

CHAPTER XXVII

DEFENCE

§ 1. Department of Defence

1. **Functions and Organization.**—(i) *Functions.* The functions of the Department of Defence include:—defence policy; joint Service matters and matters having an inter-departmental defence aspect; the financial requirements of defence policy and the allocation of the funds made available; the supply aspect of defence policy including the review of production programmes and capacity; important matters of policy or principle affecting the Defence Forces and their requirements, including the strength, organization and disposition of the forces, higher appointments in the Services, their weapons and equipment, and defence research and development.

(ii) *Organization, higher Defence machinery and the control of the joint Service machinery.* The joint Service and inter-departmental advisory machinery of the Department consists of various committees headed by the Defence Committee, the Chiefs of Staff Committee, the Defence Administration Committee and the Joint War Production Committee.

The Defence Committee is a statutory body consisting of the Secretary, Department of Defence, who is Chairman; the Chairman of the Chiefs of Staff Committee; the Chiefs of Staff of the three Services; the Secretary, Prime Minister's Department; the Secretary, Department of External Affairs; and the Secretary to the Treasury. Its function is to advise the Minister for Defence on—the defence policy as a whole and the co-ordination of military, strategic, economic, financial and external affairs aspects of defence policy; matters of policy or principle and important questions having a joint Service or an inter-departmental defence aspect; and such other matters having a defence aspect as are referred to the Committee by or on behalf of the Minister for Defence.

The Chiefs of Staff Committee meets regularly for the discussion of technical military matters on a joint service basis, and is responsible in peace for the preparation of military appreciations and plans. The functions of the Defence Administration Committee are the regular review of the progress of the Defence Programme, the co-ordination or integration of Service activities where appropriate in the interests of improved efficiency and economy, and the improvement of methods and organization. The function of the Joint War Production Committee is, briefly, to examine the relation between strategic plans and their requirements to ensure that the war potential for them exists. The major committees subordinate to the Defence Committee and/or the Chiefs of Staff Committee comprise the Principal Administrative Officers Committee (Maintenance and *Matériel*), the Principal Administrative Officers Committee (Personnel), the Defence Research and Development Policy Committee, the Joint Planning Committee, the Joint Intelligence Committee and the Joint Administrative Planning Committee.

In addition, the Defence Business Board furnishes advice on business matters of common interest to the three Services, or important subjects on which the collective advice of the Board is desired from the business aspect, with a view to promoting efficiency and economy in the execution of the Defence Programme. The Board comprises businessmen who serve in a part-time honorary capacity and consists of an independent chairman and deputy chairman and the business advisers of the three Service Departments.

2. **Basis of Current Defence Policy.**—The basic aim of Australia's defence policy is to ensure the security of this country and of its island territories. This aim is pursued through a series of defence programmes which are designed to give progressive effect to the objectives of policy approved by the Government, and are capable of adjustment to meet the requirements of the strategic situation as it may change from time to time. Because of the increased strength which comes from mutual security, Australia participates in a policy of collective defence in south-east Asia, which is the area of primary defence interest to Australia. The collective security arrangements in which Australia participates are—SEATO, ANZUS and British Commonwealth arrangements for defence co-operation (*see also* Chapter XXIX. International Relations).

General or global war as a deliberate act of policy is considered unlikely, and the main aim of Australia's defence preparations is the continual improvement of the capability of its forces to make a prompt and effective contribution to any allied effort required in a limited war or insurgency situation in south-east Asia, while at the same time having a capacity for independent action to meet the initial shock of an emergency. Should the situation change and Australia itself be directly threatened, our collective defence arrangements would be of great importance in maintaining the security of Australia and its territories.

3. The Defence Programme.—(i) Objectives. The defence programme must be maintained at a level that will enable Australia to meet its regional and home defence responsibilities. In the present strategic circumstances, emphasis is placed on progressively increasing our military capacity and preparedness by having both regular and citizen forces more readily available, and improving their means of strategic and tactical mobility. The forces are being extensively re-equipped with modern conventional weapons which are standard or compatible, as far as possible, with those used by United States forces with whom Australia is associated in defence arrangements.

The naval programme provides for the continuing modernization and development of the Royal Australian Navy into a well-balanced operational fleet with emphasis on anti-submarine capability. Three guided missile destroyers of the United States *Charles F. Adams* class are being obtained, the first two of which are scheduled for delivery in 1965 and the third in 1967. Four *Oberon* class submarines are being purchased to replace the submarines which have been maintained on the Australia station for some years by arrangement with the Royal Navy. The carrier H.M.A.S. *Melbourne* is now equipped with both Westland Wessex anti-submarine helicopters and Gannet and Sea Venom fixed wing aircraft. The two latter aircraft are expected to reach the end of their service life in about 1967. Four Type 12 anti-submarine frigates are in commission. One is already fitted with the Seacat close range anti-aircraft missile system and the others will also be fitted with it. The Australian anti-submarine missile *Ikara* will be added to the armament of the guided missile destroyers and the frigates. The R.A.N. also has in commission three *Daring* class destroyers, including one on loan from the United Kingdom, one *Battle* class destroyer, a fast transport, H.M.A.S. *Sydney*, a fast fleet replenishment tanker, H.M.A.S. *Supply*, six "Ton" class minesweepers, a recently built survey ship, and auxiliary vessels. There are also several ships in reserve. A 15,000-ton escort maintenance ship is under construction in Australia. The present target strength of the R.A.N. is over 14,000.

The Army is increasing the strength of the Regular operational force and of the Citizen Military Forces which are available for service anywhere. Regular Army strength is being increased to 28,000, including a third battle group which is being raised, and the target strength of the Citizen Military Forces has been increased to 35,000. The Pacific Island Regiment in Papua-New Guinea is being doubled in strength to 1,400 and further development is under consideration. The combat elements of the Army are based on the pentropic divisional organization. The approved objective is to provide material and reserves needed by the Regular and Citizen components of a complete pentropic division of five battle groups with appropriate support and logistic units. The tactical flexibility and mobility of the field force are being greatly improved by the acquisition of landing ships, amphibious and other vehicles, by light aircraft and helicopters for the Army light aircraft squadron, and also by utility helicopters and short take-off and landing fixed-wing aircraft in the R.A.A.F. programme.

