

## CHAPTER 4

### DEFENCE

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

Further information on Australia's strategic environment and defence policies and programming is contained in the Government's White Paper on Australian Defence tabled in Parliament on 4 November 1976 and in a supplementary statement made to the House of Representatives by the Minister for Defence on 22 September 1977. Further factual information on the programs and activities of the Department and the Defence Force is contained in past Defence Reports and other publications issued by the Department of Defence.

#### Current defence policy

The primary aim of Australian defence policy is to ensure the security of Australia and its Territories. While Australia's strategic prospects are judged on balance to be favourable, there are uncertainties which must be insured against. Defence policy is to maintain the ability to deploy a balanced force to cope with a range of lesser situations, or to expand in time should the need arise to meet a serious emergency.

The Australian alliance with the United States under ANZUS gives substantial grounds for confidence that, in the event of a fundamental threat to Australia's security, US military support would be given. However, even though her security may be ultimately dependent upon US support, Australia owes it to herself to be able to mount a national defence effort that would maximise the risks and costs to any aggressor.

Short of this major and improbable situation, Australia could face a range of other situations that she should expect to handle more independently. The requirements and the scope for Australian Defence activity are today confined basically to areas close to home—areas in which military deployments by a power potentially unfriendly to Australia could permit that power to attack or harass Australia itself or Australian territories, or the maritime resources zone and the nearer lines of communication.

The promotion of increased self-reliance derives essentially from our own national interests and responsibilities. It also accords with Australia's status as an ally of the United States: by accepting local responsibilities, Australia can contribute to the alliance relationship and to the US global effort.

Australia remains deeply mindful of her natural associations with the liberal democracies and with the Western strategic community. Additionally, Australia maintains her concern for the security and development of South-East Asia, and continues to place a high value on her defence links in the region. Australia continues to honour the terms of the Five Power arrangements which embrace Malaysia, New Zealand, Singapore and the United Kingdom as well as Australia.

#### Higher Defence organization

Legislation to give effect to the re-organization of the higher management of the Defence Force and the Department of Defence was passed by the Commonwealth Parliament in September 1975. The legislation, which came into effect on 9 February 1976, specifically recognises that responsibility for the general control and administration of the Defence Force rests with the Minister for Defence.

The Chief of Defence Force Staff exercises command of the Defence Force through the three Service Chiefs of Staff (Navy, Army and Air) who are the professional heads and have responsibility for the management of their respective arms of the Defence Force. The Chief of Defence Force Staff is the principal military adviser to the Minister.

The Secretary, Department of Defence has the powers and functions generally prescribed for such appointments in the Australian Public Service Act, but these are qualified by the statutory authority of the Chief of Defence Force Staff and by Ministerial directives to the Secretary, enjoining responsiveness of the Public Service structure to the operational priorities of the Chiefs of Staff. The Secretary is responsible to the Minister for advice on general policy and on the management and utilisation

of defence resources. Central Administration is divided functionally into areas concerned with strategic policy and force development, supply and support, resources and financial programming, manpower, science and technology, and management services.

The Chief of Defence Force Staff and the Secretary, Department of Defence advise the Minister on matters involving their joint responsibility in respect of administration of the Defence Force. The three Service Chiefs of Staff, the Chief of Defence Force Staff and the Secretary, Department of Defence all have the right of access to the Minister.

#### Higher Defence machinery

The *Council of Defence* considers and discusses matters referred to it by the Minister relating to the control and administration of the Defence Force and the respective Arms of the Defence Force. The Council is chaired by the Minister for Defence. Membership includes the Minister assisting the Minister for Defence, the Chief of Defence Force Staff, the Chiefs of Staff and the Secretary of the Department of Defence.

An extensive committee system exists to reconcile the respective Armed Services' operational requirements with Defence objectives, and to facilitate the professional management of military careers, the sound management of resources and the development of general policy. It also brings together the expertise of both military and civilian members in the internal policy formulating process and the proffering of advice to Government. Three of the more important committees are described below:

The *Defence Committee* is chaired by the Secretary and has as members the Chief of Defence Force Staff, the three Chiefs of Staff, and the Secretaries of the Departments of the Prime Minister and Cabinet, Finance and Foreign Affairs. It advises the Minister on general Defence policies calling for co-ordinated information and advice about strategic, military, foreign affairs and economic aspects.

The *Chiefs of Staff Committee* is chaired by the Chief of Defence Force Staff and is responsible for providing the Minister 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 and has as members the Chief of Defence Force Staff and the three Chiefs of Staff. It is primarily concerned with the formulation of the Five Year Defence Program and with advising the Minister on related matters encompassed by it.

