

1926.

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA.

10001

JOINT COMMITTEE OF PUBLIC ACCOUNTS.

(Fourth Committee.)

JAMES HARRISON BAYLY, Esquire, M.P., Chairman.

House of Representatives.

JAMES HARRISON BAYLY, Esquire, M.P., Vice-Chairman.

JAMES ALDRIDGE, Esquire, M.P., Member.

NORMAN JOHN OWEN, Esquire, M.P., Member.

WALTER MORRIS ALLEN, Esquire, M.P., Member.

THOMAS PATTERSON, Esquire, M.P., Member.

JOHN HENRY PEARSON, Esquire, M.P., Member.

JOHN HOWARD WEAVER, Esquire, M.P., Member.

Senate.

Senator BENJAMIN BENNETT.

Senator JAMES COL. WILLIAM KINSEY.

C.B.A. V.D.

Senator RICHARD BUNAGOTT.

Senator HAROLD EDWARD BILLOTT, C.B., C.M.G.

D.S.O., D.C.M.

Senator HATTIE SPEAKER FOLEY.

Senator WALTER KINGSMILL.

Senator JOHN DUNGER MILLER.

Senator EDWARD NEEDHAM.

FOURTH GENERAL REPORT.

(Fifth Committee.)

THOMAS PATTERSON, Esquire, M.P., Chairman.

House of Representatives.

HENRY LANK GARDNER, Esquire, M.P., Member.

JOHN HENRY LISTER, Esquire, M.P., Member.

PARKER JOHN MURPHY, Esquire, M.P., Member.

JOHN HENRY FROSTER, Esquire, M.P., Member.

EDWARD CHARLES BURY, Esquire, M.P., Member.

The Honorable Sir GRANVILLE DE LAKE RYAN, Member.

C.B.A. V.D., M.P.

Senate.

Senator HATTIE SPEAKER FOLEY, Vice-Chairman.

Senator WALTER KINGSMILL.

Senator EDWARD NEEDHAM.

Ordered to be printed, 4th March, 1926.

[Cost of Paper :—Preparation, not given ; 860 copies ; approximate cost of printing and publishing, £26.]

Printed and Published for the GOVERNMENT of the COMMONWEALTH of AUSTRALIA by H. J. GREEN, Government Printer for the State of Victoria.

No. 10.—F.2584.—PRICE 9D.

MEMBERS OF THE COMMONWEALTH PARLIAMENTARY JOINT COMMITTEE
OF PUBLIC ACCOUNTS.

(Fourth Committee.)

JAMES GARFIELD BAYLEY, Esquire, M.P., Chairman.

Senate.

- *§Senator BENJAMIN BENNY.
- †Senator Lieut.-Col. WILLIAM KINSEY BOLTON,
C.B.E., V.D.
- †Senator RICHARD BUZACOTT.
- *||Senator HAROLD EDWARD ELLIOTT, *C.B., C.M.G.,
D.S.O., D.C.M.*
- **Senator HATTIL SPENCER FOLL.
- ††Senator WALTER KINGSMILL.
- †Senator JOHN DUNLOP MILLEN.
- *Senator EDWARD NEEDHAM.

House of Representatives.

- JAMES EDWARD FENTON, Esquire, M.P., Vice-
Chairman.
- ¶JAMES AITCHISON JOHNSTON HUNTER, Esquire, M.P.
- NORMAN JOHN OSWALD MAKIN, Esquire, M.P.
- WALTER MOFFITT MARKS, Esquire, M.P.
- THOMAS PATERSON, Esquire, M.P.
- ‡‡JOHN HENRY PROWSE, Esquire, M.P.
- JOHN EDWARD WEST, Esquire, M.P.

* Appointed 5th July, 1923. † Retired 30th June, 1923. ‡ Resigned 28th June, 1923. § Discharged from attendance 20th August, 1924.
|| Discharged from attendance 10th October, 1924. ¶ Discharged from attendance 9th July, 1925. ** Appointed 20th August, 1924. †† Appointed
10th October, 1924. ‡‡ Appointed 9th July, 1925.

(Fifth Committee.)

THOMAS PATERSON, Esquire, M.P., Chairman.

Senate.

- Senator HATTIL SPENCER FOLL, Vice-Chairman.
- Senator WALTER KINGSMILL.
- Senator EDWARD NEEDHAM.

House of Representatives.

- SYDNEY LANE GARDNER, Esquire, M.P.
- JOHN HENRY LISTER, Esquire, M.P.
- PARKER JOHN MOLONEY, Esquire, M.P.
- JOHN HENRY PROWSE, Esquire, M.P.
- EDWARD CHARLES RILEY, Esquire, M.P.
- The Honorable Sir GRANVILLE DE LAUNE RYRIE,
K.C.M.G., C.B., V.D., M.P.

FOURTH GENERAL REPORT

BY THE

JOINT COMMITTEE OF PUBLIC ACCOUNTS.

INTRODUCTORY.

The Fifth Joint Committee of Public Accounts, at the request of the Fourth Committee, has the honour to submit the following Report of that Committee's proceedings during the term of its appointment.

MEMBERS OF THE COMMITTEE.

On 1st March, 1923, Senators William Kinsey Bolton, *C.B.E.*, *V.D.*, Richard Buzacott, and John Dunlop Millen were appointed members of the Committee.

On 9th March, 1923, the following members of the House of Representatives were appointed members of the Committee:—Messrs. James Garfield Bayley, James Edward Fenton, James Aitchison Johnston Hunter, Norman John Oswald Makin, Walter Moffitt Marks, Thomas Paterson, and John Edward West.

These appointments were published in *Commonwealth Gazette* No. 21 of 22nd March, 1923.

At the first meeting of the Committee, held on 14th March, 1923, J. G. Bayley, Esquire, M.P., was elected Chairman, and J. E. Fenton, Esquire, M.P., Vice-Chairman.

On 30th June, 1923, Senators Bolton and Buzacott, who had failed to secure their return as members of the Senate, ceased to be members of the Committee, and on 28th June, 1923, Senator Millen resigned from the Committee.

On 5th July, 1923, Senators Benjamin Benny, Harold Edward Elliott, *C.B.*, *C.M.G.*, *D.S.O.*, *D.C.M.*, and Edward Needham were appointed to fill these vacancies on the Committee.

The following changes in the personnel of the Committee also occurred:—

On 20th August, 1924, Senator Hattil Spencer Foll was appointed to the vacancy caused by the resignation of Senator Benny; on 10th October, 1924, Senator Walter Kingsmill was appointed *vice* Senator Elliott; and on 9th July, 1925, John Henry Prowse, Esquire, M.P., was appointed in place of Mr. Hunter.

MEETINGS OF THE COMMITTEE.

The first meeting of the Committee was held on 14th March, 1923, and the last meeting on 23rd September, 1925. Shortly afterwards the House of Representatives was dissolved and Senators were discharged from attendance.

During its term the Committee held 316 meetings at various places, as under:—

| | | | | | |
|---------------------|----|----|----|----|-----|
| Brisbane | .. | .. | .. | .. | 8 |
| Canberra | .. | .. | .. | .. | 10 |
| Crib Point | .. | .. | .. | .. | 1 |
| Duntroon] | .. | .. | .. | .. | 2 |
| Ipswich | .. | .. | .. | .. | 1 |
| Jervis Bay | .. | .. | .. | .. | 3 |
| Latrobe | .. | .. | .. | .. | 4 |
| Launceston | .. | .. | .. | .. | 1 |
| Lithgow | .. | .. | .. | .. | 3 |
| Melbourne | .. | .. | .. | .. | 253 |
| Newcastle | .. | .. | .. | .. | 1 |
| Newnes | .. | .. | .. | .. | 1 |
| Popo, Papua | .. | .. | .. | .. | 1 |
| Port Moresby, Papua | .. | .. | .. | .. | 2 |
| Sydney | .. | .. | .. | .. | 25 |
| | | | | | 316 |

and examined 169 witnesses.

In conducting its investigations the Committee made many inspections, w referred to in its various reports, and in the course of 13,636 miles by rail, 4,739 miles by water, and 958 miles by

Printed
for ex-
emplo

INQUIRIES COMPLETED.

The Committee submitted to both Houses of Parliament the following Reports :—

Third General Report.

Expenditure on Air Services.

War Service Homes Disposals.

Lithgow Housing Scheme.

Canberra Housing.

Expenditure on Munitions Supply.

Expenditure on the Royal Australian Naval College and the Royal Military College.

Certain Transactions between the Co-operative Estates Limited, of Hobart, and the War Service Homes Commission.

Expenditure on Oil Exploration, Development, Refining, &c., in the Commonwealth and Papua (Part I.—Introduction, Committee's Proceedings, Oil Exploration Work in Papua, Oil Exploration Work in Australia).

The investigation of Certain Transactions between the Co-operative Estates Limited, of Hobart, and the War Service Homes Commission, and certain phases of the Canberra Housing question were undertaken by the Committee at the request of the Government.

When the dissolution of the Ninth Parliament was announced, the Committee had in hand the preparation of Part II. of its Report on the Expenditure on Oil Exploration, Development, Refining, &c., in the Commonwealth and Papua, which part was to deal with Shale Oil, Liquid Fuels, Power Alcohol, &c., and the Commonwealth Oil Refineries Limited, but owing to the limited time at its disposal the Committee was unable to complete this part. In view of the fact, however, that much valuable evidence and information concerning the subject matters of the inquiry had been collected, the Committee placed on record, at its last meeting, the following resolution :—

“That it be a recommendation to the incoming Committee that the investigation of the Expenditure on Oil Exploration, Development, Refining, &c., in the Commonwealth and Papua be continued and completed.”

SUMMARY OF REPORTS PRESENTED.

THIRD GENERAL REPORT.

(Report dated 15th March, 1923.)

The Third General Report outlined the work of the Third Committee, and gave an epitome of the various reports presented to Parliament by that Committee.

EXPENDITURE UPON AIR SERVICES.

(Report dated 28th June, 1923.)

