

## CHAPTER 4

### DEFENCE

This chapter outlines Australia's defence policy and its defence relationships with other countries; the higher defence organisation; the functions, organisation, manning and training of the three Services; the functions and activities of the Defence Science and Technology Organization; the Natural Disasters Organisation; and the functions of the Department of Defence Support.

Further information on current defence planning and activities is available in the Defence report and other publications of the Department of Defence, and in statements to the House of Representatives by the Minister for Defence.

#### **Current defence policy**

Australian defence policy is primarily directed to the development of independent and, within resource constraints, increasingly self-reliant defence capabilities to deter and, if necessary, defeat military threats against Australia and its direct interests.

Planning for Australia's defence is not based on meeting particular threats. Rather it recognises that there are a number of possible contingencies which, were they to arise, would have consequences for our security. Particular attention is given to the capabilities of the Defence Force to deal with lesser threats or contingencies, such as limited harassments, raids, incursions, etc., that could arise at short notice and to ensuring that there are options for a future government to expand defence capability in response to changes in the strategic outlook.

Australia maintains close defence relations with numerous allies and friends. Our membership of the ANZUS alliance, the Five Power Defence Arrangements and our Defence Cooperation Programs with friendly nations in South East Asia and the South West Pacific demonstrate Australia's interest in contributing to global and regional stability.

The security and stability of our immediate neighbourhood is of major strategic importance to Australia and the continued development of an independent defence capability enhances our ability to contribute to the peaceful development of that region. Priority in defence activity is consequently given to areas close to Australia and high value is placed on fostering the defence relationship with the countries of South East Asia and the South West Pacific.

The ANZUS alliance remains an important element of our defence policy. Although the Treaty was concluded a generation ago and in a very different strategic environment, the commitments and obligations that were accepted then remain relevant and applicable to contemporary strategic circumstances. The partners acknowledge that the alliance is based on the fundamental precept that the Treaty does not absolve each government from the primary responsibility to provide for its own security to the extent that its resources allow.

#### **Higher defence organisation**

Legislation concerning the present organisation of the higher management of the Defence Force and the Department of Defence was passed by the Commonwealth Parliament in September 1975 and became effective on 9 February 1976. It specifically recognised that responsibility for the general control and administration of the Defence Force rests with the Minister for Defence.

*Chief of Defence Force Staff:* Under section 9 (2) of the *Defence Act 1903* the Chief of Defence Force Staff is vested with the command of the Defence Force. The Chief of Defence Force Staff is the chief military adviser to the Minister and in addition the Chief of Defence Force Staff has, with the Secretary, the joint administration of the Defence Force as specified below.

*Secretary, Department of Defence:* The Secretary derives his normal administrative powers as a Permanent Head and Chief Officer from the Public Service Act, the Audit Act and Finance Regulations. In addition to these powers, section 9A of the *Defence Act 1903* makes the Secretary and the Chief of the Defence Force Staff jointly responsible for the administration of the Defence Force (except for the matters falling within the command of the Defence Force or any other matter specified by the Minister). The Secretary is the principal civilian adviser to the Minister for Defence and is responsible to the Minister for advice on general policy and on the management and utilisation of defence resources.

### Higher Defence Machinery

The *Council of Defence* considers and discusses matters relating to the control and administration of the Defence Force and of the respective Arms of the Defence Force referred to it by the Minister for Defence. The Council is chaired by the Minister for Defence and membership comprises the Minister Assisting the Minister for Defence, the Minister for Defence Support, the Secretary of the Department of Defence, the Chief of Defence Force Staff, the Secretary of the Department of Defence Support and the three Service Chiefs of Staff.

An extensive committee system exists to formulate and provide Defence policy advice to the Minister for Defence, to advise on major matters of administration and to identify the respective Armed Services' operational requirements to meet defence objectives. It is also designed to ensure the sound management of resources, and to enable the interests of the various elements of the Defence organisation to be represented when decisions on resource allocation are taken. The committee system brings together the expertise of both military and civilian members in the policy formulation process and the submission of advice to Government. The more important committees are described below.

The *Defence Committee* is chaired by the Secretary of the Department of Defence, with the Chief of Defence Force Staff, the three Chiefs of Staff, and the Secretaries of the Departments of the Prime Minister and Cabinet, Treasury and Foreign Affairs as members. Representatives of other government departments and agencies may be invited as members or consultants. The Committee advises the Minister for Defence on defence policy as a whole, the co-ordination of military, strategic, economic, financial and foreign affairs aspects of defence policy, and matters of policy or principle and important questions having a joint Service or inter-departmental aspect.

The *Chiefs of Staff Committee*, chaired by the Chief of Defence Force Staff, is responsible for providing the Minister for Defence with collective professional advice on military operations; military implications of defence policy; endorsement of military plans; and other related subjects.

The *Defence Force Development Committee* is chaired by the Secretary of the Department of Defence, with the Chief of Defence Force Staff, the Secretary of the Department of Defence Support and the three Chiefs of Staff as members. It is concerned with advising the Minister for Defence on the formulation of the Five Year Defence Program, annual budget estimates, new major equipment acquisitions, major facilities and other matters relating to force structure and the management of resources.

### Defence Review

On 30 April 1981, the then Prime Minister announced in the House of Representatives a major review of the Defence organisation as part of the Review of Commonwealth Functions.

The Committee was chaired by Mr John Utz, Chairman and Chief Executive of Wormald International Ltd.

An interim report on the issue of Departmental organisation was presented at the request of the then Prime Minister in May 1982, and the recommendations were tabled in the Parliament on 7 May 1982.

The Review Committee concluded that there were disadvantages in the large structure of the Defence Department. It recommended the creation of a second Department in the Defence area—a Department of Defence Support. In accordance with the Committee's recommendations, a separate Department of Defence Support was formed, under a Minister for Defence Support.

The final report of the Defence Review Committee was presented to the then Minister for Defence in October 1982, and tabled in the Parliament in November 1982.

### Equipment for the Defence Force

An amount of \$859.120 million (excluding special purpose B707 aircraft) was spent on equipment of a capital nature in 1982-83. An amount of \$1,116.790 million is expected to be spent in 1983-84.

Expenditure on major capital equipment in 1982-83 was dominated by commitments arising from the substantial re-equipment program that the Defence Force is presently undergoing. This program includes 75 McDonnell-Douglas F/A-18 tactical fighter aircraft; four FFG guided missile frigates; 10 additional P3C Orion long range maritime patrol aircraft; PAVETACK target acquisition and tracking systems for the F111 aircraft; 4 and 8 tonne trucks for the Army; a modernisation program for the RAN's three guided missile destroyers; the Australian design, development and manufacture of a new turboprop basic training aircraft for the RAAF; and new 105 mm and 155 mm artillery for the Army.

New major capital equipment items approved during 1982-83 include eight new mortar locating radars for the Army and two Boeing 707 aircraft for RAAF strategic transport requirements. The B707 aircraft have the potential to be later modified for in-flight refuelling.

**EXPENDITURE OF DEFENCE FUNCTION**  
(S'000)

<i>Departmental category</i>	<i>Actual expenditure</i>					<i>Estimated expenditure</i>
	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84
<b>Department of Defence—</b>						
Capital Equipment . . . . .	406,880	495,731	563,556	500,748	792,758	1,043,058
Capital Facilities . . . . .	90,828	89,706	116,793	161,737	165,410	191,406
Defence Co-operation . . . . .	24,600	30,045	37,914	39,676	44,209	45,795
Manpower . . . . .	1,255,390	1,386,587	1,599,461	2,045,640	2,088,646	2,071,875
Other Running Costs . . . . .	633,872	788,876	967,616	1,044,268	1,180,569	1,233,671
<b>Total . . . . .</b>	<b>2,411,570</b>	<b>2,790,945</b>	<b>3,285,340</b>	<b>3,792,069</b>	<b>4,271,592</b>	<b>4,585,805</b>
<b>Department of Defence Support—</b>						
Capital Equipment . . . . .	10,167	14,190	21,593	32,833	66,362	73,732
Capital Facilities . . . . .	5,673	8,277	8,014	17,298	38,699	61,075
Manpower . . . . .	13,986	12,453	15,961	19,196	97,729	98,796
Other Running Costs . . . . .	71,638	82,277	91,963	112,653	137,945	151,617
<b>Total . . . . .</b>	<b>101,464</b>	<b>117,197</b>	<b>137,531</b>	<b>181,980</b>	<b>340,735</b>	<b>385,220</b>
<b>Other Departments—</b>						
Capital Facilities . . . . .	4,442	4,470	8,541	9,180	13,395	15,800
Manpower (including Renumeration Tribunal and Defence Forces Retirement and Death Benefits) . . . . .	158,277	177,243	200,183	246,056	279,714	315,645
Other Running Costs . . . . .	18,593	22,710	27,355	34,750	36,612	33,712
<b>Total . . . . .</b>	<b>181,312</b>	<b>204,423</b>	<b>236,079</b>	<b>289,986</b>	<b>329,721</b>	<b>365,157</b>
<b>Total expenditure on Defence function . . . . .</b>	<b>2,694,346</b>	<b>3,112,565</b>	<b>3,658,947</b>	<b>4,264,035</b>	<b>4,942,048</b>	<b>5,336,182</b>
<b>Special provisions—</b>						
Acquisition of Special Purpose Boeing 707 aircraft . . . . .	10,201	3,395	196	289	103	130
Allowance for prospective wage and salary increases . . . . .	..	..	..	..	..	110,000
<b>Total Defence expenditure . . . . .</b>	<b>2,704,547</b>	<b>3,115,960</b>	<b>3,659,143</b>	<b>4,264,324</b>	<b>4,942,151</b>	<b>5,446,312</b>