#### EXPENDITURE ON THE DEFENCE FUNCTION (\$'000)

Departmental Category	Actual Expenditure				Estimated Expenditure
	1973-74	1974-75	1975-76	1976-77	1977-78
<b>Department of Defence</b>					
Capital equipment . . .	93,486	90,050	151,589	281,200	323,394
Defence facilities . . .	52,689	121,846	112,437	116,837	119,989
Defence co-operation . . .	10,334	88,647	38,951	25,369	25,925
Manpower including Defence Forces Retirement and Death Benefits . . .	834,662	1,008,998	1,111,915	1,222,739	1,296,301
Other running costs . . .	328,417	366,588	437,665	504,031	553,723
<b>Total (a) . . .</b>	<b>1,319,588</b>	<b>1,676,129</b>	<b>1,852,557</b>	<b>2,150,176</b>	<b>2,319,332</b>
<b>Department of Productivity and other Departments</b>					
Capital equipment . . .	8,909	12,246	10,520	7,762	5,795
Defence facilities . . .	3,790	5,574	7,469	9,234	9,615
Manpower costs . . .	19,385	21,583	8,327	9,317	9,512
Other running costs . . .	55,361	75,116	64,384	79,841	88,074
<b>Total (b) . . .</b>	<b>87,445</b>	<b>114,519</b>	<b>90,700</b>	<b>106,154</b>	<b>112,996</b>
<b>Total . . .</b>	<b>1,407,033</b>	<b>1,790,648</b>	<b>1,943,257</b>	<b>2,256,330</b>	<b>2,432,328</b>

(a) The Research and Development activity, formerly with the Department of Industry and Commerce, integrated with the Defence Science and Technology Division of the Department of Defence during 1974-1975. (b) Historic data up to and including 1974-75 has not been adjusted for the reclassification of Department of Productivity expenditure attributable to the Defence Functions.

### Equipment for the Defence Force

An amount of \$289.0 million was spent on equipment of a capital nature in 1976-77. An amount of \$329.2 million is expected to be spent in 1977-78.

The major equipment items received by the Services in 1976-77 included 1 Oberon-class submarine, 1 training ship, 16 S2G Tracker Aircraft, 216 CRHII radio receivers, 47 Leopard Tanks, 6 light observation helicopters, 9 sets of medium girder bridges, 2 surveillance radars and 19 aircraft fire fighting trucks.

Major new equipment items planned for delivery in 1977-78 include 1 Oberon-class submarine, 6 replacement ESM systems for destroyer escorts, 10 Nomad aircraft, 34 Leopard Tanks, 30 fire support vehicles, 400 light trucks, 6 P3C LRMP aircraft and 2 C130H aircraft.

New major capital equipment decisions announced in the context of the 1977-78 Budget include a new multi-purpose secure communications network, construction of an underway replenishment ship to replace HMAS *Supply*, modernisation of the Destroyer Escorts *Swan* and *Torrens*, purchase of 200 additional light general service trucks, acquisition of 2 specialised Armoured Recovery and Maintenance Tanks, limited purchase of electronic warfare equipment, purchase for evaluation of medium truck vehicles, purchase of 5 high-power, high-frequency radio terminals and 24 medium-power low-capacity, high-frequency radio terminals, and structural and equipment refurbishment of the Macchi jet trainers.

### Defence manpower

#### Employment

The following table indicates the range of activities and occupations in which Defence manpower was engaged as at 30 June 1977, and the interdependence between the military and civilian components:

FUNCTIONAL DISTRIBUTION OF DEFENCE MANPOWER AS AT  
30 JUNE 1977

	<i>Service</i>	<i>Civilian</i>	<i>Total</i>
Combat forces and direct logistic support to combat forces . . . . .	29,700	850	30,550
Specialist support (e.g. medical services, communications) . . . . .	6,150	1,000	6,800
Stores and supply . . . . .	3,150	5,050	8,200
Workshop and repair facilities, and quality assurance inspection . . . . .	3,000	2,200	5,200
Naval dockyards—			
construction and refit program . . . . .	150	5,600	5,750
Training staff, direct support and servicemen in training . . . . .	18,400	1,700	20,100
Research and development . . . . .	400	5,400	5,800
Central and departmental functions and specialist administrative services . . . . .	2,100	3,900	6,000
Defence regional offices, service command and district HQs and administrative units . . . . .	7,000	4,600	11,950
<b>Total . . . . .</b>	<b>70,050</b>	<b>30,300</b>	<b>100,350</b>

Figures have been rounded. Civilian figures refer only to full-time operatives and exclude 1,300 locally engaged civilians in support of Air Force deployments overseas, 800 persons on extended leave, and 400 part-time staff.