Aviation now occupies an important position both in the development of a country and in its defence ; and as large amounts of public money had been voted by Parliament towards Air Services, the Public Accounts Committee undertook an investigation of this expenditure to ascertain if the money so voted was being spent to the best advantage. Evidence was heard from the principal Naval, Military, Air Force, and Munitions Supply Officers, the Controller of Civil Aviation, representatives of companies engaged in aerial enterprises in the Commonwealth, and others interested in the progress of aviation. The Committee reviewed the activities of the Royal Australian Air Force and the development of civil aviation in Australia, both by governmental and private enterprise, and discussed the necessity for their greater expansion, as well as the desirability of the local manufacture of aircraft.

The organization of the Royal Australian Air Force was found to comprise—Head-Quarters at Victoria Barracks, Melbourne, and one station located at Point Cook, Victoria, consisting of Station Head-Quarters, Flying Training School, Aircraft Dépôt, and Mixed Landplane Squadron. Areas of land for Air Force purposes were also held at Laverton and Corio Bay, Victoria, and at Richmond, New South Wales. The approved establishment of the Force was 53 officers and 300 airmen, but its actual strength was 49 officers and 296 airmen. In addition to the Naval, Military, and Air Force Officers there were also received at Point Cook civilians for training posts for employment with companies engaged in civil aviation in Australia. Qualified pilots to be employed by these companies were also given refresher courses and a charge was made for the training received.

The Committee also ascertained that much work had been accomplished in the surveying of aerial routes, both for strategic and commercial purposes, numbers of areas of land had been acquired along approved routes, and considerable sums had been expended in the preparation of landing grounds. Two aerial mail services were in successful operation, and further services were in contemplation.

The evidence placed before the Committee, together with its own observations, satisfied it that the development of the Air Force was essential for the safety of Australia, but that financial considerations had prevented its greater expansion. Whilst the Committee was of opinion that such money as had been provided had, on the whole, been wisely expended, the existing Air Force could not be regarded as by any means sufficient for this island continent. It was recognized, however, that the whole question of Air Defence had to be considered in conjunction with and in relation to the naval and military requirements of Australia.

Throughout its investigation the Committee had been impressed with the keenness and earnestness displayed by all those connected with the Air Services of Australia, but it found that, although the existing scheme provided for the effective co-ordination of the Naval, Military, and Civil branches, its administration was hampered by the absence of an Air Defence Act framed to provide the necessary power to constitute an Air Force distinct from the Naval and Military Forces, and to facilitate its effective conduct. The Committee therefore recommended the early enactment of such a measure.

Concerning the large quantities of valuable Air Force equipment which had been accumulated by gift from the Imperial Government and by purchase, and which was found to be stored under primitive conditions, the Committee considered that if proper use were to be made of such equipment adequate housing should be provided. Some of the items of general utility included in the equipment—such as ambulances and motor lorries—were being made available to other branches or Departments. This system commended itself to the Committee, as it permitted stocks to be turned over and, where necessary, to be replaced by more modern articles.

The utilization of Air Force Officers and machines for civil aviation purposes was suggested, but the Committee recognized that although civil aviation was a valuable factor in defence, war machines were neither economical nor suitable for civil work, and that the intensive training required for Air Force Officers did not permit of their participation in commercial activities.

It was apparent to the Committee that, although the possibilities of aviation in Australia were infinite, and that much valuable pioneering work was being performed, civil aviation could not, during the initial stages, be regarded as a commercial proposition; and it was of opinion that the existing system of inviting tenders for proposed services over approved routes and requiring tenderers to indicate the amount of subsidy expected, was the best means of affording assistance. The Committee ascertained that current contracts with the Commonwealth were for a period of twelve months only, but in view of the amount of capital and expense involved it considered that a longer period would be more encouraging, and offer greater inducements for contractors to extend their activities. At the same time it was realized that the effective spending of Government subsidies could not be secured in any undertaking unless the recipients themselves were prepared to risk their own resources and make every endeavour to become self-supporting.

Three members of the Committee, however, were of opinion that, as the Commonwealth maintained a Civil Aviation Branch and had to pay large subsidies to contractors, as well as undertaking the surveying of all mail routes and the purchasing or leasing of landing grounds, the Government itself should carry out aerial services. These members considered that the initiation of such a system would lead to greater co-operation between the Naval, Military, and Civil branches.

In the opinion of the Committee the growing importance of aviation for purposes of defence made it essential that Australia should, as far as possible, be self-contained in the manufacture of aeroplanes; and it found that, whilst initial difficulties would be encountered, the manufacture of aircraft, as distinct from the engines, might be successfully accomplished in Australia, but not for some time on a payable basis; and, further, that the production of engines, though shown to be possible, could not be regarded as a commercial undertaking. After reviewing various alternatives, the Committee concluded that the best results would be obtained by setting up, in conjunction with a research establishment, a parent Government factory, well stocked with the necessary raw materials pending their ultimate local production, which would be responsible for experimental and developmental work, and for the organization of engineering works throughout the country, so that in time of emergency the whole strength of Australia's engineering capacity could be readily turned to the efficient production of Defence requirements. Research into the

possibilities of Australia providing the metals, alloys, and other materials required was considered by the Committee to be eminently a governmental responsibility, and one which should receive immediate and serious consideration.

Three members of the Committee were of opinion that for the manufacture of aeroplanes and aeroplane engines sections in Government workshops in various parts of Australia should be organized and equipped to provide for an emergency.

Since the presentation of the Committee's Report to Parliament increased attention has been given to the Air Services of Australia. On 1st September, 1923, assent was given to the *Air Force Act 1923*, constituting the Royal Australian Air Force as an autonomous arm of the Defence Forces of the Commonwealth, and giving power to make regulations for its administration.

The strength of the Royal Australian Air Force has been increased, and additional squadrons have been created; a No. 2 Station has been established at Richmond, New South Wales, and an Experimental Station at Randwick, New South Wales.

Steps have been taken to create a Citizen Air Force, and a number of officers and airmen is being trained.

The establishment of an Aircraft Dépôt at Laverton, Victoria, which will provide store buildings, hangars, and accommodation for personnel, has been commenced, and it is anticipated that the Dépôt will be ready for occupation early in 1926.

Contracts have been let for the reconditioning of various items of aircraft equipment, including aeroplanes, aero-engines, and motor transport vehicles. In the case of the aeroplanes and engines, the reconditioning contracts called for stripping and complete re-building. Much valuable experience in aircraft construction has thereby been gained. An experimental section in connexion with the Royal Australian Air Force has been set up, and the construction of an experimental flying boat, designed by an officer of the Royal Australian Air Force, has been completed. Australian timbers and other local materials have been used almost entirely in its construction, and much useful data have been obtained.

At the time of the Committee's Report two aerial mail services were in operation under yearly contracts. These services covered 1,195 miles in Western Australia—from Geraldton to Derby, and 560 miles in Queensland—from Charleville to Cloncurry. Five services are now being conducted under three-year contracts. The Western Australian route extends from Perth to Derby, 1,442 miles; and the Queensland service from Charleville to Camooweal—a total of 825 miles; whilst the three new services comprise—Adelaide to Cootamundra, via Mildura, Hay and Narrandera—578 miles; Broken Hill to Mildura—189 miles; and Melbourne to Hay, via Echuca and Deniliquin—233 miles.

To further encourage civil aviation it has lately been decided to subsidize the training of civil pilots who are members of aero clubs, and certain machines are to be made available to the clubs for the use and instruction of their members.

WAR SERVICE HOMES DISPOSALS.

(Report dated 22nd August, 1923.)

In the Final Report by the Third Joint Committee of Public Accounts upon the War Service Homes Commission, reference was made to the losses which it was anticipated would follow the Government's change of policy concerning the War Service Homes scheme, whereby all constructional work by day labour was to cease, and limited building operations were to be carried out under the contract system, or were to be handed over to such State organizations as would undertake the erection of the houses. In view of the extensive loss of public money which appeared inevitable from what was practically the compulsory realization of many assets of the Commission, the Fourth Joint Committee of Public Accounts deemed it essential to continue the investigation of the previous Committee, and to go further into this phase of the operations of the War Service Homes Commission.

To carry out the work of disposing of the various assets there was created a Central Disposals Board, practically independent of the Commissioner and his deputies, which took over all stocks from the Commissioner; whilst in New South Wales, Queensland, Western Australia, and Tasmania subsidiary Boards were appointed to supervise and conduct the sales. In Victoria this work was performed by the Central Board.

The principal assets of the Commission which became available for sale through the change of policy comprised:—

Timber Areas and Saw Mills in Queensland—the purchase of which had already formed the subject of a Report by the Public Accounts Committee—Parliamentary Paper 1920, No. 32. The properties originally acquired comprised timber areas and saw-mills at Canungra and Beaudesert, with all the working plant, tramways, &c., and joinery works at South Brisbane.

purchased from Laheys Limited for the sum of £243,600; and timber areas at Beaudesert, Blackbutt, Killarney, Emu Vale, and Samford, with three saw-mills—bought from Mr. J. F. Brett for £220,000, in addition to which Mr. Brett was given the right to the "tops" on all the properties acquired from both vendors. The "tops" were subsequently re-purchased by the Commission from Mr. Brett for £20,000.

Owing to the change in policy practically the whole of these Queensland properties had been standing idle since the time of purchase. The joinery works, after being leased for some months, were sold at the price paid for them. Tenders were called early in 1921 for the working of the timber properties, but none was accepted. One of the Killarney mills had been leased; a few of the timber areas had been sold; some with short-dated leases had been let on royalties; whilst one area had lapsed on account of the Commission's failure to exercise its option of renewal. Two offers were made by Laheys Limited to take back the properties sold by them to the Commonwealth, but neither was considered satisfactory.

At the time of the Committee's investigation tenders for the sale of the saw-mills at Canungra, Beaudesert, Emu Vale, and Killarney, the surrounding freehold land, and the standing timber thereon were under consideration.

Building Material—comprising large quantities of timber, joinery, hardware, iron piping, paints and oils, cement, bricks, tiles, &c., in the various States. The value of such material taken over by the Disposals Board totalled £1,080,673.

