaul and refurbishment capacity.

Those areas of Australian industry offering the most scope for further development and a contribution to self-reliance are generally in the private sector. There are, however, some arrangements with the private sector which involve a high degree of Defence intervention and subsidy and which need review.

The Government’s defence factories and dockyards are highly subsidised and in urgent need of further rationalisation and the introduction of rigorous commercial cost-accounting practices across the full range of their functions.

Organising and planning for conflict

Command and control arrangements
No radical changes are required in ADF command and control arrangements, but the framework of functional commands should be developed further so that peacetime arrangements more closely reflect the Joint Service requirements of credible contingencies. The Review recommends a detailed examination of the need for a regional joint force command in northern Australia, which might be established on an experimental basis in the first instance.

The trend should be for the joint command structure under the CDF to gain authority at the expense of the single Services. This is not an argument for the abolition of the single Services, but recognises that over time the single Services are becoming less concerned with the conduct of combat operations.
Allocation of assets

The option of transferring the Orion force from Air Force to Navy to promote integration with Fleet assets has been considered in the course of this Review. The conclusion, on balance, is that efficiency will best be served by Air Force retaining responsibility for these fixed-wing aircraft. However, they should be assigned for most operational activities to the Maritime Command.

Ground force operations are somewhat different. Combat efficiency may be enhanced if ground force tactical helicopters and their crews were operationally part of the Army. This Review considers that its recommendation to enhance the helicopter lift capability for the Army provides a suitable opportunity to integrate the helicopter element into the Army structure.

Stockholding policy

It is unsatisfactory that there is no agreement within Defence on policy for war reserves and stockholding, and that the ADF’s sustainability in combat cannot be easily assessed. The Review recommends that a start would be to determine the adequacy of existing stocks to sustain military operations for periods of three months and six months in circumstances of intermittent low-level conflict in the north of the continent.

No need is seen for large defence stocks to be held as a contingency against the absence of overseas supply in wartime, although there may be justification for procuring greater reserve stocks of selected spare parts.

War administration

High-level co-ordination and planning for wartime administration is not an urgent requirement. The kinds of credible contingencies which could arise in short time-scales would not require major adjustment to our machinery of government. Rather, some broad guidelines need to be developed principally so that relevant Federal and State authorities are aware of potential Defence requirements, and to provide a basis for military planning and exercising. This planning should be related firmly to the potential requirements of credible contingencies, not concepts of national mobilisation to defeat an invasion force.

Civil defence

Civil defence skills and capabilities appropriate to more credible contingencies are readily available within the civil community. The Defence role can be properly limited to training and planning. There is, however, a need to test our civil defence capacities in the north of Australia in exercises.

Except for the towns located near to the joint facilities, civil defence measures against the remote prospect of global nuclear war do not require priority in our planning.

RESOURCE IMPLICATIONS

The Review has not been conducted as, nor was it intended to be, a cost-cutting exercise. It does not provide a basis for short-term variations in defence funding.
Levels of defence expenditure
The use of the Five Year Defence Program (FYDP) system has greatly improved financial and force structure planning. But some of the potential benefits have been lost because of the lack of consistent financial allocations by governments. For most of the last decade, defence planning has been caught between elevated planning guidance and depressed budgetary growth, leading to a pattern of deferrals of major projects.

The Review recommends most strongly that more realistic financial guidance should become the norm. This would do much to reduce waste of managerial and executive effort, and would allow longer-term force structure needs to be kept in a clearer perspective.

With some modest adjustments, the Review's recommendations can be accommodated by changes to the 3.1-percent real growth program developed by the Department of Defence for FYDP 1986-91, and there is no indication of difficulties beyond that period.

The balance between resource elements
Within the FYDP period, the Review's recommendations on new capital equipment more or less balance out. Beyond it, the Review identifies a specific need for some $1300 million, but this is a modest fraction of the funds likely to be available for capital equipment at that time. There is probably flexibility for other areas of defence spending to grow at the expense of capital equipment, were this required.

Capital facilities planning is overshadowed by uncertainty concerning the relocation of the Fleet Base from Sydney. Nevertheless, the Review judges that the major recommendation not already planned—Army basing in Darwin/Tindal—could be accommodated if funds for capital facilities were sustained for a few years beyond the FYDP broadly at the levels now programmed within the FYDP. With an eventual reduction in the need to develop any further new strategic facilities, the funds allocated to this part of the Defence Vote could reduce, perhaps by the mid-1990s.

Manpower changes are difficult to assess accurately, but in numerical terms the net result of the Review's recommendations is small. The programmed growth of 500 new positions and the redistribution of 550 other positions should allow the new capabilities to be accommodated. Continued broad constraint on the numbers of civilian and Service personnel within the Defence function is justified.

The Review's recommendations are likely to require a modest increase in operating costs beyond the three-percent average growth already programmed. The main initiative is the recommended basing of Regular Army elements in Darwin/Tindal and increased training in the north generally. Some transfer of expenditures from the personnel component of the Defence Vote to operating costs could also come from the greater use of Australian industry to support the Defence Force. Overall, an increase of up to about $60 million per year in operating costs could be appropriate.