#### Permanent Defence Force

PERSONNEL STRENGTHS OF THE PERMANENT DEFENCE FORCE

<i>Strengths as at end June</i>	<i>Volunteer Forces</i>				<i>National Servicemen</i>
	<i>Navy</i>	<i>Army</i>	<i>Air Force</i>	<i>Total</i>	<i>Army</i>
1973 . . . . .	17,215	31,151	22,717	71,083	2,839
1974 . . . . .	16,141	30,197	21,119	67,457	38
1975 . . . . .	16,094	31,514	21,546	69,154	..
1976 . . . . .	15,993	31,430	21,351	68,774	..
1977 . . . . .	16,390	31,988	21,703	70,081	..
1978 (estimated) . . . . .	16,380	31,910	21,751	70,041	..

NOTE. Defence Force manpower statistics for earlier years are shown in Year Book No. 61, page 100.

**COMPOSITION OF PERMANENT DEFENCE FORCE(a)**  
as at 30 June 1977

	<i>Navy</i>	<i>Army</i>	<i>Air</i>	<i>Total</i>
<b>Male—</b>				
Officers . . . . .	1,857	4,101	3,426	9,384
Other ranks . . . . .	12,324	25,068	16,277	53,669
Cadets . . . . .	348	468	339	1,155
Apprentices . . . . .	388	787	340	1,515
Junior recruits . . . . .	568	..	..	568
<b>Total . . . . .</b>	<b>15,485</b>	<b>30,424</b>	<b>20,382</b>	<b>66,291</b>
<b>Female (b)—</b>				
Officers . . . . .	66	171	142	379
Other ranks(c) . . . . .	839	1,393	1,179	3,411
<b>Total . . . . .</b>	<b>905</b>	<b>1,564</b>	<b>1,321</b>	<b>3,790</b>
<b>Total Strength . . . . .</b>	<b>16,390</b>	<b>31,988</b>	<b>21,703</b>	<b>70,081</b>

(a) Citizen Forces and reserves on full time duty are included in the appropriate category. (b) Females serve in the Women's Royal Australian Naval Service, the Royal Australian Naval Nursing Service, the Naval Police, the Women's Royal Australian Army Corps, the Royal Australian Army Nursing Corps and other Army specialist corps. The Women's Royal Australian Air Force and the RAAF Nursing Service were disbanded on 1 May 1977 when all female personnel were incorporated into the Permanent Air Force. (c) Includes female officer cadets.

### Reserve Forces

The Reserve Forces of the Navy, Army and Air Force are available to supplement the Permanent Defence Force.

Each Reserve Force consists of several reserve elements with different call out provisions and training obligations. The most important elements involve a training obligation and are as follows:

Citizen Forces (Royal Australian Naval Reserve, Active Citizen Military Forces, Active Citizen Air Force) which may be called out by proclamation for continuous full-time service in a time of defence emergency or war.

Emergency Reserves (Naval Emergency Reserve Forces, Regular Army Emergency Reserve, Air Force Emergency Reserve) which may be called out by the Governor-General for continuous full-time service as the need arises.

### PERSONNEL STRENGTHS OF THE RESERVE FORCES(a)

<i>Strengths as at end June</i>	<i>Navy</i>	<i>Army(b)</i>	<i>Air Force</i>	<i>Total</i>
1973 . . . . .	1,935	23,119	1,191	26,245
1974 . . . . .	1,593	20,000	748	22,341
1975 . . . . .	1,302	20,374	554	22,230
1976 . . . . .	1,025	21,183	458	22,666
1977 . . . . .	970	21,641	473	23,084
1978 (estimated) . . . . .	1,025	21,680	525	23,230

(a) Strengths refer to Reserves with training obligations. They exclude those members who are serving full time in the Permanent Defence Force but include all other listed Reserve members including some who have not fulfilled their minimum training obligations. (b) Includes National Service obligatees who numbered about 3649 at June 1973.

### Defence co-operation

In support of Australia's Defence policy, the Government conducts defence co-operation activities with South-East Asian and South Pacific countries. These activities include joint projects, training in Australia, loan of personnel and combined military exercises.

In 1976-77, expenditure on Defence co-operation with Papua New Guinea totalled \$14.0 million. This included the loan of Australian servicemen to P.N.G., training for P.N.G. servicemen in Australia, survey and engineering projects in P.N.G. and the provision of certain items of equipment.