Dépôts and Plant—which had been acquired to conduct the day-labour operations of the Commission. The value of dépôts and plant taken on charge by the Disposals Board was set down at £65,539.

Building Land—comprising, at the time of the Committee's investigation, 8,524 allotments, the purchase price of which had been £412,000.

Unallotted Houses—numbering at 30th June, 1923, 204, representing a cost to the Commission of £150,403.

Another of the problems associated with the change of policy was the question of contracts and arrangements for supplies of various building materials entered into by the Commissioner. The work of investigating these contracts, negotiating with the contractors, and advising the Minister concerning the action to be taken was conducted by the Business Adviser, who was also Chairman of the Central Disposals Board. In some instances contracts were terminated, but in many cases contractors refused to release the Commission, which had then either to accept deliveries or pay compensation.

At the time of the Committee's investigation the total amount of compensation which had been paid by the Commission was £148,986. Included in this amount was the sum of £10,000, representing moneys paid to Messrs. R. Driver and Company, which were to be deducted from the amount of any award made in his favour. The total amount awarded to Messrs. R. Driver and Company by the Arbitrators in this case was £121,831 14s. 8d., and although the Commission disputed the decision for some time in the law courts the award was upheld and the amount paid over. This verdict against the Commission was principally due to the non-acceptance of a recommendation by the Joint Committee of Public Accounts in its Report on the Purchase of Saw-mills and Timber Areas in Victoria, wherein it was indicated that in the event of a new contract being entered into with this firm, it should be stipulated that "current market rates" meant "sawmillers' wholesale rates," for on the interpretation of the former phrase rested the expensive litigation which followed.

In presenting its Report on War Service Homes Disposals the Committee indicated that the realization of the assets of the Commission which had been necessitated solely by the drastic change of Government policy had not reached finality, and intimated that still further losses must be expected.

The Committee was of opinion that although the necessity for retaining the Queensland timber properties and mills, which at the outset had given promise of substantial savings, had ceased to exist, the rapidly-diminishing areas of hoop-pine country in Queensland made it advisable for the Government to retain at least the freehold timber-bearing areas, as they were an asset which must undoubtedly appreciate in value.

The Committee found that when the Commissioner embarked on his ambitious building project he did so without taking into consideration the amount of labour and material available. Though a saving on prevailing market rates had been shown on much of the material, prices were then on the crest of a wave, and a fall was imminent. With the change of policy, accumulated stocks had to be disposed of on a rapidly-falling market, and the Commission, with all other

sellers, had to face heavy losses. The Committee was of opinion that the expenses incurred in the disposal work were out of all proportion to the results achieved, and it considered that the creation of a separate and expensive organization to effect sales was quite unnecessary.

The Committee recommended that such areas of land as were not likely to be required for War Service Homes purposes should be gradually and judiciously placed on the market, and disposed of on terms sufficiently liberal to enable artisans and others of limited means to acquire a block for the ultimate erection of their own homes.

The Committee considered the fact that the Commission had so many unallotted houses on hand a grave reflection on the judgment of those responsible for their erection. It approved of the action being taken to dispose of the houses by advertising them for sale—preference of course being given to returned soldiers and others eligible to receive the benefits of the provisions of the War Service Homes Act.

Since the presentation of the Committee's Report the remaining timber properties in Queensland have been sold. With the exception of Canungra, which was disposed of by public tender in one lot, all the properties were offered in small lots at public auction. All building material and the dépôts have also been disposed of. The land not required for War Service Homes purposes has been placed on the open market through the Department of Home and Territories, and a fair quantity has already been sold on ordinary subdivisional terms. The disposal of unallotted houses has, however, presented difficulties, and numbers yet remain on the hands of the Commission for sale.

The losses sustained through these transactions have been published from time to time in the financial statements accompanying annual reports of the War Service Homes Commission.

LITHGOW HOUSING SCHEME.

(Report dated 27th March, 1924.)

During the War, when the Small Arms Factory was working at high pressure, the question of housing the workmen was a very serious problem. Owing to the scarcity of houses in Lithgow it was almost impossible for employees to secure accommodation, and in consequence the management found it extremely hard to retain experienced and competent men. The Commonwealth Government thereupon resolved to proceed with a housing scheme. An area of 130 acres adjacent to the Factory was acquired, and was subdivided into about 400 allotments, with provision for roads, playgrounds, garden plots, &c., and 100 cottages of varying types and sizes were erected. The total cost was approximately £79,587, which included land, tree-planting, and accessory services—such as water supply, sewerage, roads, storm-water drainage, and electric light. The houses have been connected with the water supply and sewerage systems of the town of Lithgow. These services were executed by the local council, and the Commonwealth pays to the municipality the equivalent of rates on account of these utilities. It was intended to connect the settlement with the town gas supply, and gas fittings were installed in the cottages, but notwithstanding repeated representations by the Commonwealth the municipal authorities failed to make good their promises, and stated that the settlement could not be supplied until the gas works were extended. Subsequently a poll of ratepayers decided against such an extension, and in consequence the occupants had to depend upon oil lamps or other illuminants, and the streets remained unlighted. Later the town installed an electric lighting system, and the Council was urged to extend the main to the Littleton Village, as the settlement was called. The Commonwealth was finally forced to do this at its own expense, on an arrangement by which the Council will purchase gradually such lengths of the main as the development of the town will warrant. The work of forming roads, kerbing, guttering and street channelling was undertaken by the Lithgow Council, which agreed to pay half the cost. Owing to lack of progress, the Department had eventually to take over the work and carry it out, on the understanding that half the cost to be contributed by the Council would be reimbursed by periodical deductions from the annual payments made by the Commonwealth to the Council by way of municipal and general rates.

The Joint Committee of Public Accounts, whilst in Lithgow in connexion with an investigation of the expenditure on Munitions Supply, took the opportunity of inspecting the Littleton Village and hearing evidence concerning the scheme, as it was recognized that such information might be of assistance in considering the housing question of the Federal Capital—a matter which was then before the Committee.

The Committee found that difficulties due to war conditions, combined with a shortage of labour and material, had hampered the progress of erecting these cottages, and in consequence they were not available until the urgent need for them had passed. At first the houses were

sought after by the employees, but a change in Defence policy, by which the output of the Factory was greatly decreased, caused considerable reduction in the staff, and as a result it was found necessary to accept suitable members of the general public as tenants. It could not, therefore, be said that the Lithgow Housing Scheme had served its purpose, and it was significant that six months before even the contract for the erection of the cottages had been signed by the Works and Railways Department, the Minister for Defence had issued instructions to reduce considerably the output of rifles from the Factory.

In view, however, of the possible future activity of the Small Arms Factory, and the proposed establishment of a machine gun and pistol section, the Committee was of opinion that the Commonwealth should retain the ownership of the houses.

On visiting the settlement, the Committee was struck by its neglected and unattractive appearance, and, generally speaking, inspection confirmed complaints voiced by the occupants, and indicated inadequate supervision during construction. The amount which it had been found necessary to expend on repairs and maintenance during the first three years of the life of the cottages constituted, in the opinion of the Committee, a grave reflection on the manner in which they had been built. Moreover, the land acquired had a decided slope in one direction, and as the houses had been built on the lower levels difficulty had been experienced in coping with storm water. In few cases had any attempt been made to plant a garden, but the Committee considered that this was not surprising when it was found that the reserves provided in the layout were merely barren patches of vacant land.

As a result of its investigations, the Committee recommended that early action should be taken to make the general appearance of the settlement more attractive by repairing the fencing and painting the cottages. The defects in construction should be remedied, and adequate means provided to dispose of storm water. It was considered that the planting of the reserves would be an incentive to the householders to similarly improve their allotments.

The Committee was of opinion that the finances of the Lithgow Housing Scheme should be placed on a strictly commercial basis, and recommended that a Trust Fund be established for that purpose, and that Parliament be furnished annually with a report and statement of accounts concerning the Scheme.

The Committee was informed that the following basis had been adopted by the Tentative Board of Control of the Lithgow Housing Scheme for assessing rentals :—

Interest on capital outlay, 5 per cent. on actual cost of building, engineering services, and land.

Maintenance at 1 per cent. per annum on building.

Insurance of building at 4s. 4d. per cent. per annum.

Equivalent of water rate, 10s. per residence.

Equivalent of sewerage rate, 26s. per residence.

Equivalent of municipal general rate, including lighting, 14s. 9d. per residence.

Sinking fund on basis of 40 years' life, at 5 per cent., £0. 828 per £100.

Overhead and management expenses, $\frac{1}{2}$ per cent. on total cost.

The cost of the park areas was distributed over the residential blocks, and the total cost of the engineering services was divided by the number of residential blocks to obtain the proportion chargeable to each.

In fixing the rentals for the various residences, the scale above referred to was regarded as a minimum, and slight increases were made for different houses of the same class, according to location or other advantages. The rentals for the three types of houses were approximately as follows :—

Type "A."—Semi-detached, two rooms, kitchen, bathroom, laundry, and pantry, 14s. 6d. per week.

Type "B."—Detached, three rooms, kitchen, bathroom, laundry, and pantry, 17s. 9d. to 19s. per week.

Type "C."—Detached, four rooms, kitchen, bathroom, laundry, and pantry, 21s. 3d. to 22s. 3d. per week.

The houses were let on a fortnightly tenancy, subject to the signing of a simple acknowledgment of tenancy form.

A reduction in rent was suggested to the Committee by representatives of the occupiers, but the Committee considered, in view of the early completion of the electric light and other services, that existing rentals should not be varied, as they were not disproportionate to the accommodation provided.

To improve the appearance of the settlement, repairs and painting of the fences have since been carried out. Owing to lack of funds, however, planting of the reserves has not been done, but an annual competition, with prizes for the best kept gardens, has been instituted to stimulate an interest among tenants in the appearance of the village. The completion of the accessory engineering services has had the effect anticipated, as all the cottages have been occupied for some time, about 50 per cent. being tenanted by factory employees and 50 per cent. by members of the general public. There is at present a waiting list of applicants for the cottages, and in allotting the houses preference is given to employees of the Commonwealth.