**Note:** The 1982-83 expenditures and 1983-84 estimates of expenditure for the Department of Defence Support include expenditures previously attributable to the Departments of Defence, Industry and Commerce, Administrative Services and Science and Technology. It is not readily possible to express expenditures for 1978-79 to 1981-82 in a form comparable to that shown for 1982-83 and 1983-84. Expenditures shown for the Department of Defence Support prior to 1982-83 are primarily those for the former Department of Industry and Commerce and the Defence purchasing element of the Department of Administrative Services.

### Defence industry

Defence policies in relation to maintenance and development of defence industry capabilities stem from the broader Defence strategic and policy objectives. Defence industry policy recognises that complete self-sufficiency in the supply of the Defence Force's equipment is neither necessary nor practicable for Australia in its current strategic, economic, and technological circumstances. The self-reliant materiel policy adopted by successive Australian governments is illustrated by the balance of local and overseas spending in Defence funding of new capital equipment, replacement equipment and stores, and equipment repair and overhaul.

The complex and expensive platforms and systems (for example advanced military aircraft and missiles) required in limited numbers are imported. The long term trend is for these overseas procurements to absorb some 70 per cent of defence spending on new capital equipment. In the shorter term the balance between local and overseas spending varies in response to changes in accounting arrangements and the timing of payments in relation to particular projects. For example, the proportion of expenditure on capital equipment in Australia rose from 34.9 per cent in 1980-81 to 57.7 per cent in 1981-82, due primarily to reductions in planned payments on Australian purchases under United States Foreign Military Sales arrangements. In 1983-84, concurrent payments for the F/A-18 aircraft, FFG frigates and P3C Orion aircraft are likely to result in the proportion of capital equipment expenditure incurred overseas temporarily exceeding the long term trend.

Australian industry participation in the new tactical fighter (F/A-18) project illustrates the role local industry can play in major overseas procurements. The F/A-18 project provides for designated production tasks on Australian aircraft to be carried out in Australia and for the production of certain components and assemblies by Australian firms to be exported to the US for incorporation in other aircraft. Designated work is intended to enhance the capacity of Australian industry to maintain and repair the aircraft. Designated work in the F/A-18 project comprises local manufacture of representative airframe, avionics, engine and mechanical components. Under these programs orders worth some \$550 million will be raised on Australian industry.

The balance of defence spending on capital equipment provides for: selective local design and development equipment; local adaptation of overseas technology to meet a particular Australian requirement; local manufacture or construction of overseas designed capital items (under licence); and purchasing for military use of commercial products manufactured in Australia.

Complete design, development, and manufacture of equipment is undertaken on a selective basis in response to a unique Australian requirement or where there is particular merit in defence or technological terms. In 1982, for example, EMI (Australia) Ltd was awarded a \$16 million contract for the production of the MULLOKA sonar system developed specifically for the Australian maritime environment in collaboration with the Defence Science and Technology Organisation. Carrington Slipways Pty Ltd were awarded a contract worth some \$23 million in February 1983 for the construction of two prototype minehunting catamarans to an Australian design. However, the weapons systems and some specialised items for the minehunters will be imported. The design and the construction of prototype Australian basic pilot training aircraft is being undertaken by the Australian Aircraft Consortium.

Alternatively, overseas technology may be adapted to particular Australian requirements. Australian industry may be involved at an early stage in the development of the projects to facilitate achievement of high levels of local content. For example, in late 1982, Plessey (Australia) contracted for the development phase of tactical radios for the Army (Project Raven); tenders were received for the Defence Integrated Secure Communications Network (DISCON); and the study phase of the replacement light armoured fighting vehicle (Project Waler) was completed.

Capital equipment designed overseas is also manufactured in Australia under licence. In 1982-83 North Queensland Engineers and Agents Pty Ltd completed the eighth of 14 British-designed but locally built Fremantle class patrol craft under a current contract worth \$80 million. Vickers Cockatoo Dockyard is constructing the French-designed replenishment vessel under a contract currently worth \$133 million. The Government Ordnance Factories are scheduled to be in production of the UK-designed 105 mm light gun in 1984.

Commercial equipment may be suitable for some military requirements. In 1982-83 the Army took delivery of 253 eight tonne trucks from Mack Trucks (Australia) Pty Ltd under a contract for 940; Mercedes Benz (Australia) Pty Ltd were awarded a contract for 1,295 four tonne trucks and delivered 259 in the same period. As the first step towards replacement of the Army's light vehicle fleet, orders were placed for evaluation vehicles from JRA Ltd, Mercedes Benz (Australia) Pty Ltd and Jeep Australia Ltd.

The second major category of industry related Defence spending is on replacement equipment and stores. The long term trend is for some 70 per cent of defence spending in this category to be incurred in Australia. This funds selective local manufacture of, for example, gun barrels (which require replacement several times in the life of a major equipment), consumable items (including fuel, ammunition and high usage spares), and stores required in large volumes (such as small arms and other personal equipment).

Successive Australian governments have recognised the importance of indigenous maintenance, repair, and modification of equipment to the operational independence of the Defence Force. Australia has invested heavily in the acquisition and maintenance of requisite skills and the provision of facilities to provide comprehensive local support for equipment in the Defence Force inventory. As a result over 90 per cent of defence spending on equipment repair and maintenance is incurred locally. The RAN's six OBERON submarines are being progressively refitted by Vickers Dockyard Pty Ltd at a cost of \$30-\$40 million each. Similarly, the RAN's six destroyer escorts are being modernized at Williamstown Naval Dockyard at a cost of some \$182 million. During 1983 HMAS *Stuart* was recommissioned and work on HMAS *Derwent* is proceeding. The RAAF's Mirage and Macchi aircraft are being refurbished by the local aircraft industry at project costs of \$73 million and \$22 million respectively.

## INDUSTRY RELATED DEFENCE EXPENDITURE IN AUSTRALIA

	1978-79		1979-80		1980-81		1981-82		1982-83	
	\$m	%	\$m	%	\$m	%	\$m	%	\$m	%
Capital Equipment—										
Total . . . . .	417.0		509.9		585.1		533.6		859.1	
Local . . . . .	127.2	30.5	160.3	31.4	204.2	34.9	307.7	57.7	334.2	38.9
Replacement Equipment and Stores—										
Total . . . . .	267.8		359.4		442.7		461.6		517.8	
Local . . . . .	189.3	70.7	252.4	70.2	314.3	71.0	328.8	71.2	356.6	68.9
Equipment Repair and Overhaul—										
Total . . . . .	87.5		108.2		134.9		159.9		183.5	
Local . . . . .	80.0	91.4	98.6	91.1	126.3	93.6	146.3	91.5	170.4	92.9
Total Equipment Related Expenditure—										
Total . . . . .	772.4		977.6		1,162.7		1,155.1		1,560.4	
Local . . . . .	396.5	51.3	511.3	52.3	644.7	55.4	782.7	67.8	861.2	55.2

### Supply and support

Support requirements for defence equipment continue to increase to cater both for the rising costs of supporting older equipment and the higher level of sophistication of new equipment being purchased against an expanded capital equipment program.

Computer support is required to keep pace with a growing defence inventory. Supply minicomputer systems designed to provide stock control and related functions are operating at most Service Supply establishments with links to a central computer in Canberra. An analysis of longer term ADP requirements to support the defence supply system was completed during the year. As a result, redevelopment of the computer-based supply systems, which will rationalise systems on a joint service basis, is planned to coincide with the replacement of computer hardware.

The acquisition of a number of new major capital equipments from overseas sources requires Australia, as a matter of policy, to seek assurances from its suppliers that continued supply and support will be provided in other than peacetime circumstances. Agreements have been either concluded or are under negotiation with those countries which are, or are likely to be, significant suppliers to Australia of defence materiel.