Expenditure on the Defence Co-operation Program with Indonesia to June 1977 amounted to \$27.3 million. Major current projects include the survey and mapping of Irian Jaya, a field communications project, assistance with Sabre aircraft previously transferred to Indonesia by Australia, research and development projects, and a maritime patrol project (involving patrol boats and Nomad aircraft).

Annual expenditure on Defence co-operation with Malaysia and Singapore is now running at approximately \$4 million and \$0.8 million respectively. Major continuing projects in Malaysia include an Armed Forces manufacturing workshop, a parachute and diving school and a defence research centre. Assistance to Singapore is mainly in the area of training, particularly of qualified flying instructors. Training assistance is also provided to Thailand and the Philippines.

Assistance to South-West Pacific countries is mainly in the form of training in Australia and the provision of technical advisers.

Training in Service training establishments in Australia is an important part of Defence co-operation activities. Over 600 overseas personnel are trained in Australia each year by the three Services.

### **Defence representation overseas**

Defence Attache representation is maintained in Afghanistan, Britain, Burma, Canada, France, India, Indonesia, Iran, Japan, Korea, Malaysia, Nepal, New Zealand, Pakistan, Papua New Guinea, the Philippines, Singapore, Thailand and the United States of America.

### **Defence Force activities overseas**

The main areas in which Australian Defence Force elements have been deployed overseas during the year are Malaysia/Singapore and Papua New Guinea. Units have also visited Indonesia, the Philippines, Thailand, India, Japan, New Zealand, Britain, Canada and the United States.

In support of the Five Power Arrangements, Australian Defence Force elements in the Malaysia/Singapore area include:

*Navy*—One destroyer or destroyer escort present in the area at all times, and one submarine present for part of the year;

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

*Air Force*—Two squadrons of Mirage fighter aircraft are maintained at Butterworth in Malaysia, with a detachment at Tengah in Singapore.

The Defence Force contributes to United Nations peacekeeping activities in the Middle East (Egypt, Israel and Syria) and in Kashmir through the provision of military observers and air transport facilities.

## **THE DEFENCE FORCE**

### **Royal Australian Navy**

The R.A.N. 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 naval task group consisting of surface warships, naval aviation, and the R.A.N.'s submarine force.

#### **Development of the Royal Australian Navy**

Information relating to naval defence systems prior to 1901 appears in Year Book No. 2, page 1094; further information relating to the development of Australian naval policy appears in Year Books No. 3 and 12, pages 1060 and 1012 respectively; an account of the building of the Australian Navy, its cost, the compact with the Imperial Government, and other details appear in Year Book No. 15, pages 921-3; and the growth and the activities of the R.A.N. during the 1939-45 war are described in Year Book No. 36, pages 1023-7.

#### **Higher organisation**

Under the Defence Act the Chief of Naval Staff has command of the R.A.N., subject to the overall 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 the Naval Staff, and the Chiefs of Personnel, Technical Services, and Materiel. Other senior officers of the R.A.N. include the Flag Officer Commanding the Australian Fleet and the Flag Officer Commanding East Australia area.

#### **Ships of the Royal Australian Navy**

*The Fleet*, October 1977: *Melbourne*—aircraft carrier; *Supply*—oiler; *Stalwart*—destroyer tender; *Perth*, *Hobart*, *Brisbane*—guided missile destroyers; *Vendetta*, *Vampire*—destroyers; *Yarra*, *Parramatta*, *Stuart*, *Derwent*, *Swan*, *Torrens*—destroyer escorts; *Jervis Bay*—training ship; *Curllew*, *Snipe*—coastal minehunters; *Ibis*—coastal minesweeper; *Moresby*, *Flinders*—surveying ships; *Diamantina*,

*Kimbla*—oceanographic research ships; *Otway*, *Onslow*, *Ovens*, *Oxley*, *Orion*—submarines; *Attack*, *Acute*, *Advance*, *Adroit*, *Ardent*, *Assail*, *Aware*, *Barbette*, *Barricade*, *Bayonet*, *Bombard*, *Buccaneer*—patrol boats; *Banks*, *Bass*—general purpose vessels; *Brunei*, *Labuan*, *Tarakan*, *Wewak*, *Betano*, *Balikpapan*—heavy landing craft.

### **Fleet Air Arm**

The Fleet Air Arm maintains three front line squadrons for embarkation in the operational carrier *H.M.A.S. Melbourne*. These squadrons currently consist of Skyhawk A4G fighter ground-attack aircraft, Tracker S2G anti-submarine aircraft and Sea King Mk 50 anti-submarine helicopters. Three training and support squadrons are based at the R.A.N. Air Station, Nowra, New South Wales. Other aircraft operated by the Navy are the Bell 206B helicopter in the survey ship *HMAS Moresby*, Iroquois UH1B and Wessex 31B helicopters (utility tasks and search and rescue), HS-748, S2Es Macchi trainer and Jindivik pilotless target aircraft.