No decision has, however, yet been given as to whether the cottages should continue to be leased or whether they should be sold. The appointment of a permanent Board of Control and the establishment of a Trust Fund are contingent upon the decision as to the future ownership of the cottages.

CANBERRA HOUSING.

(Report dated 28th March, 1924.)

In view of the contemplated early transfer of the Seat of Government to Canberra, the Joint Committee of Public Accounts decided to investigate certain phases of expenditure in connexion with the establishment of the Federal Capital, particularly those concerning the housing question. Almost coincident with this decision the Committee received a request from the Minister for Home and Territories for its views regarding rentals which should be charged for houses erected for the accommodation of officers whose duties necessitated their permanent residence at Canberra. The Minister explained to the Committee that in assessing the rentals charged for dwellings erected by the Commonwealth, a deduction of 25 per cent. from the estimated annual value had been made, the decision authorizing this reduction having been based upon a consideration of the increased costs of construction at Canberra, and of the fact that most of the tenants were officers or employees not in receipt of large incomes. Whilst the number of cottages constructed for occupancy by officers was not large, the effect of such reduction in rent was not considerable, but as many houses had to be built prior to the transfer of Parliamentary and Governmental activities to the Federal Capital, it appeared to the Minister necessary that the question of rental should be placed on some permanent and fair basis.

The actual basis upon which rentals were being paid was as follows :—

- Annual value of building, being the amount which at 5 per cent. would in 60 years return interest and capital cost of the dwelling.
- Maintenance, at 1 per cent. per annum.
- Fire insurance, at 4s. per cent. per annum.
- Sewerage, 1s. 3d. in the £1 on the assessed annual value.
- Water supply, 1s. 3d. in the £1 on the assessed annual value.
- Annual value of the land, the value of the blocks being set down at £100 per quarter acre.
- Rates, 3d. in the £1 on the unimproved value of the land.
- Less a rebate of 25 per cent. on the total rental value of the dwelling thus computed.

Under this arrangement tenants are paying between 5 per cent. and 6 per cent. on the cost.

Although the Minister's request applied more particularly to cottages occupied and to be occupied by Commonwealth public servants, it was realized that the wider question of the assessment of rentals at the Federal Capital generally would have to be faced at an early date. To arrive at a basis for assessing rentals, the Committee recognized the necessity for a careful study of the many factors affecting the housing problem—the tenure and value of the land, the cost of construction of the houses, and of the provision of the necessary services such as water supply, sewerage, storm-water drainage, lighting, roads, &c., and the redemption of the costs of such services by means of rates.

Evidence was heard concerning these various factors, and information collected regarding rental bases in other Governmental housing schemes, and the rating systems and amounts levied for various purposes in typical country towns in New South Wales and Victoria. The Committee also heard evidence from officials and workmen regarding the conditions and cost of living at Canberra as compared with Capital cities, and the other disadvantages of residence there—such as the expense of annual holidays, and of medical services, the distance from shopping centres, the lack of facilities for higher education, and the absence of opportunities for placing children in trades or businesses.

In approaching the question of a basis for assessing rentals, the Committee had to keep in mind the fact that road-making, water supply, sewerage, storm-water drainage, electric power and lighting, and other services were being provided ahead of settlement, and had been designed

to meet the ultimate needs of a modern city, although in the first decade actual requirements may be but a fractional part of the completed project. It was obviously impossible, and would be quite unfair, to expect a small initial population--the majority of whom would be public servants compulsorily residing at the Seat of Government--to carry the burden.

In a Governmental scheme where no profit was sought, the Committee pointed out that rentals were dependent mainly on three factors--the value of land, the cost of construction, including accessory services, and rates.

The acceptance of the policy of only leasehold land in the Federal Territory created a position unprecedented in Australia, and rendered, in the opinion of the Committee, any forecast of land values merely speculative. Under the circumstances the assumption of an arbitrary amount was the only course available, and the sum of £100 per allotment, which had been tentatively adopted as a basis for fixing rentals, was considered a reasonable one. Under the *City Leases Ordinance* 1921, 90-year leases were provided for, but during the Committee's investigation this term was extended to 99 years, with reappraisal at the expiration of twenty years, and thereafter at the end of every ten years. The Committee considered, however, that as the progress of Canberra and the ideas of the general public and business men concerning its land values were an entirely unknown factor, the first reappraisal should be made at the end of fifteen years, with a reappraisal at the end of every ten years thereafter. As an inducement to people to take up leases prior to the transfer of the Seat of Government, the Committee recommended that in such cases the first reappraisal be made at the end of fifteen years from the date when Parliament opens at the Federal Capital.

The necessity for reducing costs of construction at the Federal Capital was, in the opinion of the Committee, of paramount importance, and the Committee was emphatic that this could only be accomplished by thorough co-operation and co-ordination of all activities, and continuity of policy and execution. The high costs were attributed, not so much to the price of materials and labour, but to the absence of proper accommodation and continuous employment for the workmen.

In providing residential accommodation, whether in cottages or hostels, the Commonwealth must maintain a proper standard of comfort and convenience, at the same time paying regard to the number of persons who will have to be provided for, taking into consideration the amount of salary received by them. The Committee considered that if workingmen were to be lodged in the city at all, they must have cheaper houses than could possibly be erected under the existing system, and recommended that earnest consideration be given to concrete and other methods of construction. The Committee was also of opinion that as much constructional work would be carried out by the Commonwealth itself for many years, the provision of adequate accommodation for those engaged on this work should be undertaken by the Government, and it suggested that if, after trial, the movable cottages then being supplied proved satisfactory, the provision of further similar structures should be arranged.

Having regard to the circumstances under which officials stationed at Canberra were placed, the Committee recognized that some concession should be made; and, whilst of opinion that residential accommodation should be maintained on a strictly commercial basis, it considered that officers employed at the Federal Capital during the initial stages of its development should not be expected to suffer pecuniary loss by reason of their compulsory transfer to the Seat of Government. The Committee accordingly recommended that a scale of allowances be instituted, which would compensate them for any such disability.

As the main engineering works for water supply, sewerage, &c., had been installed with a large ultimate population in view, it was not to be expected that the small initial population should pay the interest and sinking fund charges on such outlay. The Committee was of opinion that so far as the early residents of the Capital were concerned, they should bear only a *pro rata* charge, calculated on the basis of the population for which the respective engineering works had been planned. Some loss was inevitable in the initial stages of a scheme of this magnitude, designed many years in advance, but under the Committee's proposal, the annual loss on the services would decrease in proportion to the increase of settlement.

To encourage prospective residents, including public servants, to become the owners of their own homes, the Committee considered that, at an early stage, a system of financial assistance should be inaugurated to enable persons to proceed with the erection and purchase of their own houses.

A copy of this Report, together with the files of the Department of Home and Territories, was placed in the possession of the Federal Capital Commission on its appointment. The Department has been in touch with the Commission regarding questions of constructional costs and rents, but until the Commission has had an opportunity of viewing the results of organization recently set up to deal economically with the construction of residences in large numbers, it does not desire to comment upon these matters.

EXPENDITURE ON MUNITIONS SUPPLY.

(Report dated 4th July, 1924.)

Recognizing the importance of Australia being assured of adequate and regular supplies of munitions, the Committee investigated the Expenditure on Munitions Supply.

To acquaint itself with the work being accomplished by the Munitions Supply Branch of the Department of Defence, the Committee visited the Research Laboratories and the various factories controlled by the Munitions Supply Board. It also saw the work in progress in connexion with the construction of new factories at Maribyrnong, and the extensions of the Small Arms Factory at Lithgow. The opportunity was taken whilst in various States to see the nature of the work carried out by Government Railway Workshops, and by different private engineering establishments.

The Committee ascertained that in 1919 a comprehensive report concerning the production of munitions in Australia was prepared by the Controller-General of Munitions (Mr. A. E. Leighton), who recommended that action should be taken to establish in Australia—

- (a) Research Inspection Departments ;
- (b) Ammunition Factories ;
- (c) Repair Factories capable of repairing weapons such as rifles, guns, &c., which are subject to heavy losses in war ; such factories to form a basis for subsequent development of production factories.

The actual scheme of operations could, however, only be determined by an expression of Government policy regarding the strength and nature of the Defence Forces, and what these forces were designed to accomplish. The proposals outlined were estimated to cost £1,203,814, and were based on the assumption that military requirements demanded that the factories should be maintained on a pre-war output. But the arrival of large quantities of military stores from abroad brought about a lessening of demand upon existing factories. Further, the drastic reductions made in the Defence Estimates towards the end of 1921, and the curtailment of the Universal Training system, necessitated a change in policy. Up to June, 1922, it had been the practice to run existing factories largely as trading concerns. This was costing about £700,000 per annum. In order to establish new factories and obtain the necessary plant, tools, equipment, &c., an additional £400,000 would have been required, making an annual total of £1,100,000. But as under the greatly reduced Defence vote only about £500,000 could be made available annually, it was decided, with the concurrence of the Military Board, to reduce existing factories to a nucleus basis, which it was estimated would absorb £200,000 annually, and to allocate the balance—£100,000 for experimental work, and for administrative and professional staffs, and £200,000 towards the construction of new factories and the purchase of plant and equipment. These considerations, coupled with the rise in building costs and machinery prices since the 1919 scheme was drawn up, dictated a modified programme which was approved in 1922.

Briefly, the difference between the two schemes was that the 1919 proposals were intended to meet all the estimated peace requirements of an army of 300,000 men, whereas the 1922 programme provided nucleus factories of output capacity sufficient to train the staff in the technique of manufacture and to act as educational institutions for commercial establishments should rapid expansion become necessary. Owing to increased prices the modified scheme of 1922 was expected to cost £1,316,230, although the resultant factories would not be so extensive.

The 1922 programme of the Munitions Supply Board, which received the endorsement of the Government, was based on the following assumptions :—

- (a) That under peace conditions the sum available for Munitions Supply purposes was limited to £492,000 per annum ;
- (b) That the total cost of new construction and establishments as at present proposed was spread over six years ;
- (c) That existing factories were maintained on a nucleus basis.