The operational units of the Royal Australian Air Force comprise three bomber squadrons, four fighter squadrons, two maritime reconnaissance squadrons, three transport squadrons, one surface-to-air-missile squadron, one utility helicopter squadron and three control and reporting radar units. The fighter squadrons are to be re-equipped with the supersonic *Mirage III-O* jet fighter, of which 100 have been ordered. The airframes and engines are being manufactured to a substantial extent in Australia and deliveries have commenced. Deliveries are also being made of eighteen *Caribou* Mark I short take-off and landing aircraft and of additional *Iroquois* utility helicopters. Two radar units are being re-equipped. Approval has been given for the purchase of two squadrons of *F-111A* strike-reconnaissance aircraft to replace the *Canberra* and delivery is scheduled to commence in 1967. An additional airfield is being developed at *Tindal* in the Northern Territory. The present target strength of the Air Force is over 18,000.

In the field of research and development, Australia is making its principal contribution through the *Long Range Weapons* Project which is a joint effort with the United Kingdom. Australia also participates in the *European Launcher Development Organization* and is associated with the United States in many space and defence projects. The Australian executive authority in these matters is the Department of Supply.

(ii) *Financial.* Details of defence expenditure for 1962-63, and the allocation of the Defence Vote for 1963-64 are set out in the following table.

DEFENCE EXPENDITURE
(£'000)

Service or Department	Maintenance, aid pro- grammes, etc.	Capital material requirements, machinery, plant and equipment	Capital buildings, works and acquisition of sites	Total expenditure
DEFENCE EXPENDITURE, 1962-63				
Defence	1,572	1,125	120	2,817
Navy	33,311	14,462	1,619	49,392
Army	53,577	10,828	3,431	67,836
Air	47,652	16,141	3,652	67,445
Supply	17,939	2,613	2,503	23,055
Other	3,305	162	42	3,509
Total	157,356	45,331	11,367	214,054

DEFENCE VOTE, 1963-64

Defence	1,933	45	29	2,007
Navy	36,014	17,127	1,368	54,509
Army	60,261	14,164	3,892	78,317
Air	50,751	26,413	3,354	80,518
Supply	24,594	3,273	2,672	30,539
Other	5,547	185	49	5,781
Total	179,100	61,207	11,364	251,671

(iii) *Personnel Strengths.* The personnel strengths of the Services at 31st March, 1964, are shown in the following table.

PERSONNEL STRENGTHS: SERVICES, MARCH, 1964

Category	Navy	Army	Air Force	Total
Permanent Forces	12,317	23,492	16,387	52,279
Citizen Forces	5,398	27,296	828	33,439
Total Forces	17,715	50,788	17,215	85,718

4. *Australian Forces Serving Overseas.*—Australia has participated with the United Kingdom and New Zealand in the Commonwealth Strategic Reserve in Malaya since it was first established in 1955. The strength of the Australian component normally serving with the Reserve is as follows:—Navy—two destroyers or frigates, with an annual visit by an aircraft carrier; Army—one infantry battalion and supporting units; Air Force—one light bomber squadron, two fighter squadrons and supporting units. At the request of the Federation of Malaysia, the Strategic Reserve continues to be stationed in Malaya to assist in border security operations against the communist terrorists.

The Malaysian Government has recently requested the Australian Government, and it has agreed, to provide additional forces to the Strategic Reserve to assist Malaysian and British forces in the defence of the Federation's territorial integrity and political independence. Australian forces will provide assistance in countering the threat of seaborne infiltration of

insurgents along the coasts of Sarawak and Sabah, for engineering construction in the Borneo States, for helicopter support of the security operations against terrorists along the northern border of Malaya and some air transport and anti-aircraft defence support.

In pursuance of its obligations under the SEATO Treaty, Australia has also deployed to Thailand, at the invitation of the Government of Thailand, a contingent of Sabre fighter aircraft, and a party of Army engineers is also assisting in the construction of an airfield for medium range transport aircraft at Mukdahan. A small number of Army instructors has also been provided, at the invitation of the Government of South Vietnam, to assist that country in training for jungle warfare, village defence and other related activities.

§ 2. Naval Defence

1. **General.**—Prior to 1901, naval defence systems were organized under the State Governments. Information regarding these systems is given in Year Book No. 2, page 1084. An outline of the development of Australian Naval policy is given in Year Books No. 3, page 1060, and No. 12, page 1012. An account of the building of the Australian Navy, its cost, the compact with the Imperial Government, and other details appears in Year Book No. 15, pages 921–3. The growth and the activities of the Royal Australian Navy during the 1939–45 War are shown in Year Book No. 36, pages 1023–7.

Under the provisions of the Commonwealth of Australia Constitution Act, the Minister of State for the Navy administers the Department of the Navy. Under the *Naval Defence Act* 1910–1952, the Royal Australian Navy is administered by the Naval Board. The Naval Board consists of the Minister as Chairman, four Naval Members, and the Secretary, Department of the Navy.

Strong links with the Royal Navy are maintained by a constant exchange of officers for extended tours of duty, and by a full exchange of information and ideas. A liaison staff is maintained by the Royal Australian Navy in London, and by the Royal Navy in Australia. Advanced training and staff courses in the United Kingdom are provided by the Royal Navy for Royal Australian Navy officers.

A liaison staff is also maintained by the Royal Australian Navy in Washington and a comprehensive exchange of information is provided by this link. Staff courses in the United States are also attended by officers of the Royal Australian Navy.

The defined limits of the Australia Station are as follows.

Eastern—from 3° 30' North, 169° East, south to 1° South, thence east to 170° East, thence south along this meridian to 30° South, thence to 45° South, 160° East, thence south along this meridian.

Northern—from 3° 30' North, 169° East, west to 125° East, thence south to the coast of Celebes, thence west along the coast of Celebes to 120° East, thence south along this meridian to 10° South, thence west to 78° East.

Western—from 10° South, 78° East, south along this meridian.

2. **Ships of the Royal Australian Navy.**—The following ships were in commission or in reserve in March, 1964.

