

1955

VICTORIA

FINAL REPORT

*of the*

STATE DEVELOPMENT COMMITTEE

*on the development of*

Western  
and North-Western Victoria

*specifically*

A Commentary on the Questions  
contained in the First Progress  
Report and Recommendations Thereof.

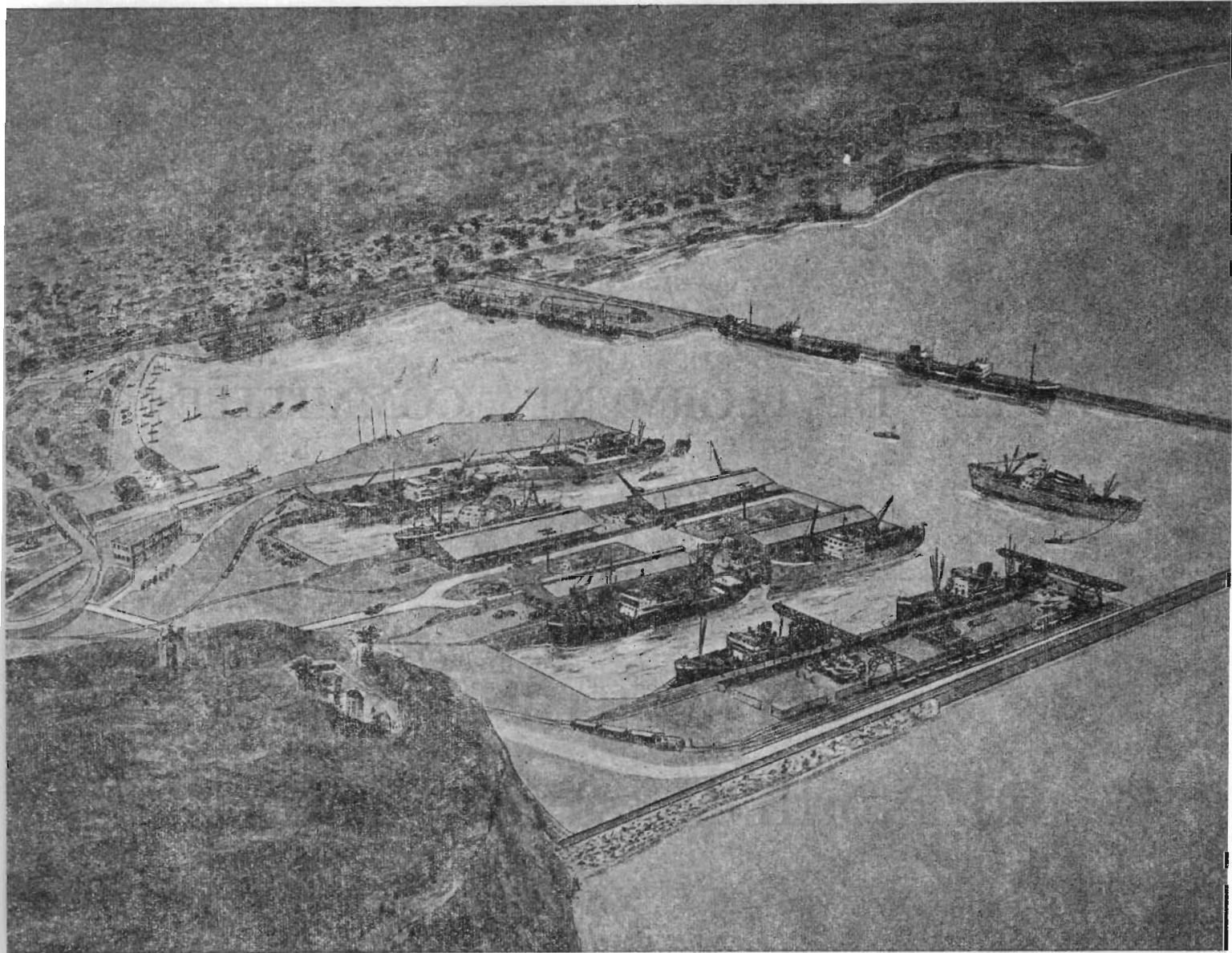
Presented to His Excellency The Governor in Council and laid before both Houses of Parliament  
Pursuant to the provisions of the *State Development Act 1941* (No. 4875).