The new factories contemplated under (b) comprise the following groups :—

Ordnance and Shell.—For the manufacture of guns (18 pounders and 4·5-in. howitzers) and carriages ; and shells up to 6-in.

Explosives and Filling.—For the manufacture of T.N.T. (trinitrotoluene) and other high explosives, and for the filling of shells and fuzes.

Gun Ammunition.—For the manufacture of fuzes, cartridge cases, and other non-ferrous component parts of gun ammunition.

Machine Guns and Pistols.—For the manufacture of Vickers machine guns, Webley revolvers and signal pistols.

The Committee reviewed the operations of the factories which had been established, viz. :—Clothing, Cordite, Acetate of Lime, Small Arms, Small Arms Ammunition, Harness, Saddlery and Leather Accoutrements; and Woollen Cloth. The Clothing, Cordite, Small Arms, and Small Arms Ammunition Factories were being run on a nucleus basis, whilst the Acetate of Lime Factory was being used for the manufacture of power alcohol for use in Departmental motor vehicles. Owing to the lessening of demand for their products, the Harness Factory had been closed, and the Woollen Cloth Factory had been sold.

The Committee was informed that although the manufacture of aeroplanes and aero-engines had not been considered in detail by the Munitions Supply Board, there was in stock a majority of the machines required for such work.

Other activities of the Munitions Supply Board reviewed by the Committee included the Research Laboratories, which, with the Inspection Department, had been established to investigate and direct the economic use of the industrial resources of the Commonwealth for war purposes, and to act as a school of direction for the factory staffs and manufacturers. The Laboratories had already rendered general and useful service to various Commonwealth and State Departments, as well as to private manufacturers.

The Committee found that the activities of the Inspection Branch were confined practically to military goods, although a certain amount of inspection was performed for the Air Force. Very little work, however, was being done for the Navy, which insisted upon following the Royal Navy's practice of carrying out its own inspection notwithstanding the fact that experienced men were available on the Inspection Staff. Although the attitude of the Navy might be considered reasonable so far as explosives were concerned, due to the greater risk on board a ship, the same argument could not be applied to the inspection of articles such as clothing, boots, &c., and the Committee recommended that early steps should be taken to co-ordinate the inspection of requirements for the Naval, Military, and Air Services, as contemplated when the Inspection Branch was created.

Recognizing that without the necessary raw materials all efforts to produce munitions would, in time of emergency, be rendered futile, the Committee made special inquiries concerning the steps being taken to ensure having within Australia adequate supplies of the materials essential in the manufacture of munitions, and was assured that special attention was being devoted to this question by the Munitions Supply Board. The Research Laboratory, with its scientific and technical staff, had been specially equipped for the purpose of investigating, from the munitions standpoint, the resources of Australia in this direction. In the case of new manufactures the greater part of the raw materials required for the first year's output had been ordered from England. On arrival these goods were to be closely examined with a view to their local production.

As the Munitions Supply Board was charged with the provision of stores of all kinds, the Contract Board, whose duty it was to invite tenders or quotations for all purchases authorized for the Defence Department, had been placed under its control. The policy of the Contract Board was to procure Australian-made goods wherever possible, and for this purpose a complete list of manufacturers and their capabilities had been compiled. The Committee was informed that although there had been a decided tendency for the Navy to import goods in preference to accepting the locally-produced article, this practice was gradually being modified.

Another function of the Contract Board was the disposal of surplus or unserviceable stores received from the Naval, Military, and Air Forces. The method of their disposal, whether by auction or otherwise, was determined by the Board after consideration of the nature and state of the goods, and the probable demand for them.

In its observations, the Committee pointed out that the primary duty of the people of the Commonwealth was to defend Australia, and if that duty were to be successfully and properly performed safety in munitions supply was an object of urgent need, and one that should be attained as quickly as consistent with a reasonable solution of all the problems associated with it. Hitherto when Australian Forces had been engaged in war they had been supplied with the major portion of their essential munitions by the British or Allied Forces with whom they had been associated. But an Australian Defence policy demanded that this country should be in a position to supply its own munitions of war.

In determining the amount to be expended on Defence, including munitions supply, whilst making adequate provision for the Nation's security, the danger had to be avoided of involving the country in expense which it might be ill able to bear. A policy once decided upon should proceed systematically from year to year, and should not be departed from unless international situations created entirely new conditions.

If the required munitions could be made in Australia so much the better, but if our industrial resources did not promise early production, it would be unwise to permit the laudable desire for self-containment to stand in the way of efficient defence. Self-containment, the Committee added, was, after all, only relative, and advanced with the development of raw materials and the growth of the manufacturing capabilities of a country. At the outset, therefore, the wisest policy was to concentrate on the manufacture of those goods which could be produced locally, and build up stocks of such goods as must be imported, pending their ultimate production in Australia.

The Committee was of opinion that the production of munitions to be manufactured in Australia should be based on local raw materials, and it urged the fullest utilization of the resources of the Commonwealth in this direction. The research work demanded by such a policy, and the establishment of a group of factories, controlled by experts and staffed with trained and experienced men, where the experimental and developmental work could be carried out, was essentially a function of the Government.

Provision for research work having been made, and the Governmental factories having been established, the Committee considered that the organization of all Government and private engineering workshops throughout Australia should be so arranged that in an emergency the whole strength of Australia's engineering capacity could be readily turned to the efficient production of Defence requirements. In the development of such a scheme the Defence authorities, through their munitions experts, should keep in close touch with those engaged in the key industries of the Commonwealth in order that they may be made acquainted with the needs of the Department, and be encouraged to adjust certain methods or processes which would permit of their works being converted to munitions plants with the least possible delay.

The Committee was convinced that the munitions supply programme being carried out, viz., the maintenance on a nucleus basis of existing factories for the manufacture of rifles, cordite, and small arms ammunition, and aiming at the production within Australia of 18-pdr. guns and 4.5-in. howitzers, together with their necessary carriages and shells, and the manufacture of machine guns and pistols, had been based on the foregoing considerations, and represented a decided advance in making Australia more dependent on her own resources. The authorities anticipated that so far as the new factories were concerned, there would be no output until 1925, when it was considered complete 18-pdr. ammunition would be available. Guns and carriages were expected to be ready in the following year, and complete machine guns during 1927-28. Even when the buildings and accessory services were completed and the plant installed, approximately a year would be occupied in developmental and experimental work before continuous output could be assured.

But if this scheme were to function as planned, adherence to the construction programme was essential. At the outset of the Committee's investigation it was repeatedly emphasized that much delay had taken place in the provision of the necessary works and buildings, but coincident with the Committee's inquiry a conference of officials of the Works and Railways Department and of the Munitions Supply Branch was held, as a result of which the work for which money had been voted by Parliament was greatly expedited. In view of the serious consequences which would arise from delay, the Committee considered it imperative that special efforts should be made by the Department of Works and Railways to expedite the Munitions Supply Works, and recommended that the Works Appropriation for the year 1924-25 be increased to enable the deficiency to be made good, and the new works arranged for that year to be commenced.

Whilst the Committee was generally in accordance with the decision to place on a nucleus basis those factories which could be used solely for the manufacture of munitions, some of the factories were equipped with machinery and plant capable of being put to productive use, and the Committee was of opinion that it was false economy to have valuable machines lying idle, and staffs of skilled workmen employed on merely skeleton production, and considered that the principle of utilizing the existing factories to produce goods required for Governmental use should be further extended, provided, of course, that the functions of the factories as munitions plants were not unduly interfered with.

The utilization of the Acetate of Lime Factory for the manufacture of alcohol fuel for the use of Commonwealth Departments was a case in point, and the Committee was of opinion that such action was the most useful and practicable which could be adopted to preserve to the Commonwealth an essential link in the chain of its munitions supply. As well as possessing the economic advantage of retaining within Australia public money which would otherwise be spent abroad, the experience which would be gained by the Defence authorities in the manufacture of one of the first essentials in modern transport would prove of inestimable value to Australia should supplies of petrol be cut off in an emergency. It appeared to the Committee, however, that the necessity for a denaturant, which added about 2d. per gallon to the cost of power alcohol produced solely for Departmental purposes, was unwarranted. A more economical plan would

be to utilize, as a denaturant, ether manufactured from the alcohol produced at the factory itself, and adopt for the control of the use of the spirit such measures as would adequately safeguard the revenue and prevent irregularities.

Having in mind Australia's annual consumption of petrol, and the vital necessity for fuel for motor transport, particularly in war time, the Committee recommended that serious consideration be devoted to the question of producing within the Commonwealth greater quantities of liquid fuel, and so help to relieve Australia from its present dependence on overseas supplies.

Although not directly associated with the question of producing munitions, the problem of transportation appeared to the Committee to be a matter worthy of reference. Without efficient and speedy means for conveying munitions to their required locations in time of need their production might easily be rendered futile. In Australia railway development was ahead of roadway construction, but railway communication was hampered by the breaks of gauge and the great lengths of single line; whilst many of the lines were not advantageously placed from a strategical point of view. Construction of roads to provide quick and reliable means of communication, particularly for motor vehicles, was now receiving more attention, but much had yet to be accomplished before the needs of the country were met. The Committee was of opinion that the question of placing the internal communications of the Commonwealth on a sound basis to provide for the adequate defence of Australia demanded early consideration and prompt action.

Since the Report of the Committee was presented, substantial progress has been made in the development of the Munitions Supply scheme along the lines of the programme set out in the Report, and there has been a gradual development of local production commensurate with Defence requirements and available funds.

There has been consultation with the Customs Department in connexion with the support of key industries, and preliminary steps have been taken for the establishment of a Materials Section, which will investigate sources of supply of materials required in the production of munitions. In the purchase of Departmental requirements of stores, the policy of preference to local manufacture has been extended to include items hitherto imported; and the question of a co-ordinated Inspection Staff is receiving consideration.

The provision of the necessary works and buildings has been expedited, and much of the deficiency in this respect has been made good. It is expected that constructional work will be finished by the due date, but production will be delayed to some extent.