In commission:—*Melbourne*—aircraft carrier; *Sydney*—fast troop transport; *Supply*—fast fleet replenishment tanker; *Anzac*, *Vampire* and *Vendetta*—destroyers; *Stuart*, *Parramatta*, *Quiberon*, *Yarra*, *Diamantina* (training) and *Gascoyne* (training)—frigates; *Kimbla* (trials)—boom defence vessel; *Hawk*, *Gull*, *Ibis*, *Teal*, *Curlew* and *Snipe*—minesweepers; *Bass* and *Banks*—general purpose vessels; *Paluma* and *Moresby*—survey vessels.

In reserve:—*Arunta* and *Tobruk*—destroyers; *Culgoa*, *Queenborough*, *Quickmatch*, *Barcoo* and *Swan*—frigates; *Kangaroo*, *Karangi*, *Kookaburra* and *Koala*—boom working vessels; *Sprightly*—fleet tug.

Under dockyard control:—*Derwent*—frigate (completing).

3. **Ships' Service Outside Australian Waters.**—During the year ended March, 1964, H.M.A. Ships *Melbourne*, *Supply*, *Vampire*, *Vendetta*, *Voyager*, *Yarra*, *Parramatta* and *Quiberon* served on the Far East Station as units of the Commonwealth Strategic Reserve with headquarters at Singapore. H.M.A. Ships *Diamantina*, *Gascoyne*, *Hawk*, *Gull*, *Ibis*, *Teal*, *Curlew* and *Snipe* also made visits beyond the limits of the Australia Station.

4. **Personnel.**—The authorized establishment strength of the Royal Australian Navy for 1963–64 is 14,300 comprising 1,539 officers and 12,761 ratings. In March, 1964, the actual strength of the permanent Naval Forces was 1,218 officers and 10,385 ratings. One hundred and twenty-six cadet midshipmen, including 31 not on pay, were undergoing training at the Royal Australian Naval College. Sixteen officers and 487 ratings were serving in the Women's Royal Australian Naval Service. Eighty-five native ratings were serving in the Papua and New Guinea Division of the Royal Australian Navy. Reserve strength in March, 1964, comprised 963 officers and 4,435 ratings, of whom 53 officers and 36 ratings were serving full-time.

The established personnel strength of the W.R.A.N.S. is 17 officers and 500 ratings. They serve in the shore establishments in the following categories: radio-operators, regulating, writers, stores assistants, sick berth attendants, motor transport drivers, Wrans (radar plot), cooks and stewards.

Members of the Royal Australian Naval Reserve are the drilling reserve of the Citizen Naval Forces. They carry out weekly training and 13 days' annual continuous training. Officers are commissioned and may serve until retiring age is reached. Ratings engage for periods of three years. Other branches of the Citizen Naval Forces are the R.A.N. Emergency List, Royal Australian Fleet Reserve and Royal Australian Naval Volunteer Reserve. These are a non-drilling reserve, but members may volunteer for periods of annual continuous training. Pay for members of Reserve Forces is approximately that paid to members of the Permanent Naval Forces. Special courses and service for long periods are available to all selected Reservists.

The Papua and New Guinea Division of the Royal Australian Navy was inaugurated in 1951. It is based at H.M.A.S. *Tarangau*, Manus Island, and consists of indigenous ratings from all districts of Papua and New Guinea.

5. **Fleet Air Arm.**—The Fleet Air Arm of the Royal Australian Navy is maintaining two front line squadrons embarked in the operational carrier H.M.A.S. *Melbourne*. This ship is fitted with an angled deck, steam catapult and mirror deck-landing sights. Training and support squadrons for H.M.A.S. *Melbourne's* Sea Venom jet all-weather fighter and ground attack aircraft and Gannet turbo-prop anti-submarine aircraft are based at the Naval Air Station H.M.A.S. *Albatross* at Nowra, New South Wales. Westland Wessex anti-submarine helicopters have been introduced into the Fleet Air Arm and are embarked in H.M.A.S. *Melbourne*. Training and support squadrons for the helicopters will also be based at the Naval Air Station.

6. **Ship Construction and Repair.**—There are two naval dockyards, at Garden Island, New South Wales, and at Williamstown, Victoria. Also the dockyard at Cockatoo Island which is operated by the Cockatoo Docks and Engineering Company Pty. Ltd., by agreement with the Commonwealth, carries out considerable naval work.

Two anti-submarine frigates have recently been completed, one at Cockatoo Island which commissioned in June, 1963, and the other at Williamstown which commissioned in April, 1964. All three dockyards are also engaged on ship refitting work for the Navy.

A new survey vessel, carrying special modern equipment including a helicopter, was built at the State Dockyard, Newcastle, New South Wales and commissioned in March, 1964.

Included in the present ship construction plan is the building of a 15,000 ton escort maintenance ship at Cockatoo Island. Four submarines of the *Oberon* class are being obtained in the United Kingdom. Of these, the first two are under construction, and tenders have been called for the remainder. In the United States, two *Charles F. Adams* class destroyers are being built for the Royal Australian Navy at the DeFoe Ship Building Yard and the construction of a third is to commence in 1964.

7. **Naval College.**—The Royal Australian Naval College, transferred in 1930 from Jervis Bay, A.C.T., to Flinders Naval Depot, was re-established at Jervis Bay in January, 1958, and was commissioned as H.M.A.S. *Creswell*.

8. **Training Establishments.**—H.M.A.S. *Cerberus* at Crib Point, Westernport, Victoria, is the basic training establishment for adult ratings in the permanent forces, while several advanced training schools are established in Sydney, New South Wales.

H.M.A.S. *Leeuwin* at Fremantle, Western Australia, is the junior recruits training establishment for the permanent forces. A large proportion of instructional hours is devoted to school subjects, and the remaining instructional time is basic naval training and disciplinary training, so that on completion of training ratings will be ready to undergo technical and specialist courses.

H.M.A.S. *Nirimba*, at Quakers Hill, New South Wales, is the Apprentice Training Establishment which provides secondary education as well as training in trades in which the lads will be employed during their service in the Royal Australian Navy.

§ 3. Military Defence

1. **General.**—(i) *State Systems.* A detailed historical account of the Australian defence forces prior to federation appears in Year Book No. 2, pages 1075–80. *See also* Year Book No. 12, page 999.