In October 1982, the Government concluded a number of Annexes to the 1980 Memorandum of Understanding on Logistic Support with the United States. These procedural documents cover such matters as technology transfer, and the acceleration of supply arrangements between the two nations. In February 1983, preparation began of another Annex encompassing co-operative arrangements for military airlift support. The Government has also sought to maintain and develop co-operative defence arrangements with its other ANZUS partner, New Zealand, and on 2 June 1983, Australian and New Zealand Ministers signed a Memorandum of Understanding on Closer Defence Logistic Co-operation. The agreement recognizes the advantages of a complementary logistic support capability, including industrial infrastructure, for the manufacture of defence equipment.

### Capital facilities

During 1982-83 total expenditure on Capital Facilities was \$174 million. Expenditure in 1983-84 is expected to be \$191 million.

Emphasis has continued on the development of facilities in the north of Australia. The new patrol boat base at Cairns was officially opened on 28 May 1982. Adjacent land has been leased for a new diesel fuel storage facility. Construction of a new Explosives Storage Facility for HMAS *Cairns* is planned to commence in 1984. A site has been reserved for possible future patrol boat facilities near Port Hedland, W.A. In August 1983, No. 75 Squadron was redeployed from Butterworth, Malaysia, to Darwin, N.T. Facilities costing \$1.9 million have been provided to support the squadron. A total of 160 houses were leased by DAS from the local civilian market to accommodate No. 75 Squadron married personnel. Works on an aircraft maintenance complex commenced in 1981 have been completed.

The Learmonth W.A. airfield has undergone improvements to enhance its capacity to accommodate aircraft deployments. Construction of a major airfield at Derby, W.A. is continuing, and the establishment of a F/A-18 base at Tindal, N.T. is under examination.

Other operational bases where new major works are involved include: HMAS *Stirling*, Cockburn Sound—where an armament depot was completed in 1982, and where an Oil Fuel Installation has been recently completed; Army brigade bases at Townsville and Enoggera, Qld and Holsworthy, N.S.W.—where work is almost completed on stages of major development programs; work has commenced on a major redevelopment of the Army Air Defence Regiment base at Woodside, S.A.; RAAF base Amberley, Qld—where additional facilities for the maintenance of F-111C aircraft and ground support equipment were completed in mid-1983; RAAF Base Townsville, Qld—where works to upgrade and refurbish living-in accommodation, messes and medical facilities were authorised and committed in mid-1983 for completion in 1985; RAAF Base Williamtown, N.S.W.—where works in support of the introduction of the F/A-18 Hornet aircraft into RAAF service commenced late in 1983; RAAF Base Richmond, N.S.W.—where work is advanced on a corrosion control facility for aircraft and associated equipment which is due for completion in mid-1984.

Major works on support facilities include Garden Island Dockyard modernisation. A new wharf and fuelling gantry were completed at the Navy Chowder Bay Oil Fuel Installation in February 1983. Buildings under construction in Sydney include a recompression chamber at HMAS *Penguin*, a bridge simulator at HMAS *Watson*, and laboratories for the Inspector of Naval Ordnance at Zetland. The major work of establishing the Naval Supply Centre at Zetland is expected to be completed in 1985-86.

During the year some 280 houses for Servicemen and their families were completed. The construction or acquisition of some further 430 houses was authorised, and it is expected that a further 750 houses (including 105 at Williamtown and 292 replacement houses at Woomera) will be authorised in 1983-84.

Major works at Defence Force educational and training institutions included: continuation of the development of the Australian Defence Force Academy in Canberra; construction of physical training facilities at HMAS *Cerberus*; a fire fighting facility at Jervis Bay, N.S.W., involving two mock-up ships; and a major redevelopment of the Army Armoured Centre at Puckapunyal, Vic.

## Defence manpower

### Employment

The following table indicates the range of activities and occupations in which defence military and civilian manpower are involved.

FUNCTIONAL DISTRIBUTION OF DEFENCE MANPOWER AS AT 30 JUNE 1983

Function	Service	Civilian	Total
Operational Forces and Logistic Support . . . . .	31,245	795	32,040
Specialist Support (e.g. communications, medical services) . . . . .	5,225	4,115	9,340
Stores and Supply: Storage and Control . . . . .	2,925	4,425	7,350
Equipment production, repair and overhaul . . . . .	3,495	1,210	4,705
Training . . . . .	17,105	1,465	18,570
Support to Reserves and Cadets . . . . .	1,615	150	1,765
Research and Development . . . . .	250	4,500	4,750
Department of Defence Headquarters and Administration including overseas representation . . . . .	4,090	3,050	7,140
Department of Defence Regional Commands and Administration . . . . .	6,690	3,905	10,595
Defence Co-operation . . . . .	140	5	145
<i>Sub-total</i> . . . . .	<i>72,780</i>	<i>23,620</i>	<i>96,400</i>
Department of Defence Support—			
Defence Shipyards . . . . .	..	5,360	5,360
Aerospace Production Facilities . . . . .	..	2,515	2,515
Munitions Production Facilities . . . . .	..	6,290	6,290
Administration and Other . . . . .	..	990	990
<i>Sub-total</i> . . . . .	<i>..</i>	<i>15,155</i>	<i>15,155</i>
<b>Total</b> . . . . .	<b>72,780</b>	<b>38,775</b>	<b>111,555</b>

NOTES: Figures cannot be reconciled with those in earlier Year Books owing to changes within classifications and transfer of civilian staff to the Department of Defence Support. Civilian figures include only full-time operatives and exclude locally engaged civilians employed in support of Air Force deployment overseas, persons on extended leave, and part-time staff.

## Permanent Defence Force

PERSONNEL STRENGTHS OF THE PERMANENT DEFENCE  
FORCE AS AT 30 JUNE

	<i>Navy</i>	<i>Army</i>	<i>Air Force</i>	<i>Total</i>
1978 . . . . .	16,298	31,883	21,689	69,870
1979 . . . . .	16,582	31,813	21,803	70,198
1980 . . . . .	16,961	32,321	22,249	71,531
1981 . . . . .	17,298	32,898	22,322	72,518
1982 . . . . .	17,598	32,876	22,711	73,185
1983 . . . . .	17,198	33,072	22,512	72,782
1984 (approved targets) . .	16,696	32,677	22,677	72,050

COMPOSITION OF PERMANENT DEFENCE FORCE (a) AS AT 30  
JUNE 1983

	<i>Navy</i>	<i>Army</i>	<i>Air Force</i>	<i>Total</i>
Male—				
Officers . . . . .	2,121	4,215	3,396	9,732
Other Ranks . . . . .	12,848	25,822	16,633	55,303
Cadets . . . . .	358	494	467	1,319
Apprentices . . . . .	650	643	506	1,799
Junior Recruits . . . . .	139	..	..	139
<i>Total</i> . . . . .	<i>16,116</i>	<i>31,174</i>	<i>21,002</i>	<i>68,292</i>
Females (b)—				
Officers . . . . .	110	320	191	621
Other Ranks . . . . .	937	1,547	1,285	3,769
Cadets . . . . .	35	31	34	100
<i>Total</i> . . . . .	<i>1,082</i>	<i>1,898</i>	<i>1,510</i>	<i>4,490</i>
<b>Total Strength</b> . . . . .	<b>17,198</b>	<b>33,072</b>	<b>22,512</b>	<b>72,782</b>

(a) Includes Reserve personnel on full-time duty. (b) Excludes female personnel on maternity leave.

## Reserve Forces

Reserves comprise trained and partly trained volunteers who are available to participate in the defence of Australia and its interests in times of war or defence emergency. Royal Australian Navy and Royal Australian Air Force Reserves can be used to supplement and increase the rate of effort of the Permanent Forces. The Army Reserve consists mainly of formed units and sub-units, which, with the Regular Army, provide the basis for expansion of the Army.

RESERVE COMPONENTS WITH TRAINING OBLIGATIONS (a) AS  
AT 30 JUNE

	<i>Navy</i>	<i>Army</i>	<i>Air Force</i>	<i>Total</i>
1978 . . . . .	917	23,164	490	24,571
1979 . . . . .	1,037	22,978	498	24,513
1980 . . . . .	1,039	23,986	502	25,527
1981 . . . . .	1,021	31,125	591	32,737
1982 . . . . .	1,094	31,706	873	33,673
1983 . . . . .	1,204	33,227	1,178	35,609

(a) Strengths exclude those members who are serving full-time in the Permanent Defence Force but include members who have not fulfilled their minimum training obligations.