The utilization of the existing factories for the manufacture of other products has been considered, but difficulty is experienced in securing orders for products which are within the capacity of the plants and, at the same time, are not procurable from commercial sources. Full use, however, is being made of the skilled sections of all factories in the production of tools and plant for the new factories under construction. It is anticipated that such work will be available for some years to come.

The Acetate of Lime Factory has continued to produce power alcohol for Commonwealth purposes; and the Customs Department has agreed to the elimination of wood naphtha as a denaturant—with a consequent saving in cost of approximately 2d. per gallon.

The Committee notes, with satisfaction, that the question of improving Australia's internal communications is receiving serious attention, and that the Commonwealth purposes granting substantial assistance to the States for road construction and maintenance.

EXPENDITURE ON THE ROYAL AUSTRALIAN NAVAL COLLEGE AND THE ROYAL MILITARY COLLEGE. (Report dated 15th August, 1924.)

Having in mind the amount of public money expended in establishing and maintaining the Royal Australian Naval College and the Royal Military College, the Committee decided to investigate the expenditure on these Colleges, to ascertain whether the best possible value for the money was being obtained.

These institutions had been established to train cadets to become the officers required for Australia's Naval and Military Forces, and in order that every fit Australian boy, who was physically and mentally qualified, might have an opportunity of entering either of the Colleges, the Commonwealth Government undertook to bear the whole of the expense of training and maintaining the cadets from the time of their entry. In this respect these Colleges differ from every similar institution in the Empire.

The Royal Australian Naval College was established in 1912 at Jervis Bay, in Federal Territory, and up to the end of the financial year 1923-24, the capital cost had amounted to £286,273; and the annually recurring expenditure, excluding repairs and maintenance, totalled

£613,496—or an average of £51,124 per annum. The Royal Military College was established in 1911 at Duntroon, in the Federal Capital Territory. Up to the end of the financial year 1923-24 the capital cost of the College had amounted to £222,875, and the annually recurring expenditure, excluding repairs and maintenance, had totalled £657,052; after allowing an amount of £61,713 representing revenue derived by the College from the training of cadets for the New Zealand Government, the average annual cost had been £42,524. The entire cost of upkeep of these Colleges, however, represented less than 3 per cent. of the total Defence expenditure.

At the Royal Australian Naval College provision had been made for the accommodation of 160 cadets, and at the Royal Military College accommodation for 150 cadets had been provided. Owing to the Defence retrenchment of 1921-22, numbers of graduates and trainees had been retired, and at the time of the Committee's visit to the Colleges the number of cadets was 44 at Jervis Bay and 41 at Duntroon, including 4 who after graduating proceeded to Point Cook to be further trained as officers of the Royal Australian Air Force. These numbers, it was admitted, were less than the requirements of the Services.

The staffs employed numbered 118 at Jervis Bay and 80 at Duntroon, and the Committee was informed that although these staffs could deal with many more cadets than were in training, they represented the minimum which could be employed without sacrificing efficiency.

As a result of its investigations, the Committee was convinced that these establishments were essential adjuncts to the Defence of Australia. Already during the brief term of their existence the prestige of the Royal Australian Naval College and the Royal Military College had been well established, not only in Australia, but throughout the Empire, and the reputation won by the graduates, particularly during the War, had gained for these institutions a place in Australia's history. Having regard to the small number of cadets being trained, the Committee was of opinion that the Colleges were being conducted efficiently, and as economically as circumstances permitted. Certain overhead expenses had to be met, and the annual cost of training each student naturally varied according to the number being trained.

Evidence was strongly in favour of the Colleges being kept, if possible, purely for the purpose for which they were originally intended. The Committee, however, recognized that in these establishments the Commonwealth had valuable assets which could be utilized not only for the training of those who would eventually lead its Naval, Military, and Air Forces, but for turning out well-educated youths who would be able to serve their country in civilian life. The admission of paying students would not materially reduce the annual cost unless the fees were unduly high, and would moreover mean a radical departure from the principles upon which the Colleges had been founded.

After considering many alternatives, the Committee came to the opinion that the best results would be achieved by admitting annually more students than the number of graduates estimated to be required for the Services, and whilst regarding each of these students as potential Naval, Military, or Air Force Officers, the final selection would depend upon aptitude displayed and progress made throughout their course, as well as by a qualifying examination. The Committee was informed that 80 boys represented the best number for training at these institutions, and it recommended that the number of cadets in residence should be brought up to that number as early as possible, in order that a trial be given to the system outlined.

In the event of it being decided not to increase the number of entrants to the Royal Military College, the Committee considered that a saving might be effected by taking advantage of the facilities offered by existing Universities for education in civil subjects, and carrying out the military training at an appropriate establishment convenient to such an institution. The Committee added that experience alone would determine whether efficiency would be affected by the adoption of such a course.

One member of the Committee, however, was of opinion that owing to the increasing tendency towards peaceful operations internationally, and reductions in military and naval votes throughout the world, and in view of the small requirements of the Australian Military Forces for staff officers, the appropriation of the amount required to continue the activities of the Royal Military College was not warranted. He considered that the position would be adequately and satisfactorily met by the adoption of the proposal to utilize the facilities available at the Universities for educational purposes, and to give the technical military training at some permanent Defence establishment.

The Committee was of opinion that an increased number of boys from the training ship H.M.A.S. *Tingira* should be admitted annually to the Royal Australian Naval College, provided they complied with the prescribed conditions.

It was also recommended that when future appointments to the Naval Staff of the College were being considered, such appointments should be made from the personnel of the Royal Australian Navy.

In examining the Estimates of Expenditure for the Department of Defence the Committee noticed that the Estimates for the different activities of the Department were submitted to Parliament in varying forms, e.g., whilst the pay of the whole of the Naval and Civil Staff employed at the Royal Australian Naval College was shown under the Division of the Estimates relating to the College, the Division—Royal Military College—included the pay of Civil and Executive Officers only, the pay of the Military Staff being charged under "Permanent Forces." The Committee considered that the Estimates of Expenditure should be submitted to Parliament in a uniform manner, and recommended that the pay of members of the Permanent Naval Forces on temporary duty at the Naval College should be included under "Permanent Naval Forces."

During its investigation the Committee elicited the information that the salaries provided for the professors and masters at these Colleges compared unfavorably with those paid for similar services in other educational establishments, and that anomalies existed amongst the civil staff concerning the participation in superannuation benefits. The Committee recommended that these questions should receive early and sympathetic consideration.

Although it was understood that railway communication with the New South Wales South Coast system at Bombaderry (Nowra), 25 miles distant, would be available when the Naval College was established, such connexion had not been effected. The absence of this communication had been reflected in the cost of maintaining the College, and the Commonwealth had had to incur expenditure on the acquisition of a location for a road, and its construction to the point where it joined an existing main road. Requests that repairs should be effected to the section of the road from the end of that constructed by the Commonwealth to the nearest main road—a distance of about seven miles—which became almost impassable after heavy rains, had not been favorably received. As the Commonwealth had voted large sums of money to be spent by the States on road construction, and as the Commonwealth had grounds for believing that the railway communication would have been established, the Committee considered that a request to keep the road of approach to the College in a proper state of repair was not unreasonable, and recommended that it be suggested to the State Government of New South Wales that this road might be included amongst those to receive the benefit of the Commonwealth grant.

During its visit to Jervis Bay, the Committee was amazed at the totally inadequate and insanitary quarters occupied by some members of the civilian staff. The accommodation consisted of hutments built piecemeal from scraps of second-hand material, and were neither rain nor wind proof. The Committee was informed that, although year after year officers of the College had brought this unsatisfactory state of affairs under notice, and medical officers had repeatedly reported that these hovels were unfit for habitation and should be burned, it was only within a few months of the Committee's visit that approval had been given for the erection of one cottage. The Committee expressed the opinion that these hutments were a disgrace to the Commonwealth, and recommended the immediate erection of suitable civilian quarters.

During its inspection of these Colleges, as well as of other Commonwealth properties, the Committee was surprised by the lack of attention given to the proper maintenance of valuable works and buildings. The explanation always tendered was that of insufficient funds, and the Committee recommended that greater attention should be paid to the proper maintenance of Commonwealth properties, and that necessary repairs should be effected without delay.

An increased number of students is now being admitted to these institutions—at the Naval College, fifteen cadets are to be accepted annually, which number, it is anticipated, will be sufficient to meet the requirements of the Fleet for the next ten years; and at the Military College the annual intake is to be raised to 21, so that an establishment of 80 staff cadets should be reached by next year.

Additional funds have been made available this year to permit of more repair and maintenance work being effected at the Colleges. Funds have also been voted for repairs to the road within the boundary of the Naval College, and it is understood that, at the request of the Commonwealth, the New South Wales Government proposes to allocate portion of the money granted by the Commonwealth for road construction and maintenance to the repair of the road between Jervis Bay and Nowra.

Immediate steps were taken after the presentation of the Committee's Report to improve the civilian quarters at the Naval College. Four cottages have already been erected and it is proposed to erect three more cottages as soon as funds can be made available.

CERTAIN TRANSACTIONS BETWEEN THE CO-OPERATIVE ESTATES LIMITED, OF HOBART, AND THE WAR SERVICE HOMES COMMISSION.

(Report dated 1st October, 1924.)

Consequent upon a promise made in the House of Representatives by the then Minister for Works and Railways (Mr. P. G. Stewart), the Joint Committee of Public Accounts was asked to inquire into and report upon certain transactions between the Co-operative Estates Limited and the War Service Homes Commission.

The Co-operative Estates Limited was a company established in Hobart for the purchase and subdivision of suburban properties, and whilst not trading as an ordinary building contractor, it built houses for the purchasers of its subdivided allotments on the Credit Foncier system. The Company also held the patent rights for the Wilson Steel Moulding Plant for monolithic hollow-wall concrete construction.

The Company, however, erected a group of houses near Hobart for the War Service Homes Commission, and whilst this work was in progress it was asked by the Deputy Commissioner for Tasmania (Mr. W. J. Earle), whether it would negotiate to build on the mainland. At first it declined to undertake building operations, but offered to grant a licence to the Commission to build on a royalty basis. Subsequently the Managing Director of the Company (Mr. W. G. Murchison), wrote to the Deputy Commissioner submitting a proposition whereby the Company would purchase 225 plants to enable the erection of 10,000 concrete cottages per annum throughout the Commonwealth—provided the company were financed up to 95 per cent. of the amount of £135,000 which would be required.