The strength of the military forces of the States at 31st December, 1900 (the eve of federation), exclusive of cadets, reservists, and rifle club members, was—New South Wales, 9,338; Victoria, 6,335; Queensland, 4,028; South Australia, 2,932; Western Australia, 2,696; Tasmania, 2,024; total for Australia, 27,353.

(ii) *Commonwealth Systems.* Under the terms of the Commonwealth of Australia Constitution Act, the Commonwealth took over control of defence matters in March, 1901. The growth of the Commonwealth Military Forces may be considered to have taken place in a number of phases. For particulars of the phases which cover the period from the welding together of the military forces of the States into one homogeneous Army in 1902 up to the re-establishment of the Military Board and the organization of Commands after the 1939–45 War, *see* Year Book No. 46 and earlier issues.

Members of the Commonwealth Military Forces have taken part in the following campaigns:—the South African War, 1902; the First World War, 1914–1918; the Second World War, 1939–1945; Korea, 1950–1954; Malaya, 1955–1960.

In 1960, a complete re-organization of the Australian Military Forces was undertaken. The re-organization involved the reshaping of the Army by:—the adoption of a pentropic divisional organization; increasing the Regular Field Force; reducing the command, training and administrative structure; and converting the Citizen Military Forces to a wholly volunteer force and eliminating national service training which was introduced in 1951 and suspended in 1959–60.

2. **Organization.**—Army Headquarters is responsible for the policy and control of the Australian Military Forces. The Military Board consists of the Minister for the Army, President; the Chief of the General Staff; the Adjutant-General; the Quartermaster-General; the Master-General of the Ordnance; the Deputy Chief of the General Staff; the Citizen Military Forces Member; and the Secretary, Department of the Army. After the 1939–45 War, Command Headquarters were established to implement Army Headquarters policy and to command and administer those units placed under their authority. Command Headquarters are established in the mainland capital cities of Australia. The geographic extent of Commands is as follows.

Northern Command—the State of Queensland, a small part of northern New South Wales, and the Territory of Papua and New Guinea.

Eastern Command—the State of New South Wales, less those parts included in Northern, Southern, and Central Commands.

Southern Command—the State of Victoria, the State of Tasmania, and part of southern New South Wales.

Central Command—the State of South Australia, plus a portion of south-western New South Wales.

Western Command—the State of Western Australia.

Northern Territory Command—the Northern Territory.

The basic formation in the re-organized Army is the pentropic division, which is designed to have improved tactical capabilities with increased mobility and flexibility under conditions of tropical warfare. The pentropic division consists of five battle groups, each under the direct command of the divisional headquarters. Each battle group has, as its basic component, an infantry battalion of larger size and greatly increased fire-power compared with the infantry battalion which existed prior to the re-organization. In addition to the strengthened infantry battalion, each battle group includes supporting elements such as armour, artillery, engineers, signals, etc.

The general structure of the Army is divided between Field Forces and the Australian Support Area organization (home defence, training and command, and administrative units). The main field force components are as follows.

- (a) In Australia, two Regular Army battle groups with a third in the process of being raised, and eight Citizen Military Forces battle groups. In addition, there are combat support and communication zone supporting units. Two pentropic division headquarters, one Regular Army/Citizen Military Force and one Citizen Military Force, enable grouping of battle groups as pentropic divisions.
- (b) A restricted Regular Army battalion in Malaysia as a part of the British Commonwealth Far East Strategic Reserve.
- (c) A Regular Army anti-aircraft battery and an engineer construction group in Malaysia at the request of the Malaysian Government.

Regular Army Forces in Papua-New Guinea consist of a battalion of the Pacific Islands Regiment with a number of small supporting units. Action is being taken to raise a second battalion.

3. **Strength of the Australian Military Forces.**—The effective strength at 31st March, 1964, was—Australian Regular Army (including 815 Pacific Islanders and 760 Women's Services), 23,492; Citizen Military Forces, 27,296.

4. **Military Training Systems.**—(i) *The Staff College.* Until 1938, the training of staff officers was carried out in the various Military Districts throughout Australia, except in cases where officers were selected from time to time to attend courses abroad. In 1938, an Australian Command and Staff School, located in the original Officers' Mess at Victoria Barracks, Sydney, was established. Between 1939 and 1945, the training of staff officers was carried out under varying conditions by different schools in accordance with the changing needs of the war.

Early in 1946, the Staff School (Australia) was established at Seymour, Victoria, and redesignated the Staff College in conformity with other Commonwealth training establishments for training officers for command and staff appointments. The College was later moved to Queenscliff, Victoria, where it is at present situated. From 1965 the course will be held annually and will be of twelve months duration. The normal intake is 50 students, and, on successfully completing the course, an officer is awarded the symbol "psc". The course is designed 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.

Included in the 1965 course will be students from the United Kingdom, Canada, New Zealand, India, Pakistan, Ceylon, United States of America, Thailand, Malaysia and the Philippines. Vacancies on each course are reserved also for officers who may be nominated by the Royal Australian Navy, the Royal Australian Air Force and the Commonwealth Public Service.

In order to ensure common standards in tactical doctrine and staff and command training throughout the Commonwealth of Nations, liaison is maintained with other Staff Colleges, and to this end there is also a reciprocal exchange of instructors between the United Kingdom and Australia. An instructor is also provided by New Zealand.

(ii) *The Royal Military College.* The Royal Military College was established in 1911 at Duntroon in the Australian Capital Territory for the purpose of providing trained officers for the Army. The conditions of entry are laid down in the Royal Military College Regulations. The length of the normal course is four years. While at the College, Staff Cadets are wholly maintained, and, in addition, receive payment increasing with each year of the course. The course of instruction is organized into military and civil departments, and the instructional staff comprises officers of the Army and civilian professors. On graduation, cadets are appointed lieutenants in the Australian Regular Army. The College also trains New Zealand cadets for commissions in the New Zealand Permanent Forces.