The Review supports the allocation of a funding wedge for stocks to sustain operations in credible contingencies—but primarily for spares rather than ammunition.

CONCLUSION
To provide an appropriate defence for a country in Australia's unique strategic circumstances is exceedingly complex. In the absence of an identifiable threat, the question of what sort of defence capabilities are most relevant, and how much we need, are necessarily matters of judgement.

This Review has sought to narrow the options and to limit the scope for subjective judgement by focusing on the unchanging nature of our geographic circumstances and the levels of threat that we might realistically expect. The central theme of this Review is that Australia is a defensible continent and that, with some important reordering of priorities, we can provide for our own defence.
FORCE STRUCTURE PROPOSALS

INTELLIGENCE AND SURVEILLANCE

JIO and DSD
- Maintain current levels of activity, with progressive investment in new technology. ($10 million programmed for improvements to JIO over the next five years.)

Electronic warfare (EW)
- Ensure that we can adapt our EW systems to the operational environment, especially for credible contingencies.
- Continue current and proposed programs to update electronic support measure (ESM) systems. (About $100 million approved or programmed for early decision.)
- Allocate sufficient resources to establish and run the Defence EW Data Base (DEWDAB). (About 10 specialists.)

Over-the-horizon radar (OTHR)
- Expand and accelerate the current development program by applying additional resources, especially to surface detection. ($46 million programmed for decision in 1985-86, to convert experimental Jindalee radar into an operational system.)
- Make program provision for two additional OTHRs to enter service by early 1990s, and possibly another two by mid-1990s. (Per radar: $105 million capital cost, $2 million annual operating cost, and at least 40 Defence personnel. Years of decision about 1987-88 and 1990-91.)
- Manage OTHR on a Joint Service basis and integrate with the ADF command support system.
- Review future needs for other systems for maritime surveillance when the full potential of OTHR for surface surveillance is clarified.

Long-range maritime-patrol (LRMP) aircraft
- Retain the 20 Orion LRMP aircraft for maritime surveillance and strike (both anti-surface and anti-submarine operations).

Surface-towed acoustic arrays
- Retain priority for an early decision on development and a later decision on further acquisition. ($56 million programmed for decision in 1986-87, and $23 million in 1989-90. 48 personnel eventually required.)

Mapping and charting
- Retain priority for AUTOMAP III. ($13 million programmed for decision in 1986-87.)
- Increase defence manpower allocated to mapping by up to 50, subject to examination of alternatives such as greater use of civil contract.
- Delete proposed acquisition of photo-survey aircraft from the Defence Program, and use civilian contractors. (Delete $67 million programmed for decision in 1986-87. Contract cost estimated at $0.7 million per year.)
- Retain priority for a second Flinders class survey ship (AGS-02). ($48 million programmed for decision in 1986-87. Thirty uniformed personnel for the ship and 20 civilians in the Hydrographer’s office.)

STRIKE AND INTERD ICTION

Strike aircraft
- Retain the F-111 force with a minimum update for service until around the mid-1990s. (Reduce Avionics Test Equipment update from $91 million to $60 million. Reduce Simulator update from $41 million to $14 million. Defer by one year and reduce Avionics update from $219 million to $150 million. Delete Precision Guided Munitions ($62 million) and Electronic Countermeasures ($60 million). Reduce total update package from about $470 million to about $225 million.)

Submarines
- Retain the program for six new submarines but establish a financial ceiling and, if necessary later, explore options for lesser capabilities. ($2650 million programmed for decision in 1987-88.)

MARITIME DEFENCE

Mine countermeasures
- Avoid further delay to testing and evaluation of the two prototype catamarans for inshore minehunting (MHI), and if successful construct at least four more. ($211 million programmed for follow-on MHIs, for decision in 1987-88.)
- Retain high priority for trials of Australian concepts for minesweeping. ($100 million programmed for trials and acquisition of new sweeping concepts, for decision in 1986-87 and beyond.)
- If these concepts are successful, acquire four vessels and lease craft of opportunity for minesweeping. (Make program provision of $37 million for decision on acquisition in about 1988-89.)
- If these concepts are not successful, acquire three minesweepers urgently from overseas. (Cost in the order of $300 million.)
- Retain high priority for establishment of Mine Warfare Systems Centre. ($46 million programmed for decision in 1987-88.)

Destroyers and patrol vessels
- Build in Australia eight ocean patrol ships/light patrol frigates, to enter service from the early-to-mid-1990s as the last three destroyer escorts (DEs) and first five Fremantle class patrol boats pay off. Plan on a decision in 1987-88 for design development. (Estimated cost of $2000 million is balanced by reductions in earlier proposals for new surface combatants and new patrol boats. About 1000 personnel for these new ships and their helicopters to become available from the five Fremantles and three DEs.)
- Consider cancelling the modernisation of, and paying off, the third guided missile destroyer (DDG) HMAS Hobart. (Save $32 million from capital equipment program; reduce annual operating costs by $8 million; reallocate the crew of 330.) Government may wish, however, to retain nine rather than eight capable destroyers in the fleet.
- Continue with studies for a possible DDG replacement, with a view to funded industry studies in the late 1980s and government decision on source selection in...