Further negotiations took place in Sydney, as a result of which Mr. Earle, who was then "Supervising Engineer," prepared a memorandum under date 11th November, 1919, for the Commissioner, intimating that he had a big scheme to put up whereby he could build 10,000 cottages per annum by means of this plant, with an estimated saving of anything up to one million pounds—this matter, however, was to form the subject of a later and more detailed report. For the purpose of demonstrating the possibilities of the system he desired authority to enter into an agreement with the company to erect a group of fifteen houses with three plants in Sydney suburbs—the Commissioner to advance 90 per cent. of the cost of purchase of the plant, to be repaid at the rate of £10 per house; the Commissioner approved of this proposal, and a copy of the memorandum was supplied to the Company.

Subsequently contracts were entered into for the erection by the Company, near Sydney, of 15 houses and 64 "shells," i.e., the concrete portion of a cottage comprising foundations, walls and chimneys. To enable the Company to purchase plant to satisfy these contracts, the Commission advanced moneys, totalling £4,058 2s. 9d., to be repaid at the rate of £10 for each cottage constructed, on the understanding that should it be decided by the Commission to build no further houses with the plant, or by the company, the outstanding balance was to be paid forthwith by the company.

During the progress of these contracts, the re-organization of the War Service Homes Commission was being effected, and the change of policy was announced whereby day labour work and the building of groups ceased, and only single houses for specific applicants were to be erected by contract. The Company was accordingly invited to tender for works advertised from time to time by the Commission, but no tenders were received from it.

As the Commission did not propose to let any further contracts to the Company under the original agreements, the amounts advanced by the Commission to the Company became due on the completion of the current contract, viz., about 10th January, 1922. The first definite demand for repayment of the outstanding balance of the advances was made on 13th April, 1922, and at the same time the Company was informed that although the Commission could not accept any responsibility or liability for the payment of a claim which had been made by the Company for increases in award rates of wages in connexion with the contract for the erection of the 64 shells, the Commission was agreeable to meet the claim to the extent of £267 6s. 5d., as an act of grace, provided it was satisfied after inspection of the Company's books that a loss had been sustained, and on condition that the amount be credited to the Company in reduction of the moneys owing to the Commission for advances.

In view of the financial difficulty with which the Company stated it was faced, the Commission extended the period for repayment of the amount due, and the Company agreed to pay regular quarterly instalments of £250. This agreement was not adhered to by the Company, which made further requests for relief, and asked that the capital liability of the plant should be reduced to its actual value at the time building operations ceased for the Commission, the deferment of repayments of principal for twelve months, and the waiving of twelve months' interest. The Minister declined to reopen the question, and as the next instalment was not

paid, the matter was referred to the Crown Solicitor. After further correspondence a writ was issued, but subsequently it was withdrawn on the Company undertaking to meet all payments on due dates, if payment of the first instalment were deferred for three months.

After two more instalments had been paid, further representations were made on behalf of the Company, and the next payment was deferred for thirty days, but in the meantime the Managing Director waited on the Minister with a request that the payment of instalments be deferred for twelve months to enable the Company to realize on some of its properties.

As the payment due was not made, the Crown Solicitor was instructed to issue a writ for the balance owing to the Commission. Following further representations on behalf of the Company, the Crown Solicitor was informed that if the Company tendered the instalment due together with interest and costs, he was authorized to accept the money and withdraw the writ. No payment being made, the action proceeded, and judgment was signed at the sittings of the Supreme Court at Hobart in March, 1924, for the amount of the debt, £2,742 5s. 11d.; interest to 30th March, 1924, £69 8s. 1d., and costs, £15 11s. 6d., or a total of £2,827 5s. 6d. Shortly afterwards the Prime Minister was approached, and it was decided that action to execute the judgment would be deferred for six months provided that all the Company's creditors agreed, in writing, not to take legal action during that period.

It was during this period that the question was referred to the Public Accounts Committee for report—the Company claiming that it was led to believe that contracts for the building of a considerable number of houses would be entered into, and as those contracts did not eventuate it was entitled, on a moral basis, to either compensation or to the waiving of the debt.

The Commission claimed that the contracts were definite, and by their terms showed that no such inducement was held out to the Company, consequently the Company was not entitled to any compensation or relief from its debt.

On being requested by the Committee to submit a specific claim on behalf of his Company, Mr. Murchison presented a statement embodying the following terms:—

- (1) That the Commission take over the plant.
- (2) That a refund be made to the company of all amounts of principal and interest already paid on account, approximately £3,000.
- (3) That a certificate of satisfaction of the judgment be registered in Tasmania.
- (4) That the total loss sustained by the company in its Sydney operations be refunded, amounting to approximately £3,000.
- (5) We also claim that all losses which will be sustained by our purchasers and shareholders as a result of the action of the Commission in destroying the credit of the company should be made good. These losses, if the company is forced into liquidation, which it certainly will be unless something is done by the Government to restore its credit, will be as follows:—
 - (a) Share capital, £23,000.
 - (b) Prospective profit, £40,000.
 - (c) Losses (if any) sustained by purchasers on terms.

This claim represented, in round figures, £70,000.

But later Mr. Murchison informed the Committee that in submitting this claim he only did so formally to place something concrete before the Committee. He added that he made no arbitrary demand, and was prepared to accept the decision of the Committee as absolute and final.

The former Chairman of Directors of the Company, Mr. G. M. Johnstone, considered that this claim was so framed that it would be difficult of assessment; he was of opinion that a fair claim would be:—

- (a) remission by the Commission of the balance of the money due;
- (b) refund of amounts paid by the company on account of the plant;
- (c) compensation to the company for losses sustained on the contract for the fifteen complete houses, and for expenditure incurred at Sydney;
- (d) a reasonable sum for consequential damage incurred and losses sustained by the company through the action of the Commission.

He estimated that a total of approximately £15,000 would cover these claims. Under this arrangement the Commission would own the plant and pay the company royalties for its use.

In presenting its Report, the Committee observed that from the knowledge acquired during its various investigations of the War Service Homes Commission it was aware that at the outset of the scheme the Commissioner embarked upon an ambitious building programme without fully taking into consideration the amount of labour and material available. Urged on by public

and press criticism, and anxious to show results, the Commissioner was eager to avail himself of any means which promised the early achievement of his desire, and possibly the proposition put before him in the Supervising Engineer's memorandum of 11th November, 1919, appealed to him.

The claims made by the Company were based on what it considered to be a moral obligation on the part of the Commonwealth Government in view of the contents of the official memorandum addressed to the War Service Homes Commissioner on 11th November, 1919, wherein the Supervising Engineer to the Commission forecasted a "big scheme" for the building of 10,000 houses per annum by means of this Company's patent plant. But it is clearly indicated in the memorandum—a copy of which was supplied to the Company—that this scheme would form the subject of a later and more detailed report. Such a report, however, never eventuated.

It was maintained on behalf of the Company that it did not proceed to Sydney as a building contractor, but after reviewing the evidence it appeared to the Committee that there was little doubt that the Company was quite ready to take advantage of the opportunity afforded to participate in the scheme for the housing of returned soldiers, and was willing to accept any contracts with the Commission in the hope that further business would follow.

Whilst the Committee could not accept the Company's view that its transactions with the Commission were responsible for its present unsatisfactory financial position, it considered that such transactions appeared to have been a contributing factor. Mr. Murchison alleged against the Commission hostility to his Company and to concrete construction, and harsh treatment in the demands for the repayment of the advances; the Committee was of opinion, however, that the evidence did not support these assertions.

The claim that the Commonwealth should take over the plants was one which the Committee considered could not be entertained. Further, since the Commission's operations with the plants had ceased, no supervision appeared to have been exercised to see that they had been kept complete or in good order, and their present value to the Commission would be problematical.

From a careful consideration of the circumstances surrounding the negotiations and transactions between the Co-operative Estates Limited and the War Service Homes Commission, it appeared to the Committee that the Company made itself liable for a larger quantity of plant than was wise in view of the work actually undertaken, but as the Commission had agreed to advance 90 per cent. of the cost of such plant, actually made advances on a number of plants which could only be justified by the prospect of further constructional work, and, moreover, took an active part in obtaining quotations, &c., the Commission was not entirely free from the allegation of having offered inducements to the Company. As a result, the Company undertook the demonstration work with a reasonable hope that further business would ensue. Its subsequent transactions with the Commission no doubt to some degree contributed to its present unsatisfactory financial position, and for some time to come there appeared to be little hope of improvement in this direction.

The Committee was of opinion, therefore, that without admitting any responsibility or liability in the matter, the War Service Homes Commission should waive the amount owing by the Co-operative Estates Limited, give a certificate of satisfaction for its debt, and permit the Company to retain possession of the plant for its own use.

Two members of the Committee, however, came to the conclusion that the Company had neither legal nor moral claim, and they were of opinion that there was no reason why the debt owing by the Company to the Commission should be waived. As it did not appear that the Company would be able to meet its liability on the expiration of the period of grace, they recommended that arrangements should be made for the acceptance of the amount on extended terms.

The recommendation of the Committee was subsequently adopted by the Government, and has been carried into effect.

EXPENDITURE ON OIL EXPLORATION, DEVELOPMENT, REFINING, &C., IN THE COMMONWEALTH AND PAPUA.

Part I.—Oil Exploration Work in Papua and in Australia.

(Report dated 12th August, 1925.)

In view of the heavy expenditure being incurred in oil exploration work in the Commonwealth and Papua, and the amount being spent on the development of the oil industry and in the refining of oil, the Public Accounts Committee instituted an investigation of the expenditure of the Commonwealth on these various activities. Recognizing also the importance of adequate and regular supplies of oil being available, if possible, within Australia for industrial and defence purposes, the Committee made inquiry as to the steps being taken to achieve the desirable object of rendering Australia less dependent on outside sources for its requirements of motor spirits,

fuel and lubricating oils, and similar commodities. The use of petroleum products in Australia has increased tremendously during recent years, the volume of imports has been correspondingly great, but the local production of oil has been negligible.