(iii) *The Officer Cadet School.* The Officer Cadet School was established in 1951 at Portsea, Victoria, for the purpose of speeding up the production of junior regimental officers for the Australian Regular Army. Serving members of the Australian Regular Army, the Citizen Military Forces, and civilians between the ages of 18 and 23 years are eligible to apply for entrance. A special entry provides for candidates up to 25 years. The course is of 44 weeks' duration, and, on graduation, cadets are appointed second-lieutenants in the Australian Regular Army. Graduates normally proceed to further training at the Army School of the Arm and Service to which they have been allotted, before being posted to regimental duties.

(iv) *The Women's Royal Australian Army Corps School.* The W.R.A.A.C. School, established in 1952 at Mildura, Victoria, moved to Mosman, New South Wales, in 1958. It has three wings, one whose primary task is the training of officer cadets for the W.R.A.A.C., one for the training of non-commissioned officers at all levels and for other special courses, and one which is a basic training wing. The officer cadets are selected from eligible applicants, who may be serving members between 21 and 32 years of age, or civilians between 21 and 30 years of age. The course is of six months' duration and, on graduation, cadets are appointed lieutenants in the Women's Royal Australian Army Corps.

(v) *The Army Apprentices' School.* The Army Apprentices' School was opened in 1948 at Balcombe, Victoria, with the aim of training youths as skilled tradesmen for the Australian Regular Army, and to form a background for an Army career with prospects of promotion. The course is open to boys between the ages of 15 and 17 years and provides training in a number of highly skilled trades. A three-year course of intensive theoretical and practical work at the Apprentices' School is followed by one year in an appropriate Army workshop or technical unit. At the end of their third year, boys are given their Army trade test and also take the Victorian Apprenticeship Commission's final grade public examinations, which ensures that they will be accepted as qualified tradesmen in civil life when they eventually leave the Army. In addition to trade training, the Apprentices' School provides general educational facilities up to the School Leaving Standard.

(vi) *Other Schools.* Army Schools have been established for the major Arms and Services for the purpose of training officers and other ranks in the up-to-date techniques of their own Arm or Service, to qualify them for promotion requirements and to produce trained instructors. Courses at Army Schools are conducted for members of both the Australian Regular Army and the Citizen Military Forces.

The following Army Schools have been established:—Jungle Training Centre, Armoured Centre, School of Artillery, School of Military Engineering, Transportation Centre, School of Military Survey, School of Signals, Infantry Centre, Army Intelligence Centre, Royal Australian Army Service Corps Centre, Royal Australian Army Medical Corps School of Army Health, Royal Australian Army Ordnance Corps School, Royal Australian Electrical and Mechanical Engineers' Training Centre, School of Music, and Air Support Unit (Army Component).

5. *Women's Services.*—In July, 1950, approval was given for the enlistment of women into the Australian Regular Army on a limited scale. Enlistment into the Royal Australian Army Nursing Service commenced in November, 1950, and into the Australian Women's Army Corps early in 1951. In February, 1951, the Royal Australian Army Nursing Service became a Corps and was designated the Royal Australian Army Nursing Corps (R.A.A.N.C.). During June, 1951, the Australian Women's Army Corps was redesignated the Women's Royal Australian Army Corps (W.R.A.A.C.). The Women's Services in the Australian Regular Army now comprise two Corps only, the Royal Australian Army Nursing Corps and the Women's Royal Australian Army Corps.

Women's Services are incorporated in the Citizen Military Forces, and one company of the Women's Royal Australian Army Corps is located in each Command excluding Northern Territory Command. Companies of the Royal Australian Nursing Corps are located in each Command excluding Northern Territory Command.

6. *The Australian Cadet Corps.*—The Australian Cadet Corps is a voluntary organization. It serves as a training ground to provide, to some extent, the future officers and non-commissioned officers of the Australian Military Forces, and, as such, occupies a foremost position in the scheme of national defence. The Australian Cadet Corps, however, does not form part of the Australian Military Forces. School Cadet units are raised at educational establishments throughout the Commonwealth and Papua and New Guinea, except in the Northern Territory. The minimum age for enrolment is the year in which the applicant reaches the age of 14 years, and cadets, who, in the large majority of schools receive a free issue of A.M.F. pattern uniform, may remain in the Cadet Corps until they cease to be pupils of the educational establishments concerned. A few units retain their own pattern school uniform and are not issued with A.M.F. pattern uniforms. Provision is made for the appointment of officers, cadet under-officers, warrant and non-commissioned officers on an authorized establishment scale from within school units. School Cadet units may be, and in many cases are, affiliated with Citizen Military Force units.

The establishment of the Corps is 39,000 all ranks, and at 25th March, 1964, comprised 315 School Cadet units with a posted strength of 38,294, all ranks.

§ 4. Air Defence

1. **General.**—A statement regarding the preliminary steps taken in connexion with the development of air defence appears in Year Book No. 18, page 610, and one on the expansion and development and zones and operations of the Royal Australian Air Force during the 1939–45 War in Year Book No. 36, page 1027.

2. **Administration and Organization.**—(i) *General.* The Air Board is responsible, subject to approved policy, for the control, organization and administration of the Royal Australian Air Force, and is constituted as follows:—Chief of the Air Staff, Air Member for Technical Services, Air Member for Personnel, Air Member for Supply and Equipment, and the Secretary, Department of Air.

Headquarters of the Royal Australian Air Force is in Canberra. A R.A.A.F. representative is located in London, and Air Attachés are located in Paris and Washington.

(ii) *Commands.* The units of the Royal Australian Air Force are organized into the following two functional Commands throughout Australia and its Territories.

Operational Command—responsible for the command of operational units and the conduct of their operations within Australia and its territories.

Support Command—responsible for the command of training units, supply and servicing units; recruitment and individual training in the R.A.A.F.; and supply and servicing, including technical servicing of the R.A.A.F. in Australia.

(iii) *Formations and Units.* The organization of the Royal Australian Air Force includes the following types of formations and units.

Formations—comprising a headquarters unit to control the activities of a number of units at one location; each formation has a base squadron which provides common services to all units at the location.

Flying Squadrons—bomber, fighter, transport, helicopter and maritime reconnaissance squadrons which undertake the operational and, in conjunction with operational conversion units, the operational training flying commitments of the R.A.A.F.