## **Defence co-operation**

In support of Australia's defence and foreign policies the Government seeks to foster practical working relationships in the defence field with South-East Asian and South-West Pacific countries. Within the framework of the Five Power Defence Arrangements (Australia, Malaysia, New Zealand, Singapore, United Kingdom) Australia maintains a Defence Force presence in Malaysia with periodic deployments to Singapore (see following section on 'Defence Force Activities Overseas'), participates in the Integrated Air Defence System and in multilateral exercises with Five Power partners in the region.

Bilateral activities include exchanges of senior level visits, strategic consultations, combined military exercises and naval visits. We have granted use of certain Australian training facilities to Singapore to meet its own military training requirements. A principal bilateral activity is the Defence Co-operation Programs (DCP). These programs are geared to the needs and priorities of co-operating countries, and emphasise the transfer of skills and technology. Activities include training in Australia, joint projects, loan of Australian personnel, and combined military exercises.

In 1982-83 some 1,141 Service personnel from countries participating in the Defence Co-operation Program were trained in Australia by the three Services or with civil organisations.

Co-operation with Papua New Guinea (PNG) included the provision of Australian Loan Servicemen to PNG, combined exercises, training for PNG Servicemen in Australia, survey and engineering projects in PNG, and the provision of defence equipment. Expenditure in 1982-83 totalled \$17.3 million.

In Indonesia major Defence Co-operation projects include maritime patrol assistance (including further Nomad maintenance assistance and an additional Attack Class patrol boat), survey and mapping of Irian Jaya and the islands east and west of Sumatra, dockyard equipment for the Tanjung Uban Naval Base (Riau Islands), and turbine conversion of Sioux helicopters. Together with the provision of training and advisory assistance, total expenditure was \$10.2 million in 1982-83.

Assistance to Malaysia in 1982-83 amounted to \$4.9 million, mainly for training. Australian advisers in Malaysia provided assistance in the areas of cataloguing, defence research, and the development of an armour/artillery training centre.

Defence Co-operation with Singapore, composed of training and study visits in Australia and advisory assistance (mainly flying instruction) in Singapore, totalled \$1.6 million in 1982-83. A similar amount (\$1.5 million) was spent on the program with the Philippines in 1982-83 and included Australian advisory teams to assist in establishing a Nomad maintenance system and to support Australian DART target ranges, as well as training and study visits in Australia.

Assistance to Thailand amounted to \$3.8 million, mainly towards the provision of four Nomad aircraft, and the maintenance support of existing Nomad aircraft purchased by Thailand.

In 1982-83 expenditure on co-operation with South-West Pacific countries increased to \$3.4 million. Activities in the South-West Pacific are not confined to those states with defence forces. They include technical advisory assistance, survey and mapping, hydrography, channel clearance operations, engineering assistance in civil engineering projects, training and equipment assistance.

## **Defence representation overseas**

Australia has resident Defence representation in 16 countries: Britain, China, France, Federal Republic of Germany, India, Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Pakistan, Papua New Guinea, Philippines, Singapore, Thailand and the United States of America. In addition there is non-resident accreditation in Canada (from the United States of America), Iran (from Pakistan), Nepal (from India), Burma (from Thailand) and Switzerland (from France).

## **Defence force activities overseas**

The main areas where Australian Defence Force elements have been deployed during the year were Malaysia/Singapore, Papua New Guinea, the Middle East and the Indian Ocean. Units also visited the United Kingdom and Western Germany, Indonesia, the Philippines, Japan, the United States, Canada, New Zealand and the South-West Pacific.

Australian Defence Force elements in the Malaysia/Singapore area include:

*Navy*—A Destroyer or Destroyer Escort is maintained in South-East Asian waters for much of the year. In addition other ships of the RAN visited the area on goodwill visits.

*Army*—An Australian infantry company is maintained at Butterworth on the basis of three month detachments from Australia, in a training role.



*Air Force*—One squadron of Mirage fighter aircraft is maintained at Butterworth with periodic deployments to Singapore. Two P3 Orion maritime patrol aircraft are also maintained at Butterworth.

The Defence Force continued to contribute to United Nations peacekeeping operations with Australian Army observers in Kashmir, Egypt, Israel, Syria and Lebanon. In addition, since March 1982 Defence Force personnel have been deployed to Sinai for peacekeeping duties with the Multinational Force and Observers (MFO). An Australian Army Officer has been seconded to the UN HQ in New York for liaison duties.

Five Australian Army instructors have been in Uganda since March 1982, as part of a Commonwealth Military Training Team.

Since mid-January 1981 RAN ships have been deployed for patrol duties in the Indian Ocean and the Arabian Sea. These vessels have also paid goodwill visits to Indian Ocean littoral states.

Under the Defence Co-operation Program elements of the Defence Force have conducted survey and civil engineering operations in neighbouring countries. Major survey operations have been undertaken in Indonesia and Papua New Guinea, and other survey tasks in Malaysia, Fiji, Solomon Islands, Vanuatu, Tonga and Western Samoa. An Army engineer unit is permanently located in the Southern Highlands Province of Papua New Guinea and engineer units have been deployed to Fiji and Solomon Islands.

## THE DEFENCE FORCE

### Royal Australian Navy

The RAN maintains and exercises a modern, well-equipped and highly-trained maritime force. The structure of this force is based primarily on the provision at sea of a balanced force group, consisting of surface warships, naval aviation and submarines.

#### Higher organisation

The Chief of Naval Staff has command of the RAN, subject to the command of the Defence Force by the Chief of Defence Force Staff. Principal staff officers to the Chief of Naval Staff are the Deputy Chief of Naval Staff, the Chief of Naval Operational Requirements and Plans, the Chief of Naval Personnel, the Chief of Naval Technical Services, the Chief of Naval Materiel and the Director General of Supply Navy. Other senior officers of the RAN include the Flag Officer Naval Support Command and the Flag Officer Commanding HM Australian Fleet.

#### Ships of the Royal Australian Navy

The Fleet, September 1983: *Stalwart*—destroyer tender; *Supply*—oiler; *Tobruk*—amphibious heavy lift ship; *Adelaide*, *Canberra*, *Sydney*—guided missile frigates; *Perth*, *Hobart*, *Brisbane*—guided missile destroyers; *Yarra*, *Parramatta*, *Stuart*, *Swan*, *Torrens*, (*Derwent* decommissioned—undergoing modernisation at Williamstown)—destroyer escorts; *Vampire*—destroyer training ship; *Jervis Bay*—training ship; *Curlew*—coastal minehunter; *Ibis*—coastal minesweeper; *Moresby*, *Flinders*—surveying ships; *Cook*, *Kimbla*—oceanographic research ships; *Otway*, *Onslow*, *Ovens*, *Otama*, *Oxley*, *Orion*—submarines; *Attack*, *Assail*, *Barbette*, *Buccaneer*, *Fremantle*, *Launceston*, *Townsville*, *Warrnambool*, *Ipswich*, *Cessnock*, *Whyalla*, *Wollongong*, *Bendigo*, *Gawler*—patrol boats; *Brunei*, *Tarakan*, *Wewak*, *Betano*, *Balikpapan*—heavy landing craft. Patrol boats *Adroit*, *Award*, *Bayonet* and heavy landing craft *Labuan* are manned by RAN Reserve personnel.

#### Fleet Air Arm

In March 1983 the government announced that HMAS *Melbourne* would be scrapped and that a replacement carrier would not be acquired. The Minister for Defence, Mr Scholes, also announced that fixed wing aviation in the Fleet Air Arm (FAA) would be phased out by mid 1984 subject to the satisfactory resolution of some problem areas. Fixed wing aviation support for the Navy would in future be provided by the RAAF. The FAA currently operates four squadrons at the RAN Air Station, Nowra, N.S.W.

### Equipment for the Royal Australian Navy

The significant new equipment items received by the Navy in 1982-83 include:

- 4 Fremantle Class Patrol Craft (HMAS *Ipswich*, *Cessnock*, *Bendigo*, and *Gawler*)
- the third Guided Missile Frigate (HMAS *Sydney*)
- 2 Westland Sea King MK 504 helicopters
- 5,644 Barra Sonobuoys
- 4 Self propelled Water/Fuel Lighters
- Recompression Chamber at HMAS *Stirling*
- One River Class Destroyer Escort (HMAS *Stuart*) from Modernisation
- One Oberon Class Submarine (HMAS *Ovens*) from Modernisation.

The Defence Department has invited world wide responses for involvement in a Project Definition Study related to the future acquisition of submarines for the RAN.