The various subjects dealt with by the Committee during its inquiry were divided into the following main headings :—

- (a) Oil Exploration Work in Papua.
- (b) Oil Exploration Work in Australia.
- (c) Shale Oil.
- (d) Liquid Fuels, Power Alcohol, &c.
- (e) Commonwealth Oil Refineries Limited.

Part I., dealing with Oil Exploration Work in Papua and in Australia, has been presented to Parliament. But Part II., comprising Shale Oil, Liquid Fuel, Power Alcohol, &c., and the Commonwealth Oil Refineries Limited, was not completed when Parliament was prorogued. In view of the importance of the subjects dealt with, the Fourth Committee at its last meeting placed on record a resolution recommending the incoming Committee to continue and complete the inquiry.

The investigation of the oil exploration work in Papua covered the operations in that Territory from 1911, when indications of petroleum were first discovered near the Vailala River, up to the present time.

At the outset it was intended to permit exploration and development by private enterprise, but subsequently the Commonwealth Government determined to conduct operations as a national undertaking. Drillers with exploratory boring plants were sent to Papua, and operations were commenced along the Vailala River. Shortly afterwards the services of Dr. Arthur Wade, Petroleum Technologist, were secured to examine the geological features of the oil-bearing areas in Papua, and to report as to the method of development which should be adopted. In 1915 Dr. Wade was appointed Director of the Oil Fields in Papua, and continued in active control until 1919. During that time extensive and detailed geological survey work was carried out under arduous and exacting conditions, and a number of bores was sunk, in some of which small quantities of oil were found.

In 1920 the Imperial Government consented to co-operate with the Commonwealth in its search for oil in the Territory of Papua, and, as a result, the Anglo-Persian Oil Company, in which the British Government holds a controlling interest, was appointed as agent for the two Governments to geologically explore the Territory for oil, to select suitable sites for test-drilling, and to superintend boring operations and generally bring the work to the development stage. Shortly afterwards the British Government withdrew from the agreement, but the Company continued as agent for the Commonwealth, under an arrangement terminable on one month's notice by either party, whereby the boring operations in progress were to be continued, and the expenditure was not to exceed on the average £2,000 per month. As a result of the recommendations of the Company's experts, work along the Vailala River was discontinued, and boring operations were commenced at a location known as Popo, where the geologists considered the prospects of striking oil in commercial quantities were very promising. Other areas examined by the Company were also reported to show favorable indications of oil, but it was considered advisable to thoroughly test the Popo region by boring before proceeding elsewhere.

Much trouble had been experienced in carrying out drilling operations in this country, abnormal conditions had been met, and special machinery had to be obtained. Two bores at Popo, which had reached depths of 1,825 feet and 894 feet respectively, had to be abandoned. At the time of the Committee's visit the third bore was down 1,348 feet; subsequent advices indicated that a depth of 2,375 feet had been reached, but that heavy cavings had buried the boring tools. Efforts to pass the obstruction and permit the bore to be carried lower were then being made. According to geological reports the petroliferous zone should extend from between 2,000 to 3,500 feet below the surface, and it was considered that the bore should at least be carried right through this zone.

The Committee ascertained that present work in Papua was being carried on under the direction of Mr. W. G. Langford, the Manager in Papua for the Anglo-Persian Oil Company, and also the official representative of the Commonwealth Government; and that the expenditure which had been incurred since the Anglo-Persian Oil Company took control in 1920 up to June last had totalled £227,256.

As certain allegations and insinuations had been made publicly from time to time concerning the search for oil in Papua, and the work of the Anglo-Persian Oil Company in particular, the Committee endeavoured to obtain reliable first-hand information which would confirm, or otherwise, the rumors. As a result of its investigation, and its visit to the scene of

operations, the Committee came to the conclusion that there was no justification for the insinuations that the Company was not doing its best on behalf of the Commonwealth to find oil in the Territory. Four members of the Committee expressed the opinion that no evidence had been adduced to confirm the contention that the Company was not making every effort on behalf of the Commonwealth Government to find oil in the Territory.

In July, 1923, the policy of conducting exploratory work solely by the Government was modified, and private individuals or companies were permitted to prospect for oil in Papua, except within an area of approximately 1,160 square miles, including the Popo district, which was reserved for the operations of the Commonwealth Government. Although fourteen licences to prospect were in existence, the Committee found that, although prospecting work and geological investigations had been proceeding on some of the areas taken up, no results had been reported.

Generally speaking, however, the Committee found that according to expert geological evidence the prospects of oil being discovered in commercial quantities in Papua were hopeful. But the difficulties of prospecting in a tropical country, and of boring in soft, muddy strata subject to intense gas pressure, had caused the experimental stages of development to be long and costly. It was of opinion that the early work along the Vailala River had been carried on without adequate superintendence, and that there had been lack of co-ordination between the drilling parties, and apparently profitless expenditure owing to insufficient scientific knowledge. With the appointment, in 1915, of Dr. Wade, the position improved, but there did not appear to the Committee to have been any proper appreciation by those responsible at the Seat of Government of the importance of the work. For the nine years during which the Commonwealth itself controlled the work in Papua the expenditure totalled £131,034. Much detailed geological and geographical knowledge had been acquired, and a small quantity of oil—approximately 2,000 gallons—from a number of shallow bores, had been obtained.

With the advent of the Anglo-Persian Oil Company, in 1920, as agents, more extensive detailed geological survey work was undertaken, and at Popo, where operations were in progress, three bores had been sunk, but the actual production of oil had been nil. The work was being conducted for the Government by the Company under an agreement terminable by one month's notice on either side, and when the bore reached a depth below which, in the opinion of the geologists, there was no possibility of the occurrence of oil, there would arise the question of future operations. Should oil be struck, tanks, pipe-lines, and other provision for storage and for the transport of the crude oil to the refinery would have to be undertaken, and as such work demanded extensive technical experience the Committee was of opinion that the provision of such services for and on behalf of the Commonwealth Government should be in the hands of a Company such as the Anglo-Persian Oil Company, which already had the trained personnel available. Four members of the Committee, however, were of opinion that in the event of oil in payable quantities being discovered, it should be the duty of the Commonwealth Government to at once undertake the storage, transport, refining, and marketing of the product.

Should, unfortunately, oil not be struck in the present bore, the question whether the search for oil in Papua should be continued would have to be faced. The Committee pointed out that, compared with the money expended on oil exploration work in other countries, the amount already spent in Papua could not be regarded as excessive. As expert geological opinion concerning oil prospects in Papua was so favorable the Committee was of opinion that further prospecting was justifiable and necessary, and it recommended that such work be continued. Should success be achieved the Commonwealth would then possess a virgin oil field free from the influence of any of the big oil groups. As the work of searching for oil demanded considerable financial resources, and keen and experienced technical and geological knowledge, the Committee considered that such work could be more properly undertaken by a private company on behalf of the Commonwealth than as a purely governmental function, and in the Anglo-Persian Oil Company, with a wealth of such knowledge at its disposal, is a company which to a major degree is an Imperial concern. Four members of the Committee, however, were of opinion that in order to be absolutely free from the influence of oil combines the Commonwealth Government should, under expert advice and assistance, vigorously prosecute the development of oil-bearing areas.

Although at first glance the appointment of Mr. Langford as Commonwealth representative on the field and local Manager of the Anglo-Persian Oil Company appeared illogical, it had to be remembered that the company occupied the position of agent of the Commonwealth entrusted to carry out certain work. As this officer had had many years' experience of the field, with a good record, and possessed the necessary qualifications, there did not appear to the Committee to be any justification for incurring the expense of having another representative on the field, especially as the actual work performed for the Commonwealth occupied very little time. Four members of the Committee, however, regarded the position as unsatisfactory, and considered it essential that independent supervision should be preserved.

To ascertain what steps had been taken to discover likely oil-bearing areas in Australia, the Committee heard evidence from many expert witnesses. Notwithstanding the rewards which had been offered—£50,000 by the Commonwealth, £10,000 by New South Wales, and £5,000 by South Australia—no satisfactory results had yet been achieved. During recent years much more attention has been given to this subject, and at the invitation of the Commonwealth Government Dr. Wade returned to Australia last year and conducted detailed geological examinations of various likely oil-bearing areas in Australia.

The consensus of geological opinion concerning the prospects of flow oil being discovered in commercial quantities in Australia was unfortunately not very favorable. Much detailed geological survey work yet remained to be done, and until this was completed it could not be definitely laid down that the Commonwealth possessed no oil-bearing areas. The Committee was of opinion, however, that the offering of rewards by the Government for the discovery of oil was not the best means to attain the desired object; it was considered that better results would be gained by devoting the money to the assistance of systematic geological surveying and exploratory boring in likely oil-bearing areas.

The need for early action for Australia to obtain reliable information concerning its mineral oil resources so impressed the Committee that at an early stage of its inquiry it wrote to the Prime Minister recommending the Commonwealth Government to immediately summon a conference of State geologists, professors of geology, representatives of the Commonwealth Institute of Science and Industry, &c., to formulate a scheme for this purpose. Such a conference was convened, and submitted to the Prime Minister resolutions embodying its views on the various questions referred to it. The conference also stressed the desirableness of establishing a Federal Geological Survey to deal with certain matters.

From evidence heard and its own observations, the Committee was unanimously of opinion that early steps should be taken to create a Federal Geological Survey, designed to co-operate with and correlate the geological work of the States.

Since the presentation of the Report, the Commonwealth has withdrawn its offer of a reward for the discovery of oil in Australia, and has made the money available in the form of a subsidy for the assistance of genuine prospectors.

The establishment of a Federal Geological Survey also received consideration from the Government, but the conclusion was reached that action in this direction was premature until uniformity of geological cartography and the co-ordination of geological work had been given effect to by the States.

THOMAS PATERSON,
Chairman.

Office of the Joint Committee of Public Accounts,
Federal Parliament House,
Melbourne, 19th February, 1926.