Operational Conversion Units—specializing in operational conversion training of aircrew for the bomber and fighter squadrons.

Aircraft Depots—specializing in major overhauls, etc., of aircraft and equipment and relieving flying unit ground staff of these commitments.

Stores Depots—centrally located depots to which stores and equipment ordered by the R.A.A.F. are delivered for distribution to units.

Flying Training, Ground Training, Navigation, Radio and Air Armament Training Units—specializing in the aircrew and ground staff training required by the R.A.A.F.

Airfield Construction Squadrons—specializing in the construction of R.A.A.F. aerodromes and associated buildings and works services.

Royal Australian Air Force Academy—the training college for officer cadet entrants to the R.A.A.F.

Telecommunications Units—responsible for the communications services of the R.A.A.F.

R.A.A.F. Staff College—trains specially selected R.A.A.F. officers for higher staff and command posts.

3. **Aircraft.**—The aircraft which are at present being used in the Royal Australian Air Force are: bomber squadrons—Canberra; fighter squadrons—Avon Sabre (the R.A.A.F. is currently re-equipping with Mirage III fighters); transport squadrons—Dakota, Hercules and Metropolitan (the R.A.A.F. is currently acquiring a squadron of Caribou aircraft); maritime reconnaissance squadrons—Neptune; utility helicopter squadron—Iroquois helicopters; training—Avon Sabre, Canberra, Dakota, Meteor, Vampire and Winjeel.

4. **Personnel.**—The Royal Australian Air Force comprises an operational element and a support element. At 1st April, 1964, establishment posts totalling 17,283 had been authorized. On the same date, the enlisted strength of the Royal Australian Air Force was as follows: Permanent Air Force, 16,387; Citizen Air Force, 828; and General Reserve, 16,731. The preceding figures include the Women's Royal Australian Air Force which was separately established at 854 posts on 1st April, 1964, and had reached an enlisted strength of 784 members by that date.

§ 5. Department of Supply

1. **General.**—On 17th March, 1950, the Department of Supply was created to take over the functions of the former Department of Supply and Development, except those relating to the Bureau of Mineral Resources, Geology and Geophysics, which were transferred to the Department of National Development on that date. The Department of Supply and Development had been formed in April, 1948, to take over the munitions and aircraft activities of the Department of Munitions and the supply activities of the Department of Supply and Shipping. To these were added the design and inspection activities of the Department of the Army in February, 1950.

On 11th May, 1951, the munitions and aircraft production and the defence production planning activities of the Department were transferred to a newly created Department of Defence Production. The Department of Supply continued to exercise the remaining functions except shipbuilding, which was transferred to the Department of Shipping and Transport. In April, 1953, the control of materials used in producing atomic energy was vested in a newly created Australian Atomic Energy Commission, which was administered by the Minister for Supply until October, 1956, when it became the responsibility of the Minister for National Development. In March, 1958, responsibility for the production of aluminium was transferred to the Department of National Development. The Australian Aluminium Production Commission, the executive body appointed to carry out this function, became responsible to the Minister for National Development as from that date.

On 24th April, 1958, the Department of Defence Production was abolished, and the functions of that Department were re-transferred to the Department of Supply. References to those functions and to the activities of the various branches and establishments of the former Department of Defence Production are contained in Year Book No. 44, pages 1059–61. On 11th March, 1959, the design and inspection functions were re-transferred to the Department of the Army.

On 18th December, 1959, the Department assumed responsibility for the operation and management of space tracking stations in Australia on behalf of the United States National Aeronautics and Space Administration. On 29th March, 1962, Australia became a foundation member of the European Launcher Development Organisation, and the Department accepted responsibility for the test firing of the launching rocket for that Organisation's communications satellite, using the facilities of the Woomera Rocket Range.

2. **Functions of the Department.**—The functions of the Department of Supply include the following.

Defence research and development, including the operation of the Joint United Kingdom—Australia Weapons Research Project, and Australian research and development through the Weapons Research Establishment, the Aeronautical Research Laboratories, the Defence Standards Laboratories and associated establishments.

Manufacture, acquisition, provision and supply of munitions (including aircraft) and miscellaneous goods and services required by the defence forces.

Arrangement of contracts for the supply of goods and the performance of services.

Operation and management of factories, workshops and undertakings concerned in the production of munitions (including aircraft), clothing, canvas-ware and other defence goods.

Operation and management of space tracking stations in Australia on behalf of the United States National Aeronautics and Space Administration.

Test firing of the launching rocket for the European Launcher Development Organisation's communications satellite, using the facilities of the Woomera Rocket Range.

- Acquisition, maintenance and disposal of strategic materials.
- Planning and establishment of manufacturing facilities for the production of munitions and other defence goods.
- Investigation and development of Australian sources of supply in connexion with defence.
- Sale or disposal of surplus Commonwealth property other than land or buildings.
- Provision of Commonwealth transport facilities outside the Australian Capital Territory and the Northern Territory.
- Provision and control of stores required for or in connexion with matters administered by the Department of Supply, and general storage for other Departments as required.
- Provision of security services within the Department.
- Arrangements for ascertaining costs and the control and limitation of profits in connexion with the production of munitions and other defence goods.

3. *Act Administered.*—The Minister for Supply administers the *Supply and Development Act 1939–1948*, except insofar as it concerns the building (see also Chapter XV., p. 554, of this volume), repair and maintenance of merchant ships and the building, extension, alteration, repair and maintenance of shipyards, drydocking and repair facilities for merchant ships.

4. *Research and Development Branch.*—(i) *General.* The Research and Development Branch, which is under the control of the Chief Scientist, is responsible for research and scientific development in relation to war *matériel*, including the operation of the Joint United Kingdom—Australia Weapons Research Project. The Chief Scientist is also the Chairman of the Joint Project Board, which is responsible for the administration of the Joint Project undertaking. The headquarters of the Branch is situated in Melbourne, and the following establishments are included in the Branch:—(a) Weapons Research Establishment, Salisbury, South Australia; (b) Defence Standards Laboratories, Maribyrnong, Victoria, Finsbury, South Australia, and Alexandria, New South Wales; (c) Aeronautical Research Laboratories, Fishermen's Bend, Victoria.