Deliveries expected during 1983-84 include:

- Recompression Chamber at HMAS *Penguin*
- Fourth Guided Missile Frigate (HMAS *Darwin*)
- 3 Fremantle Class Patrol Craft (HMAS *Geraldton*, *Dubbo*, *Geelong*)

### Training and Entry

*RAN Staff College.* The RAN Staff College located at HMAS *Penguin*, Balmoral, N.S.W., prepares RAN officers of Lieutenant Commander and Lieutenant rank for command and staff appointments. Two courses of 22 weeks duration are run annually, each course comprising 28 students, typically 20 Naval Officers, one officer each from the Army, RAAF, USN and RNZN, two Public Service Board officers and two Defence Co-operation Program students.

*HS817* operates Sea King MK 50 helicopters in the anti-submarine role; studies are currently underway to examine ways of getting the Sea Kings to sea now that there is no aircraft carrier. *HC723* operates Iroquois UH1B and Wessex 31B helicopters in utility tasks and search and rescue, and also provides the Bell 206B for small ships flights, notably for the survey ship HMAS *Moresby* and to provide helicopter training for FFG destroyers. *VC 724* operates 4 of the remaining 10 Skyhawk A4Gs in a limited Fleet support and target towing role. These aircraft will be withdrawn from RAN service in 1984, provided that a suitable target towing alternative is forthcoming. *VC851* operates Tracker S2E/G aircraft in anti-submarine and surveillance tasks and 2 HS748 aircraft fitted for electronic warfare training. Tracker operations beyond mid 1984 are dependent on the outcome of a study into coastal surveillance being conducted by the Minister for Aviation, Mr Beazley. RAN HS748 aircraft may be transferred to the RAAF in late 1984. The RAN also operates Jindivik pilotless target aircraft from the Jervis Bay Range Facility in NSW. Helicopter capable ships in the RAN are the FFGs, *Stalwart*, *Tobruk* and *Moresby*. The RAN is due to take delivery of the first of 6 Squirrel AS350B light helicopters in May 1984 for use in survey work, light utility tasks and as an interim helicopter for the FFGs.

### Ship Construction and Repairs

There are two naval dockyards, one at Garden Island, Sydney and one at Williamstown, near Melbourne. A third yard at Cockatoo Island in Sydney Harbour is operated by Vickers Cockatoo Dockyard Pty Ltd (VCD) under agreement with the Australian Government. This company carries out considerable naval refitting work, particularly of submarines. In August 1979 the company was awarded a contract to construct a new replenishment ship for the RAN the keel of which was laid in August 1980.

Other current construction projects include 5 Patrol Boats being built in Cairns, NQEA, one Guided Missile Frigate in the USA and modernisation of one Destroyer Escort being undertaken by Williamstown Naval Dockyard. A contract for the building of two prototype Minehunter Catamarans and ship building facility was awarded to Carrington Slipways Pty Ltd, Newcastle in January 1983.

Evaluation is continuing on the construction of the two FFG type frigates in Australia.

Work will continue on the construction of:

- HMAS *Success* (AOR-01) at VCD
- 2 Fremantle Class Patrol Boats at NQEA.

*Officer Entry.* The Royal Australian Naval College at Jervis Bay is the training centre for officers in the RAN. Applicants for permanent commissions (presently male only) must be under 20 years of age on 1 January of the year of entry and must matriculate to a university in an Australian capital city. Officer appointees specialise in Seamen, Engineering, Supply and Secretariat, or Instructor Branch. Appointees either complete a full-time degree course in Engineering, Science, Surveying or Arts at the

University of New South Wales, or complete a Diploma of Applied Science at the Royal Australian Naval College. Applicants for degree studies must meet the entry requirements of the appropriate faculty of the University of New South Wales. Male and female applicants for short service commissions must be under 24 years of age on 1 January of the year of entry and have either matriculated to a degree course at an Australian university, College of Advanced Education, or Institute of Technical and Further Education, or achieve four passes at Year 12. Entry is also available to professionally qualified persons such as doctors, teachers, engineers and lawyers.

**Sailor Entry.** There are several entry schemes available, depending upon an individual's age, educational standard and interests. New entry training is carried out at the following establishments:

- HMAS *Nirimba* at Quaker's Hill, New South Wales, is the primary establishment for all RAN trade training which includes courses for apprentices aged between fifteen and eighteen, general entry personnel and direct entry tradesmen.
- HMAS *Leeuwin* at Fremantle, Western Australia, is the junior recruit training establishment for male entrants aged between fifteen-and-three quarters and sixteen-and-a-half.
- HMAS *Cerberus* at Westernport, Victoria is the training establishment for general entry members aged between seventeen and twenty-six. Recruits receive twelve weeks initial basic training before progressing to branch training courses.

Advanced branch training is also undertaken at the various schools at HMAS *Penguin*, and HMAS *Watson* in Sydney, and the Naval Air Station at Nowra, New South Wales. A number of specialist courses are conducted in the United Kingdom and United States.

## Australian Army

The Australian Army maintains a potential ability and readiness to conduct operations on land for the defence of Australia and, in co-operation with the other arms of the Australian Defence Force, shares a responsibility to deter aggression, to ensure the nation's security and to preserve its national interests.

### Higher Organisation

Command of the Army is the responsibility of the Chief of the General Staff, subject to the overall command of the Defence Force by the Chief of Defence Force Staff. He has for his principal staff officers the Deputy Chief of the General Staff, the Chief of Operations, the Chief of Personnel, the Chief of Logistics, the Chief of Materiel and the Chief of the Army Reserve.

The Army is organised into three commands as follows:

- *Field Force Command* which commands all field force units of the Australian Army, both Regular and Army Reserve.
- *Logistic Command* which commands the principal logistic elements of the Army.
- *Training Command* which is responsible for all individual training and commands all Army training establishments and schools with the exception of the Royal Military College, Duntroon (which is under the command of the Chief of the General Staff).

Military Districts as listed below provide administrative support for the three commands, and, in certain cases act as intermediate headquarters for them:

- *1st Military District*—the State of Queensland.
- *2nd Military District*—the State of New South Wales, less those parts included in 3rd and 4th Military Districts.
- *3rd Military District*—the State of Victoria and part of southern New South Wales.
- *4th Military District*—the State of South Australia plus a portion of south-western New South Wales.
- *5th Military District*—the State of Western Australia.
- *6th Military District*—the State of Tasmania.
- *7th Military District*—the Northern Territory.

The military district headquarters also handle those matters in which both Commonwealth and State Governments are involved.

### Training

**Officer Training.** The Army currently utilises a number of training sources to meet the requirements for commissioned officers. These are:

- *Royal Military College.* Located at Duntroon in the Australian Capital Territory, this college provides military and tertiary training for officers for the Regular Army.
- *Officer Cadet School.* Located at Portsea in Victoria, the school is a source of commissioned officers for the Regular Army. Graduates do not undertake tertiary studies during the course.

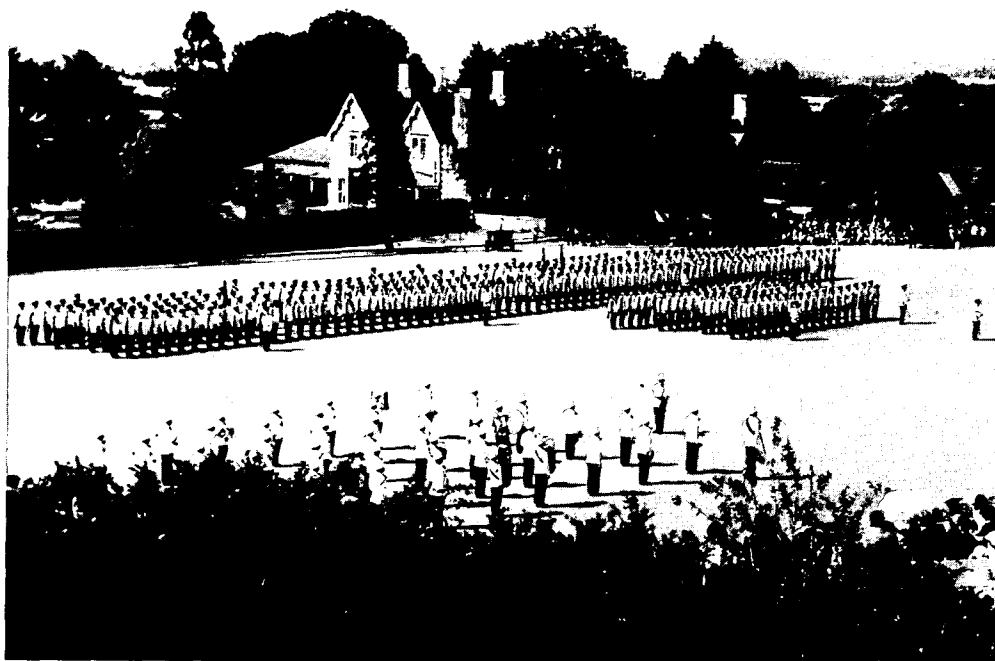


PLATE 27

Graduation parade, Royal Military College, Duntroon

- *Women's Royal Australian Army Corps School.* Located at Mosman in New South Wales this school is a source of commissioned officers for the Regular Army. Graduates do not undertake tertiary studies during the course.