### **Ship construction and repairs**

There are two naval dockyards, one at Garden Island, New South Wales, and one at Williamstown, Victoria. The dockyard at Cockatoo Island, which is operated by Vickers Cockatoo Dockyard Pty Ltd by agreement with the Commonwealth Government, carries out considerable naval repair work and has the capability to construct warships.

Current construction projects include 1 Oberon Class submarine in the United Kingdom (due to be commissioned in early 1978), 2 guided missile frigates in the United States of America and an oceanographic vessel being built at Williamstown. Modernisation of three River Class destroyers escorts, *Parramatta*, *Stuart* and *Derwent*, is progressing and the half-life refit of a fourth, *Yarra*, is scheduled for completion in late 1977.

Extensive improvements to the weapons control system of the guided missile destroyers *Hobart*, *Perth* and *Brisbane* are progressing at Garden Island Dockyard.

### **Training and Entry**

*Officer Entry.* The Royal Australian Naval College, *H.M.A.S. Creswell* at Jervis Bay, A.C.T. is the training centre for officers in the R.A.N. Junior entry is accepted between the ages of fifteen and seventeen and senior matriculation entry to a maximum of twenty years. The majority of entrants undertake University Degrees in Engineering, Science and Arts through the University of New South Wales. Short Service Commissions of seven years are also granted on completion of training as seamen, supply officers or aircrew officers to suitable applicants who have completed secondary schooling and are aged between seventeen and twenty-four.

*Sailor Entry.* There are a number of entry schemes available, depending upon an individual's age, educational standard and own particular interests.

*H.M.A.S. Nirimba* at Quaker's Hill, New South Wales is the naval school for apprentices. Boys aged between fifteen and seventeen-and-a-half receive training in the electrical and engineering trades.

*H.M.A.S. Leeuwin* at Fremantle, Western Australia is the junior recruit training establishment for boys aged between fifteen-and-three-quarters and sixteen-and-a-half.

*H.M.A.S. Cerberus* at Westernport, Victoria is the main training establishment for adult entry sailors aged between seventeen and twenty-six. Recruits receive twelve weeks basic training before advancing to specialist training courses.

On completion of initial training further branch and category training is undertaken at the various schools at *H.M.A.S. Penguin*, *H.M.A.S. Watson* and *H.M.A.S. Nirimba* in Sydney, *H.M.A.S. Cerberus* at the Naval Air Station at Nowra, New South Wales. A number of specialised training courses are conducted in the United Kingdom and the 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.

### **Development of the Australian Army**

A detailed account of the Australian Defence Force prior to Federation appears in Year Book No. 2, pages 1075–81. See also Year Book No. 12, page 999. For particulars of the phases which cover the period from Federation to the re-establishment of the Military Board and the organisation of Commands after the 1939–45 War, see Year Book No. 46 and earlier issues.

### 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 Materiel, the Chief of the Army Reserve and the Inspector General 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 Citizen Military Forces.

*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:

*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

*Australian Staff College.* The Australian Staff College is located at Queenscliff, Victoria. The course is held annually and is of twelve months duration. The normal intake is eighty students. The course is intended to train selected officers for appointments in all branches of the staff in peace and war and to prepare them to assume, after experience, command and higher staff appointments.

*Royal Military College.* The Royal Military College was established in 1911 at Duntroon in the Australian Capital Territory to provide trained officers for the Army. The conditions of entry are laid down in the Royal Military College Regulations. The course is four years of military and academic studies. On graduation, cadets are appointed lieutenant in the Australian Regular Army.

*Officer Cadet School.* The Officer Cadet School was established in 1951 at Portsea, Victoria, to increase the rate at which junior regimental officers could be produced for the Australian Army. Serving members of the Regular Army, the Citizen Military Forces and civilians between the ages of eighteen-and-a-half and twenty-two-and-a-half are eligible for entry. A special entry provides for candidates up to twenty-four-and-a-half years. The course lasts for forty-four weeks and, on graduation, cadets are appointed second lieutenants in the Australian Regular Army.

*Women's Royal Australian Army Corps School.* The WRAAC School at Mosman, New South Wales, has three wings: one for the training of officer cadets for the WRAAC; one for the training of junior non-commissioned officers; and one which is a basic training wing. The officer cadets are selected from serving members between nineteen-and-a-half and thirty-two years of age, or from civilians between nineteen-and-a-half and thirty years of age. The course is of twenty-three weeks duration and, on graduation, cadets are appointed lieutenants in the Women's Royal Australian Army Corps.