(ii) *Weapons Research Establishment, Salisbury, South Australia.* This establishment, which occupies an area of about six square miles, includes Edinburgh Airfield, where accommodation is provided for a unit of the R.A.A.F., which carries out the experimental and other flying required. Extensive facilities have been provided for branches of British firms which have contracted with the British Ministry of Aviation to develop weapons systems or components.

The Establishment has four main sections, namely the Trials Wing, the Space Physics Wing, the Weapons Research and Development Wing and the Engineering Wing. The Trials Wing is concerned with the operation, development and instrumentation of the Woomera Range, also the planning, execution and assessment of trials. The Space Physics Wing undertakes the operation of United States satellite and space tracking stations throughout Australia and conducts research and development in support of the Range, including investigations into the characteristics of the upper atmosphere using sounding rockets. The Weapons Research and Development Wing is concerned primarily with Australian-initiated defence research, but assistance is also given with some phases of the Joint Project programme. The Engineering Wing provides the design and manufacturing effort required to support the work of the Establishment and the Range.

Testing ranges have been established at Woomera, which is approximately 280 miles north-west of Adelaide. A township, together with modern amenities such as hospital, school, kindergarten, community store, swimming pool and all sporting facilities, has been built at Woomera to accommodate the range and allied service personnel and their families. The population is approximately 4,500.

(iii) *European Launcher Development Organisation (ELDO).* By virtue of the major facilities at Woomera for launching space vehicles, Australia has become a member of ELDO, which has been established with the object of developing a launching vehicle for placing satellites in orbit for peaceful purposes. Other members of ELDO are Britain, Belgium, the Federal Republic of Germany, France, Italy and the Netherlands.

(iv) *United States Space Projects.* Agreements have been signed by the Australian and United States Governments for a co-operative programme for the establishment and operation in Australia, for scientific purposes, of facilities for space vehicle tracking and data recording. Space tracking, telemetry and command stations have been established

at Island Lagoon, near Woomera, and at Carnarvon, Western Australia, while other stations are in course of construction near Canberra, at Tiddinbilla and Orroral Valley. A small mobile station is also being set up at Darwin. All these are an integral part of the world-wide network of tracking and data recording stations being established by the United States National Aeronautics and Space Administration to support its programme for manned space vehicles, scientific satellites and deep space probes.

(v) *Defence Standards Laboratories.* The broad function of these Laboratories is to provide a scientific service to the Armed Services, Civilian Defence and the factories, branches and establishments of the Department of Supply. It also provides trained groups in specialist fields for which there is no counterpart elsewhere in Australia. This service covers problems arising in the provision and use of defence *matériel* and is given generally within the fields of chemistry, physics, metallurgy and engineering and, to a limited extent, in those of bio-chemistry and physiology.

(vi) *Aeronautical Research Laboratories.* The work of these Laboratories lies in the fields of: (a) aeronautics; (b) guided missiles; and (c) branches of engineering appropriate to the special facilities, resources, or experience resulting from (a) and (b). In particular it comprises aerodynamics, including wind tunnel, free flight model and actual flight testing; structures of aircraft and missiles; metals and other materials used in the construction of airframes and engines; engines of the air-breathing type used for the propulsion of aircraft or missiles; human engineering studies relating to the operation of aircraft and guided missiles; research and development related to Australian-initiated guided missiles; and operational assessment studies on devices and techniques employed or proposed for the defence of Australia.

5. *Production.*—(i) *Munitions.* The Department is responsible for the production of a wide range of munitions required by the Armed Services. Production is carried out substantially in Government factories, although some orders, mainly for components, are placed with private industry.

The following Government factories are currently in operation:—Ammunition—Footscray, Victoria; Explosives and Filling—Albion and Maribyrnong, Victoria; Mulwala and St. Marys, New South Wales; Ordnance—Maribyrnong, Bendigo and Port Melbourne, Victoria; Small Arms—Lithgow, New South Wales; Clothing—South Melbourne and Brunswick, Victoria.

The Ammunition Factory produces the complete round of small arms ammunition and also components for larger calibre gun ammunition, including empty cartridge cases; electronic and mechanical fuses and primers. The Explosives Factories produce the various types of explosive compositions and propellants required for gun ammunition, rockets and guided missiles. The Filling Factory at St. Marys fills and assembles into complete rounds of ammunition (other than small arms ammunition) the empty components and materials supplied by the other munitions factories and by private industry.

The Ordnance Factories at Maribyrnong and Bendigo are equipped to produce heavy ordnance equipment, such as naval guns and gun mountings; large turbine gears; steel shell bodies; empty rocket motors for guided missiles; trailers and tank transporters; and other items requiring heavy engineering capacity. As well as work for the Services, the Bendigo Factory is producing equipment for projects of national importance, e.g. control equipment for the Snowy Mountains Hydro-electric Authority, components for marine diesel engines for Australian shipping and large heavy engineering items for the coal, cement and steel industries.

The Port Melbourne Factory builds large marine diesel engines for the Australian ship-building industry. Major forgings and fabrications for these engines are produced at the Ordnance Factories at Maribyrnong and Bendigo.

The Small Arms Factory is equipped to produce the rifles and other small arms required by the Army. Current production is the 7.62-mm. automatic rifle, for which orders have also been received from overseas, and the 9-mm. carbine, which replaces the Owen as the infantry light machine gun.

The Clothing Factories make uniforms, clothing and canvas goods for the three Services and also for the Postmaster-General's Department and some other Commonwealth authorities.

(ii) *Aircraft and Guided Weapons.* (a) *Aircraft and Engines.* Production both in Government factories and in industry of military types of aircraft and aero engines and of other aircraft components required by the Royal Australian Air Force is administered by the Department of Supply. Planning of capacity and the negotiations of contractual

arrangements concerning aircraft modification, repair and overhaul, and for the supply of spare parts and airborne equipment for the R.A.A.F., the R.A.N. and the Army are also functions of the Department.

The following factories are operated by the Department:—The Government Aircraft Factory at Fishermen's Bend, and the Final Assembly Workshops and Test Airfield at Avalon, Victoria; the Airframe Repair Workshops at Parafield and Northfield, South Australia.