*Note:* With the commencement of the Australian Defence Force Academy courses in 1986 all of the above courses will be amalgamated and conducted at the Royal Military College with the exception of tertiary studies and some military training.

- *Officer Cadet Training Units.* These units are located in each Military District and are the major source of commissioned officers for the Army Reserve.
- *University Regiments.* University Regiments provide officer training for members of the Army Reserve. These courses are designed to meet the requirements of undergraduate enlistees.

*Command and Staff College.* Located at Queenscliff in Victoria, the college provides advanced training for selected Australian and overseas officers, to prepare them for command and staff appointments in the rank of lieutenant colonel.

*Other Rank Training.* Initial training for other ranks is conducted as follows:

- *1st Recruit Training Battalion.* Located at Kapooka NSW this unit is the major training establishment for male recruits enlisted into the Regular Army.
- *Women's Royal Australian Army Corps School.* This unit, in addition to training female officer cadets, trains female recruits enlisted into the Regular Army.
- *Army Apprentices School.* Recently moved from Balcombe to Bonegilla in Victoria, this school provides initial trade and military training for apprentice enlistees.
- *Army Reserve.* Army Reserve recruits attend initial training at courses conducted by either Training Groups located in most Military Districts or units.

*Land Warfare Centre.* The Land Warfare Centre at Canungra, Qld, conducts courses for both officers and other ranks as follows:

- promotion subjects;
- tactics and administration;
- individual battle skills; and
- sub-unit operations.

*Other Schools.* Army schools have been established to train officers and other ranks in up to date techniques of their own arm or service. Courses conducted include training, promotion courses and instructor development. Courses are conducted for members of both the Regular Army and the Army Reserve.

### **Equipment for the Army**

Significant new equipment items received by Army in 1982-83 included 264 eight tonne and 140 four tonne cargo trucks, six 105 mm light field guns (and 5,000 rounds of ammunition), 69 sustained fire machine guns, 215 light field vehicles, eight heavy cranes, 26 medium vibrating rollers, 13 fire fighting trucks and 46 compressors. Deliveries expected during 1983-84 include 209 eight tonne and 378 four tonne cargo trucks, 150 sustained fire machine guns and four fire fighting trucks.

## **Royal Australian Air Force**

The function of the Royal Australian Air Force is the conduct of operations in the air for the defence of Australia and Australian interests.

### **Higher Organisation**

The Chief of the Air Staff (CAS) has command of the Royal Australian Air Force subject to the overall command of the Defence Force by the Chief of Defence Force Staff. The CAS is assisted in his decisions by an advisory committee which includes the Deputy Chief of the Air Staff, Chief of Air Force Personnel, Chief of Air Force Technical Services, Chief of Air Force Development, Chief of Air Force Materiel, Air Officers Commanding Operational and Support Commands, Director General Supply—Air Force, Assistant Secretary Resources Planning, and other officers or specialists as may be directed by the CAS. The Committee has no statutory authority nor executive function and the CAS is not obliged to accept its recommendations.

The Chief of Air Staff administers and controls RAAF units in Australia through the two commands. Operational Command is responsible to the CAS for the command of operational units and the conduct of their operations within Australia and overseas. Operational units based at Butterworth, Malaysia, contribute to the development of the Malaysian and Singapore defence capability and provide forces for the Integrated Air Defence System. Support Command is responsible to the CAS for training of personnel, and the supply and maintenance of Service equipment.

### **Structural Organisation**

The RAAF has five operational elements, the units of which actively and directly participate in air operations. These elements are the strike/reconnaissance force, tactical fighter force, air transport force, tactical air support force and the maritime force. The strike/reconnaissance force provides a capability for offensive air operations against land and naval targets, and a long range reconnaissance capability. The tactical fighter force is responsible for air superiority, air defence and air interdiction operations, and also provides close air support to sea and land forces. The air transport force is used for routine strategic and domestic transport, and in addition has a tactical transport role. Tactical transport and close air support aircraft normally operate within a tactical air support force which is usually controlled by a joint (Air Force/Army) headquarters. Maritime forces are primarily employed in ocean surveillance, anti-submarine warfare and search and rescue. Major maritime operations are controlled by a joint (Air Force/Navy) headquarters.

The support component consists of those units and personnel which support units of the operational component. The elements are maintenance, supply, air training, ground training, administrative and the RAAF Reserve.

### **Aircraft**

The RAAF's strike/reconnaissance force is equipped with F-111 and RF-111C aircraft. The air defence and ground attack squadrons are equipped with the Mirage 1110/D. Transport aircraft currently in use are Hercules C130H and C130E, Caribou, Mystere 20, HS-748, Boeing 707, and BAC-111. Three squadrons operate Iroquois and one operates the Chinook medium lift helicopters. Maritime squadrons operate Orion P-3B and P-3C aircraft. Aircraft used for aircrew initial training are the CT-4 Airtrainer, Macchi and HS-748T2.

### Training

**RAAF Academy.** The RAAF Academy at Point Cook, Victoria is an affiliated college of the University of Melbourne. Cadets are selected principally for the General Duties Branch, and, after three years tertiary training, graduate with a Bachelor of Science degree. Graduates then complete a basic aircrew training course. Cadets selected for the Engineer Branch study the first year at the Academy and then attend the University of Sydney to graduate with a Bachelor of Aeronautical Engineering degree.

**Engineer Cadet Squadron.** The Engineer Cadet Scheme provides training for degree status in aeronautical, mechanical, electronic and communication engineering at the Royal Melbourne Institute of Technology. Electronic and communication engineering can also be taken at the Western Australian Institute of Technology.

**Equipment Cadets.** Cadets selected for Equipment Branch duties undertake a three year course at the Darling Downs Institute of Advanced Education in Queensland. They graduate with a Bachelor of Business degree.

**Basic Aircrew Training.** Flying training for RAAF pilots is conducted at Point Cook, Victoria and Pearce, W.A. RAAF navigators are trained at East Sale, Victoria and airman aircrew (flight engineers, loadmasters and air electronics analysts) undergo basic training at Edinburgh, S.A. Officer and military training forms part of the training course for pilots and navigators. NCO and military training forms part of the training for airman aircrew. The RAAF also provides pilot and observer training for the RAN and pilot training for the Army and Papua New Guinea Defence Force.

**Aircrew Operational Conversion.** Conversion training to Mirage fighter aircraft and Orion Maritime aircraft is conducted by the respective conversion training squadrons. Conversions to other operational aircraft are conducted within the operational squadrons.

**Officer Training.** With the exception of those officers commissioned from the RAAF Academy, all officers entering directly (with or without tertiary qualifications), commissioned airmen and airwomen, aircrew (pilot and navigator), engineering and equipment cadets and undergraduate students undergo the Junior Officer Initial Course (JOIC) at the Officers' Training School, Point Cook, Victoria. Following graduation from the JOIC all graduates, with the exception of aircrew (pilot and navigator), immediately undergo the Joint Officer Executive Course at Officers' Training School, Point Cook.

**Staff College.** The RAAF Staff College located at Fairbairn, A.C.T., provides two residential staff courses. The Basic Staff Course of six weeks duration provides Command and staff training to officers of the rank of Flight Lieutenant. The Advanced Staff College Course of forty-three weeks duration provides staff training and higher service education to selected officers normally of the rank of Squadron Leader. This course is designed to broaden the students' professional background and to prepare them for Command and staff appointments of greater responsibility. A one year correspondence course covering military studies, international affairs and management is a compulsory prerequisite for entry to the advanced course.

**Ground Training.** The major ground training schools are the School of Radio at Laverton, Victoria and the School of Technical Training at Wagga, New South Wales. Both schools provide trade and technologist apprentice and adult trade training for technical personnel. They also provide post-graduate type training and specialist familiarisation courses on aircraft and telecommunications systems. Non-technical courses conducted at Wagga include catering, clerical, supervision and management and instructional technique.

### Equipment for the Royal Australian Air Force

Forecasts regarding major capital equipment acquisitions are as follows:

- Deliveries of ten additional P3C aircraft to replace existing P3B aircraft will commence in November 1984
- The first two F/A-18 aircraft for the RAAF are scheduled for delivery in the US in October 1984. The first Australian assembled aircraft is scheduled for delivery in April 1985.
- New major capital equipment decisions approved by the Government during 1982-83 included, two F/A-18 Operational Flight Trainers and two additional B707 aircraft.

Deliveries expected during 1983-84 include:

- C130H Simulator;
- P3C Operational Flight Trainer; and
- 18 Aerospatiale AS350B Light Helicopters.