*Land Warfare Centre.* The Land Warfare Centre was renamed in 1975, having previously been called the Jungle Training Centre, Canungra. The Land Warfare Centre provides training for personnel in tactics and administration, prepares senior non-commissioned officers for commissions and conducts sub-unit and individual training in battle skills.

*Army Apprentices School.* The Army Apprentices School was opened in 1948 at Balcombe, Victoria, to train youths as skilled tradesmen for the Regular Army and to provide them with a background for an Army career. The course is open to youths between the ages of fifteen and seventeen and provides training in a number of highly skilled trades.

*Other Schools.* Army schools have been established for the major arms and services to train officers and other ranks in the up-to-date techniques of their own arm of service, to qualify them for promotion and to produce trained instructors. Courses at Army Schools are conducted for members of both the Regular Army and Citizen Military Forces.

## 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.

### Development of the Royal Australian Air Force

For a short note about the development of the Royal Australian Air Force, *see* Year Book No. 58, page 91.

### Higher organisation

The Chief of the Air Staff (C.A.S.) 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 C.A.S. 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 Materiel, Chief of Air Force Technical Services, Chief of Air Force Operations, Director General Supply—Air Force, Assistant Secretary Resources Planning, and other senior officers or specialists as may be directed by the C.A.S. The Committee has no statutory authority nor executive function and the C.A.S. is not obliged to accept its recommendations.

The Chief of Air Staff administers and controls R.A.A.F. units in Australia through two commands: Operational Command and Support Command. Operational units based at Butterworth, Malaysia, work within the broad directives issued by the C.A.S. They contribute to the development of the Malaysian and Singapore defence capability and provide forces for the Integrated Air Defence System.

Operational Command is responsible to the C.A.S. for the command of operational units and the conduct of their operations within Australia. Support Command is responsible to the C.A.S. for training of personnel, and the supply and maintenance of service equipment.

### Structural organisation

The R.A.A.F. 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 role of the strike/reconnaissance force is primarily to counter air operations. 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 logistic 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 Citizen Air Force.

### Aircraft

The R.A.A.F.'s strike/reconnaissance force is currently equipped with F111C and Canberra aircraft. The air defence and ground attack squadrons are equipped with the Mirage 111-0. Transport aircraft currently in use are Hercules C130A (to be replaced with C130H) and C130E, Caribou, Dakota, Mystere 20, HS748, and BAC1-11. Four squadrons operate Iroquois and Chinook helicopters and the two maritime squadrons operate Neptune SP2H (to be replaced with Orion P3C) and Orion P3B aircraft. Aircraft used for basic training are the CT4 Airtrainer, Macchi and HS748.

### Training

*Staff College.* The R.A.A.F. Staff College located at Fairbairn, A.C.T. provides staff training and higher Service education to selected officers normally of the rank of Squadron Leader and above. The course, which is of one year's duration, is designed to broaden the students' professional background and to prepare them for command and staff appointments of greater responsibility. A two year correspondence course covering communication skills, military studies, international affairs and management is a compulsory prerequisite for entry to this course.

*R.A.A.F. Academy.* The R.A.A.F. Academy is an affiliated college of the University of Melbourne. Cadets are selected principally for the General Duties Branch and, after four years tertiary training, graduate with a Bachelor of Science degree and the award of a Graduate Diploma in Military Aviation. 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.



*Engineering Cadet Squadron.* The Engineering Cadet scheme provides training for degree or diploma status in aeronautical, mechanical, electrical and communication engineering at the Royal Melbourne Institute of Technology and similar institutes in the Melbourne area.

*Equipment Cadets.* Cadets selected for Equipment Branch duties are stationed at No. 7 Stores Depot Toowoomba, Queensland and undertake a three year course at the Darling Downs Institute of Advanced Education. They graduate with a Bachelor of Business Studies degree.

*Officer Training.* With the exception of those officers commissioned from the R.A.A.F. Academy or the flying training schools, all officers entering directly (with or without a tertiary qualification), commissioned airmen and airwomen, engineering and equipment cadets and undergraduate students undergo the Officers' Initial Training Course at the Officers' Training School, Point Cook, Victoria.

*Basic Aircrew Training.* R.A.A.F. pilot, navigator and air electronic officer trainees are selected primarily direct from civilian life, although some places are filled by serving officers (including graduates of the R.A.A.F. Academy) and airmen. Direct entry and serving airmen trainees are commissioned on graduation, having completed their officer training concurrently with their flying training. Additionally, the R.A.A.F. provides initial pilot training for the Army and complete pilot and observer training for the R.A.N.