The current aircraft production programme at the Government Aircraft Factory comprises the French Mirage supersonic fighter for the R.A.A.F. and the Jindivik radio-controlled target aircraft, which has been or is being supplied to Britain, Sweden and the United States, as well as to the Weapons Research Establishment, South Australia.

Apart from the Government Aircraft Factory, the Commonwealth Aircraft Corporation Pty. Ltd. is the only major aircraft manufacturer in Victoria, and this company is currently producing the French Atar turbo-jet engine for the Mirage fighter and also some sections of the airframe.

Other major activities carried out in the Government factories or by various private contractors are the manufacture of airframe and engine spare parts; the overhaul, repair and modification of military aircraft and engines currently in service with the R.A.A.F., R.A.N. and Army; and the reconditioning and servicing of aircraft instruments and other ancillary equipment.

(b) *Guided Weapons.* The Government Aircraft Factory at Fishermen's Bend has become increasingly engaged in recent years in guided weapons development and production. The first production task undertaken at the Factory in the guided weapons field was the supply of the Malkara anti-tank missile to the British Army. While the Factory is responsible for producing the missile body and control equipment and for final assembly of the completed weapon, the project involves other factories also, e.g. the Ordnance Factory, Maribyrnong, produces the hardware for the rocket motor; the Explosives Factory, Mulwala, supplies the propellant; and the Explosives Factory, Maribyrnong, fills and finally assembles the motor. Private industry has also contributed to the project by supplying vital electronic and other components.

Preparations are in hand for quantity production of the Ikara anti-submarine weapons system for the Royal Australian Navy; some missiles and associated equipment have already been produced for trials purposes.

(c) *Telecommunications.* The Department is responsible for the technical aspects of production of telecommunications and electronics equipment for the Armed Services and for certain other organizations such as S.E.A.T.O. and the Colombo Plan. All production is carried out by the electronics industry. Substantial orders have been placed on local industry for a wide range of telecommunications and electronics equipment. Some of the major projects are the development of pilot models of an improved man-pack transistorized receiver/transmitter for the Army; the manufacture of telegraph relay stations for the R.A.A.F.; the production of major sections of the Ikara weapons system for the R.A.N.; and wind-finding radar equipment for the Bureau of Meteorology. Development contracts are in progress for the local production of high-stability miniaturized electronic components such as sealed crystal holders, fixed and variable resistors, mica and tantalum capacitors and a quartz crystal oscillator.

6. *Contract Board.*—(i) *General.* Under the *Supply and Development Act 1939–1948*, the Contract Board is the authority responsible for the arranging of contracts for the performance of services and the purchase of supplies for the Naval, Military and Air Forces of the Commonwealth, as well as for the Department of Supply. The Board is also responsible for the sale or disposal of all surplus or unserviceable Commonwealth goods approved for disposal. By arrangement, the Board also arranges purchases on behalf of other Commonwealth departments and authorities which desire to use its facilities.

(ii) *The Board and its Administrative Organization.* The Contract Board meets in Melbourne, and comprises representatives of the Departments of Supply, Navy, Army and Air. The Board's administrative organization is the Directorate of Contracts. In each State other than Victoria, there is a District Contract Board with an administrative organization similar to the Directorate of Contracts. The table following shows, in respect of the Contract Board organization, the purchases and realizations from disposals for the years 1961–62 and 1962–63.

**CONTRACT BOARD ORGANIZATION: PURCHASES AND REALIZATIONS
FROM DISPOSALS**
(£)

State	Purchases		Realizations from disposals	
	1961-62	1962-63	1961-62	1962-63
Contract Board, Victoria	39,052,328	33,876,845	1,380,091	1,253,181
District Contract Board—				
New South Wales	7,359,936	6,664,285	1,556,825	1,206,164
Queensland	1,072,749	931,855	315,856	339,588
South Australia	1,709,412	2,089,214	508,433	541,318
Western Australia	357,019	843,685	201,445	187,663
Tasmania	94,887	103,501	39,147	49,131
Total	49,646,331	44,509,385	4,001,797	3,577,045

7. **Defence Supply Planning.**—The central planning authority of the Department is the Planning Branch, whose principal functions are:—

- to plan for and to assist in the development of additional production capacity to meet the Services' munitions requirements for peace and war;
- to provide and administer stockpiles of relevant materials and reserve pools of plant and equipment considered essential for expansion of production in the event of war;
- to prepare and advance co-ordinated production programmes against Service orders and to analyse and interpret achievement against these programmes for the information of the Department and the Services;
- to provide advisory services in the field of instrumentation, machine tools, materials, and inspection to Government factories and contractors engaged in the production of munitions requirements; and
- to administer the national stockpile.

A series of Industry Advisory Committees has been established to advise the Minister and the Department in the development of industrial mobilization plans to meet the Services' *matériel* requirements for mobilization and war. The Committees are:—Ammunition; Electrical; Explosives and Chemicals; Machine Tools and Gauges and Munitions Factory Equipment; Materials; Military Vehicles; Radar and Telecommunications; Weapons and their Equipment; Hard Fibres; Raw Cotton; and Rubber and Allied Materials.

Members of the Committees include industrialists of wide experience and the highest ability in their chosen fields.

8. **Stores and Transport Branch.**—This Branch, administered by a Board of Management and working under the direction of a General Manager, functions as the central storage authority and the central transport authority for all Commonwealth Departments. It is the authority for the arrangement of furniture removals at departmental expense in all States, but not in the Australian Capital Territory or the Northern Territory. It has agents in Canberra and Darwin. It also operates a shipping and customs section and the England-Australia bulk air freight scheme for Commonwealth Departments.

On 30th June, 1963, the Branch had under its control land, buildings and works, vehicles, plant and equipment valued at £11,184,528, and 3,302,000 sq. ft. of storage space, as well as storage facilities for large quantities of chemicals, bulk liquids and explosives.

9. **Finance Branch.**—The total expenditure on Department of Supply activities during the year 1962-63 was £48,690,000, comprising £23,055,000 (net) from Parliamentary appropriations, and £25,635,000 from Trust Fund Accounts. The latter included expenditure of £6,043,000 for Stores and Transport and £18,299,000 in Government Munitions and Aircraft Factories.