## Defence Science and Technology Organisation

The Department's defence science and technology establishments, collectively known as the Defence Science and Technology Organisation (DSTO), form the second largest research organisation in Australia with some 1,000 professional scientists and engineers in its total staff of about 4,400.

DSTO was established as a unified organisation in 1975 when the laboratories formerly in the Department of Supply were brought into the Department of Defence and under the direct control of the Chief Defence Scientist.

The Defence Review Committee presented its interim report to Government in May 1982 and its final report in November 1982. On 7 May 1982 several organisational units were transferred from the Department of Defence to the newly created Department of Defence Support (DDS), following a recommendation of the interim report. Under these re-arrangements, the administration of most of the DSTO establishments was transferred to DDS; the Chief Defence Scientist (CDS), his central staff and the Central Studies Establishment remained in the Department of Defence.

Following the change of Government on 5 March 1983, new Administrative Arrangement Orders were issued on 11 March 1983 which returned the DSTO Laboratories to the Department of Defence.

DSTO has a central office and one establishment in Canberra, representatives in London and Washington, and nine laboratories in five States. The Chief Defence Scientist, is supported in the Central Office by a Deputy, and policy and management staff. Scientific advisers are attached to Service headquarters in Canberra and some field headquarters.

The objective of DSTO is to help the Australian Defence Force take best advantage of modern technology. Major activities are: scientific input to Defence policy formulation; solution of Defence Force problems particularly where high technology or special features of Australian physical or military environment are involved; modification and extension of life of military equipment; development of indigenous equipment; evaluation of military equipment and procedures by trials, exercise analysis or operational research; support to defence industry; and international co-operation in defence research and Development (R & D). The DSTO also conducts mission-oriented research and enhances or maintains a technology base in key areas such as surveillance, aeronautics, weapons guidance and other electronic systems and countermeasures, explosives and propulsion.

There is considerable interaction between DSTO and its principal customers, the Defence Force and defence industry. Many companies benefit from close association with this R & D effort, some having facilities adjoining or co-located with the Defence Research Centre, Salisbury (DRCS).

Despite the laboratories' strong alignment with defence, their unique skills and facilities are available for non-defence tasks when priorities permit. Functions of the laboratories are briefly described below.

*Aeronautical Research Laboratories, Fishermans Bend, Victoria*—Provides research support primarily to the defence force and defence industry in fields including aerodynamics, aircraft materials, structural integrity and efficiency of aircraft, analysis and integration of systems, and on air-breathing propulsion systems and engine airframe integration and performance. It also assists civil aviation in some of these fields.

*Advanced Engineering Laboratory, DRCS, S.A.*—Engages in engineering feasibility studies and the development, design and manufacture of prototype systems and equipment in the mechanical and electronic engineering fields. It also provides engineering support to the Services and assistance to defence-related industry and maintains an advanced engineering technology base.

*Armed Forces Food Science Establishment, Scottsdale, Tasmania*—Determines the energy and nutrient requirements of servicemen under all conditions in which they may be expected to operate and translates these needs into ration scales for static mess feeding and ration packs for combat purposes.

*Central Studies Establishment, Canberra, A.C.T.*—Carries out analytical studies on force structure, defence planning, equipment proposals, weapons systems, logistics and manpower.

*Electronics Research Laboratory, DRCS, S.A.*—Is concerned primarily with R & D in radar, radio, electronics, infra-red physics, optics, electro-optics, electronic warfare and surveillance.

*Joint Tropical Trials and Research Establishment, Innisfail, Qld*—Performs investigations and research on the effects of tropical environments on materials, equipment and electromagnetic wave propagation; and on mechanisms of degradation, ways of measuring degradation and the classification of tropical environments. Sponsored jointly by Australia and UK.

*Materials Research Laboratories, Maribyrnong, Vic.*—Provides research and development support to the Defence Force and defence industry in fields including organic and inorganic materials, metallurgy, explosives and ordnance, electromagnetic propulsion and terminal ballistics, high energy lasers and camouflage.

*Materials Testing Laboratory, Alexandria, N.S.W.*—Provides a consultant and investigatory service in areas of non-destructive inspection, physical metallurgy, corrosion and mechanical testing. There are facilities for the examination and analysis of textiles, petroleum products, paints, non-organic finishes and explosives.

*RAN Research Laboratory, Edgecliff, N.S.W.*—Conducts operations research studies of maritime warfare, analyses maritime exercises, and undertakes research on underwater acoustics, oceanography, sonar and mine warfare.

*Weapons Systems Research Laboratory, DRCS, S.A.*—Responsible for R & D related to aeroballistic aspects of weapons and weapon systems, rocket and gun propulsion systems, combat data and display systems, guidance and control systems for weapons, underwater detection systems and the integration of systems.

*Defence Research Centre, Salisbury, S.A.*—Comprises the Advanced Engineering, Electronics Research and Weapons Systems Research Laboratories and provides for their administrative support. DRCS Administration provides general support services for the Defence Support Centre, Woomera.

*Defence Support Centre, Woomera, S.A.*—Provides an outdoor laboratory essential for weapon systems trials in support of R & D programs.

The DSTO Central Office in Canberra has two Divisions:

*Programs and Administration Division* controls the management and administration of DSTO forward planning and advises on the optimum deployment of DSTO resources, co-ordinates co-operation with overseas governments and is responsible for information services (Defence libraries) as well as career planning and assessments. It also manages special joint undertakings with other countries.

*Projects and Analytical Studies Division* provides management and advice on major development projects and co-ordinates relevant establishment activities, co-ordinates analytical studies throughout DSTO, fosters DSTO contacts with other national science and technology agencies and bodies, with professionals in industry, academic institutions, other R & D agencies and with the wider community.

## **Natural Disasters Organisation**

In 1972 the former Directorate of Civil Defence was moved from the Department of Interior to the Department of Defence and was absorbed into the Natural Disasters Organisation (NDO) which was established in 1974.

NDO's primary peacetime function is to mitigate the effects of disasters. It does this, at the request of State and Territory counter disaster organisations, by co-ordination of physical assistance from the Defence Force and other Commonwealth Government Departments. Non-Government organisations also co-operate with NDO. States and Territories have complete responsibility for their own Counter Disaster Organisations. The NDO and State and Territory Emergency Services together constitute a core civil defence structure.

At the national level NDO develops and implements contingency plans to cope with requests by State/Territory counter disaster authorities for Commonwealth resources during disasters or for civil defence needs. A National Emergency Operations Centre located at NDO Headquarters in Canberra provides a focal point for the co-ordination of national efforts when required and maintains communication with State and Territory authorities and Commonwealth Departments during disasters or potential disasters such as impact on Australian territory of space debris.

A number of Commonwealth funded support programs for State/Territory Emergency Services are administered by NDO. These include—the supply of emergency type equipment such as radios, rescue vehicles, generators, flood rescue boats, etc.—reimbursement of salaries of State/Territory full time organisers at regional level—subsidies on a limited \$ for \$ basis to provide accommodation for State/Territory Emergency Service Units at local government level—the provision of public information material and training handbooks.

Other programs which benefit all organisations having a counter disaster involvement and the community generally are—training at the Australian Counter Disaster College, Mt Macedon Victoria, or by College mobile teams in States/Territories—fallout shelter surveying—maintenance of emergency broadcasting facilities.



## DEPARTMENT OF DEFENCE SUPPORT

The Department of Defence Support was formally established (by the Governor-General in Council) on 7 May 1982, and draws together elements previously located in the Departments of Administrative Services, Defence, and Industry and Commerce as recommended by the Interim Report of the Defence Review Committee (the Utz Committee).

The Department of Defence Support has, within the overall defence, industry and employment policies, the goal of provision of optimum support for the nation's defence effort in peace and war and the development of an appropriate technological and industrial infrastructure. The Department is responsive to the requirements of the Australian Defence Force and the need to revitalise and further develop the infrastructure which supports that Force.

The Department in close co-operation with the Department of Defence:

- provides technical expertise and other forms of assistance to encourage and facilitate the development of modern and viable defence-related industries in Australia;
- ensures that Australian industry participates in the production of defence equipment to the maximum extent practicable;
- administers the Australian Offsets Program so as to stimulate technological advancement and broaden the capabilities of Australian industries of significance to this country's strategic and overall manufacturing needs;
- undertakes the purchase of goods and services for defence purposes;
- provides advice on the capacity, efficiency and capability of the Australian defence industry;
- manages the Government's defence facilities including munitions and aircraft factories, and dockyards; and
- consistent with the Government's defence and foreign affairs policies, markets defence and allied products and services to help maintain industrial capabilities of strategic significance.