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

*Ground Training.* Training for non-aircrew personnel is generally provided in two stages: basic training, which includes apprentice training, brings the airman to a level of proficiency in his particular trade such that he can be recognised and employed as a qualified tradesman on an operating unit; and advanced training covers higher level training courses including supervision and management techniques, and specialist courses on particular aircraft or telecommunications systems.

*Major Ground Training Schools.* 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 apprentice and adult training.

### Natural Disasters Organization

The Natural Disasters Organization (NDO) was created in the Department of Defence in 1974 absorbing all functions of the former Directorate of Civil Defence (which had been in the Department of the Interior until moved to Defence in December 1972).

The NDO and the State and Territory Emergency Service organizations constitute the core civil defence structure for Australia. The main pre-occupation in peacetime is in mitigating the effects of natural disasters, but the primary role is to ensure that the total structure maintains and improves the capability for meeting both the civil defence and natural disasters requirements. The State Governments have complete responsibility for their own organizations. The headquarters of the NDO at Canberra provide a focal point for the co-ordination of national effort during natural disasters and civil defence emergencies. In such emergencies, the headquarters ensure that States and Territories receive the full material and physical support of the Commonwealth Government.

The NDO administers a number of programs from Commonwealth funds, mainly for the support of the Emergency Service organizations: the supply of emergency type equipment (radios, rescue vehicles, first aid kits, generators, flood rescue boats, etc.); reimbursement of salaries of State professional organizers at regional level; provision of training films and handbooks; and subsidies on a dollar-for-dollar basis to provide accommodation for the State units at local government level. Other programs benefit both organizations with a counter disaster involvement and the community at large. Such programs include training courses at the Australian Counter Disaster College at Mt Macedon; emergency broadcasting facilities; a fall out shelter survey service and a public information program. NDO is also required to develop and implement contingency plans involving Commonwealth resource, to cope with natural disasters and civil defence needs. A Disaster Earmark Store has been established at the R.A.A.F. Stores Depot, Dubbo, N.S.W. to expedite the supply of certain items to meet initial disaster relief requirements.

### Defence Science and Technology

The Defence Science and Technology Organization (DSTO) is engaged in research, analysis, development, trials and evaluation under the policy, administrative and technical control of the Chief Defence Scientist. It consists of a central office and a number of establishments, a small number of people in overseas posts and some in joint activities with other nations. The DSTO contains about 5,300 staff who provide a degree of scientific expertise in most physical sciences and some engineering fields of relevance to defence.

The functions of the DSTO are: defence science policy; scientific advice on all defence matters; conduct of research and development, including development of new equipment which will improve military effectiveness and analysis of weapons systems and equipment; relationship of Australian research and development to international programs; trials and evaluation of proposed and existing equipment.

The DSTO consists of three main functional areas of responsibility: Military Studies and Operational Analysis Division; Policy and Program Planning Division; and DST laboratories.

#### **Military Studies and Operational Analysis Division**

The Division formulates the program of analytical studies for tactical, operational and force structure problems to assist the Department and Services. The Central Studies Establishment and Services Analytical Studies Group carry out most of these studies. Scientific Advisers, oversighted by this Division but attached to each Service arm, provide advice on military needs as well as constituting a direct link with the DSTO.

#### **Policy and Program Planning Division**

This Division defines principal objectives of the DSTO and advises on scientific and technical aspects of Defence policy including arrangements for international co-operation in scientific and technical activities.

#### **DST Laboratories**

Responsibility for the preparation, co-ordination and reviews of the DSTO program rests with the Deputy Chief Defence Scientist. Laboratories primarily concerned with testing and evaluating service equipment are functionally separated into the Services Laboratories and Trials Division.

The DST Laboratories are:

*Weapons Research Establishment, S.A. Applied Physics Wing; Weapons Research and Development Wing; Engineering Wing; and Trials Wing.*

*Materials Research Laboratories, Victoria.*

*Aeronautical Research Laboratories, Victoria.*

*Engineering Development Establishment, Victoria.*

*Royal Australian Navy Research Laboratory, N.S.W.*

*Royal Australian Navy Trials and Assessing Unit, N.S.W.*

*Armed Forces Food Science Establishment, Tasmania.*

*Joint Tropical Trials and Research Establishment, Queensland.*

## **DEFENCE PRODUCTION**

The production establishments became one of the defence responsibilities of the Department of Productivity following its creation on 8 November 1976. They had previously been the responsibility of the Department of Industry and Commerce (see Year Book No. 61, page 109).

### **Defence production functions of Department of Productivity**

The defence production functions of the Department of Productivity are carried out under the *Supply and Development Act 1939* and include the following:

Planning, establishment, operation and management of facilities producing aircraft, guided missiles, small arms, ammunition, explosives, marine engines, clothing and other defence goods. Acquisition, maintenance, and disposal of strategic materials, investigation and development of Australian sources of supply of defence materiel in conjunction with Department of Defence.

For the performance of the above functions the Department has two production divisions—

Munitions Supply and Aircraft, Guided Weapons and Electronics Supply—supported by Production Planning Branch, Marketing Branch and elements of Central Office and Regional technical and administrative staffs.

#### **Munitions supply**

The Munitions Supply Division is responsible for the production of munitions required by the Defence Force. Production is carried out in Government factories, which may place orders with private industry for components and materials. The factories currently in operation and their main products or services are as follows:

Ammunition Factory, Footscray, Victoria (fuses, primers, cartridge cases and small arms ammunition); Clothing Factory, Victoria (uniforms and clothing); Engine Works, Victoria (servicing of marine and land-based diesel engines); Albion Explosives Factory, Deer

Park, Victoria (high explosives, propellant); Explosives Factory, Maribyrnong, Victoria (propellants, explosives, rocket motors); Mulwala Explosives Factory, New South Wales (propellants and chemicals); Munitions Filling Factory, St Marys, New South Wales (filling of ammunition and explosive munitions); Ordnance Factory, Bendigo, Victoria (heavy guns, mountings, large gears); Ordnance Factory, Maribyrnong, Victoria (guns, projectiles, heavy forgings, rocket motor components); and Small Arms Factory, Lithgow, New South Wales (rifles, machine guns, mortar shells, calibre shells and fuse components).

#### **Aircraft, guided weapons and electronics supply**

Production both in Government factories, and in industry, of aircraft, aero-engines, other aircraft components and guided weapons is the responsibility of this Division. Planning of capacity and negotiation (in conjunction with the government purchasing authority) of contractual arrangements concerning aircraft modification, repair and overhaul, and for the supply of spare parts and airborne equipment for the Services, are also functions of the Division.

The following factories are operated by the Division: Government Aircraft Factory at Fishermen's Bend, Victoria together with its Final Assembly Workshops and Test Airfield at Avalon, Victoria and the Aircraft Engineering Workshop at Pooraka, South Australia.

A twin turbo-propellor utility aircraft known as Nomad has been designed and developed by the Government Aircraft Factories (G.A.F.) and the Government has approved production of 120 aircraft. The Jindivik radio-controlled target aircraft and the Turana pilotless target aircraft continued in production. The Ikara anti-submarine weapon system which has been fitted into 9 R.A.N. ships has also been purchased by the British and Brazilian Navies.

#### **Finance**

The total outlay during 1976-77 by the Department of Productivity on Defence-orientated activities was \$79,683,000. This was in addition to a turnover of \$65,578,000 by the Government Factories through their trust accounts.

#### **Personnel**

At 30 June 1977, 8,466 personnel were employed on specifically defence-orientated functions (excluding general financial and administrative management support) as follows: administration 483; aircraft production 2,401; munitions production 4,747; miscellaneous production 827; overseas staff 8.

## **PURCHASING**

The Purchasing Division of the Department of Administrative Services arranges for the purchase of supplies and services for the Australian Navy, Army and Air Force, the Department of Defence Central Office, and the Department of Productivity defence production factories and establishments. Purchase of some supplies from overseas sources is arranged and progressed by the Department of Defence through offices located in the United States of America and the United Kingdom with contractual assistance from the Department of Administrative Services.

Upon request, the Purchasing Division also arranges contracts on behalf of other Commonwealth Government departments and authorities. Through the Australian Government Stores and Tender Board, now located within the Division, goods and services in common use by departments are purchased; some stocks of goods are also held for issue to departments as required.

The Division is also responsible for the review, development and co-ordination of Commonwealth purchasing policies, practices and procedures.

Disposal of surplus or unserviceable Commonwealth-owned stores and equipment to the best advantage of the Commonwealth is also carried out by the Purchasing Division.

Purchases by the Purchasing Division in 1976-77 totalled \$238 million. This figure includes contracts valued at \$55 million arranged during the year by the Australian Government Stores and Tender Board. Total realisation from disposals in 1976-77 was \$24 million, of which \$21 million came from 180 public auction sales conducted during the year.