The Department, at 30 June 1983, employed 15,444 people under the Public Service Act, the Supply and Development Act and the Naval Defence Act. This workforce includes some 2,100 professional and technical staff, 4,200 tradesman and 1,500 apprentices.

### Budget allocations

Estimated total expenditure for the Department in the 1983-84 Budget was \$377.2 million, an increase of \$47.4m (14.4%) on the 1982-83 figure of \$329.8m.

The Department is heavily committed to work associated with important defence projects ranging from the Basic Trainer Aircraft and the F/A-18 fighter programs to the Waler armoured vehicle, the Raven combat radio, the Discon telecommunications system, the Barra submarine detector and the follow-on destroyer projects.

Some of these projects already involve considerable work by Australian industry and contribute further to the nation's expanding technological capability.

#### DEPARTMENT OF DEFENCE SUPPORT 1983-84 OUTLAYS BY FUNCTION

	\$m	\$m
<b>Defence aerospace</b>		<b>110</b>
F/A-18 Fighter Aircraft program	52	
Basic Trainer Aircraft	5	
Nomad Aircraft	14	
RAAF/RAN Aircraft Overhauls and Spare Manufacture	23	
Lightweight Box-launched IKARA	1	
Other	15	
<b>Defence shipbuilding</b>		<b>128</b>
Cockatoo Island Dock improvement	3	
Garden Island Dockyard modernisation	26	
Repair and refit of naval ships	50	
Naval ship construction	31	
Maintenance of Navy shore installations	5	
Manufacture and repair of Navy stores	13	

## DEPARTMENT OF DEFENCE SUPPORT 1983-84 OUTLAYS BY FUNCTION

	\$m	\$m
<b>Munitions</b>		<b>103</b>
High explosives, propellant and rocket motor manufacture	19	
Ordnance and specialised engineering	28	
Manufacture and repair of small arms, ammunition and fusing devices	37	
Filling and assembly of military explosives and pyrotechnic stores	16	
Reserve stocks	3	
<b>Administration</b>		<b>36</b>
Defence purchasing	8	
Marketing	1	
Industry assistance and offsets	5	
Central and regional administration and miscellaneous	22	
<b>Total Defence Support 1983-84 outlay</b>		<b>377</b>

Of the additional \$47.4m in the Budget outlays some \$26m of the increase were set aside for machinery, plant and works for the manufacture, final assembly and test of the F/A-18 aircraft, while \$16.3m of the increase will go towards upgrading the Garden Island Dockyard.

Transfers of responsibilities from other Departments, such as the defence purchasing function from the Department of Administrative Services, account for \$13.9m, although these have been partly offset by savings in other areas (-\$8.8m). The Department is also responsible for the administration of the Australian Industry Assistance Program which is funded through the Department of Defence (\$29m).

### Munitions Production

The Department of Defence Support maintains and operates nine factories for the manufacture of munitions and other defence material, including military clothing. The munitions factories undertake work in the fields of light, heavy and chemical engineering.

As well as achieving progress in the development and production of munitions for Australia the factories have helped to broaden the country's industrial base. They develop and adopt new manufacturing technology and a diverse range of production equipment is used to develop new production processes and apply new techniques.

Through the Department, the munitions factories have links with munitions manufacturers in the UK, Europe, and North America. The Department also maintains contact with ASEAN countries on defence production matters and provides some training for their engineers. Functions of the facilities are briefly described below.

*Small Arms Factory, Lithgow, N.S.W.*—manufactures small arms, weapons and kindred defence equipment.

*Mulwala Explosives Factory, N.S.W.*—manufactures acids, nitrocellulose and granular propellants.

*Munitions Filling Factory, St Marys, N.S.W.*—assembles and fills artillery ammunition, bombs, depth charges, warheads, rockets, mines and pyrotechnic items.

*Albion Explosives Factory, Vic.*—manufactures high explosives and some gun propellants, and recovery of concentrated acids.

*Australian Government Clothing Factory, Coburg, Vic.*—manufactures uniforms and other clothing for the defence services and other government departments.

*Explosives Factory, Maribyrnong, Vic.*—produces rocket motors, gun propellants, explosive devices, special paint products and undertakes chemical process design and installation.

*Ordnance Factory, Maribyrnong, Vic.*—manufactures ordnance, projectiles, heavy forgings, bomb and rocket motor components, electrical generators, fabrications and test equipment.

*Ordnance Factory, Bendigo, Vic.*—manufactures ordnance and gun mounting systems, heavy engineering products for both defence and the private sector, ships shafting and propulsion systems.

*Ammunition Factory, Footscray, Vic.*—specialises in the production of small arms ammunition, cartridge cases, small calibre projectiles and fusing mechanisms for gun ammunition.

## Defence Aerospace

In aerospace matters the Department's objectives, within Government policies, are to:

- develop and maintain an industrial capability in the fields of aircraft, guided weapons and electronics-communications;
- co-ordinate and direct the operation of Government aerospace facilities and programs; and
- implement related policies.

In the case of the aircraft, guided weapons and electronics-communications industries, the Department has responsibilities of a wide nature, involving provision of advice and oversight of the development of capacity and capability in the private sector as well as the government establishments involved. Major aerospace activities include:

- analysis of defence requirements for manufactured aerospace goods and associated services and the assessment of the capability of the Australian aerospace industry to meet these requirements;
- development of the industrial capability and capacity to meet current and future government requirements for manufactured aerospace goods; and
- development and introduction of improved production practices and techniques in government-owned aerospace establishments and their promotion in the Australian manufacturing industry.

Government aerospace facilities are:

*Government Aircraft Factories (GAF), Fishermen's Bend and Avalon, Victoria*—GAF is involved in the design, development, manufacture, assembly, modification and test of military and civil aircraft and guided weapons. Current activities include Nomad aircraft, Ikara anti-submarine weapon system, Jindivik target aircraft, Mirage support and manufacture of airframe components for export against offset orders. New activities include F/A-18 Fighter Aircraft and Basic Pilot Training Aircraft.

*Aircraft Engineering Workshop (AEW), Pooraka, South Australia*—AEW provides a quick response engineering jobbing workshop capacity for the Services and has capability in the areas of fine machining, electroplating, heat-treatment, welding and sheet-metal fabrication to aircraft manufacturing specifications.

*Guided Weapons and Electronics Support Facility (GWESF), St Marys, N.S.W.*—GWESF provides technical support to the Services in testing and calibration of a wide range of electronic items and also provides independent facilities and technical expertise to assist Defence industry.

## Defence Shipbuilding

The Department of Defence Support manages the Dockyards at Garden Island and Williamstown, and is responsible for the Cockatoo Island Dockyard which is operated on behalf of the Commonwealth by Vickers Australia Pty Ltd.

These dockyards undertake: refitting; repair; modernisation; and construction of naval vessels.

Garden Island is principally concerned with refitting, repair and modification and is undergoing major modernisation to improve its ability in these areas and to create a fleetbase which is able to cope with the demands of modern naval vessels and systems.

Williamstown Dockyard, planned as the principal construction yard for destroyer size ships, is also being modernised for the building of FFG type frigates for the Royal Australian Navy.

All updates and modifications of submarines are carried out at Cockatoo Island Dockyard and the new underway replenishment ship, HMAS *Success* is under construction.

## Defence Purchasing

The Department of Defence Support is the Purchasing Authority for all defence supplies of goods and services (except those common use items falling within the responsibility of the Department of Administrative Services), purchased in or from Australia from commercial suppliers above the prescribed public tender threshold (currently \$10,000).

The Department undertakes defence purchasing through:

- Major Contracts Branch (located in Central Office) for major defence equipment procurements (usually those over \$5 million, but also other requirements of smaller value but with great complexity of other special features), and
- Defence Purchasing Regional Offices located in each capital city for all other defence purchasing.

Activities undertaken include many significant contractual arrangements conducted recently for the Department of Defence, among them: the production of Barra sonobuoys, Raven Phase 3A (radio system); Waler Phase 1 (light armoured vehicle); prototype Minehunter catamarans; Basic Pilot Trainer Aircraft; and provision of production infrastructure items and overseas training of industry personnel in support of the F/A-18 Tactical Fighter Project.

### **Australian Offsets Program**

The Department has overall responsibility for the administration and future development of the Australian Offsets Program.

Where Australian industry is not able to meet the Government's requirements and overseas purchases are necessary, overseas suppliers are required to provide local industry with viable offsets opportunities.

The objectives of the Program are to secure workload which will broaden the capabilities of industry which is of technological or defence significance to Australia, to stimulate technological advancement and to provide new employment opportunities within Australian industry.

To date the Program has been instrumental in obtaining over \$600 million worth of high technology workload for industry. Opportunities currently exist for more than \$1,000 worth of offsets work.