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VICTORIA



[By courtesy of Portland Harbor Trust Commissioners.]

An artist's impression of the ultimate lay-out of the New Portland Harbor Project drawn by a member of the Portland Harbor Trust Commissioner's staff — Mr. R. W. Gill.

Report and Recommendations Thereof  
contained in the First Progress

Presented to His Excellency the Governor in Council and laid before both Houses of Parliament  
Pursuant to the provisions of the Act Development of Port (1873)

# STATE DEVELOPMENT COMMITTEE

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L. J. Cochrane, Esquire, M.L.A.

## SECRETARY.

N. T. Howard, Esquire, Premier's Department, Melbourne, C.2.

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## FUNCTIONS OF THE STATE DEVELOPMENT COMMITTEE.

TO INQUIRE INTO AND REPORT TO THE GOVERNOR IN COUNCIL UPON :

- (a) the balanced economic, industrial and rural development of the State ;
- (b) the decentralization of industrial activities and the distribution of population in the State ;
- (c) the improvement of the general economic welfare of the State ;
- (d) the amelioration of the conditions of industrial and rural life in the State ;
- (e) the organization and development of primary, secondary and other industries in the State to meet conditions arising from the present war and the re-organization of such industries after the present war.\*

\* *State Development Act 1941* (No. 4875), Section 5.

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# REPORT

*To His Excellency General Sir REGINALD ALEXANDER DALLAS BROOKS, Knight Commander of the Most Honourable Order of the Bath, Knight Commander of the Most Distinguished Order of St. Michael and St. George, Knight Commander of the Royal Victorian Order, Companion of the Distinguished Service Order, Governor of the State of Victoria and its Dependencies in the Commonwealth of Australia, &c., &c., &c.*

MAY IT PLEASE YOUR EXCELLENCY :

Pursuant to the State Development Acts, the State Development Committee has the honour to submit the following Final Report relating to the development of Western and North-Western Victoria which should be read in conjunction with the First Progress Report dated 31st December, 1953.

## TERMS OF REFERENCE.

The matters into which it was desired the Committee should inquire were as follows :—

“The economic industrial and rural development of those parts of Victoria known as the Western and North-Western Districts of the State with particular reference to—

1. the development and importance of railway, road, and port facilities ;
2. provision of adequate schemes of water supply and adequate power and fuel facilities ;
3. establishment of secondary industries essential to the efficient and economic carrying on of primary production within the districts in question.”

## FIXATION OF BOUNDARIES.

For the purpose of this enquiry, the Western and North-Western portion of the State includes the area covered by the Mallee, Wimmera, and Glenelg Regions plus the municipalities of the City of Warrnambool and Shires of Warrnambool, Belfast, and Minhamite. Practically speaking, the area may be more simply designated as all that part of the State west of an imaginary line drawn between Swan Hill and Warrnambool.

## FOREWORD.

### Introductory.

The First Progress Report provides a general review of the area under investigation and a summary of the questions to be resolved. This Final Report provides a commentary on the questions contained in the First Progress Report and recommendations thereof.

The Committee widely circulated copies of the First Progress Report throughout the area under enquiry, thus affording interested persons and bodies an opportunity to bring forward additional questions for attention. Notwithstanding the broad nature of the Terms of Reference and the voluminous evidence received, we are pleased to state that the summary of questions to be resolved contained in the First Progress Report was generally accepted as providing a broad outline of what local people consider should be done to develop the area, particularly from the view-point of supporting a vast, economic maritime trade through the Port of Portland.

A number of questions advanced in evidence were not new, but had been the subject of either previous investigations by parliamentary committees or direct representations to the Government. Nevertheless, we decided to include them at length in the reports in order that the plan may be more readily comprehended.

This investigation was undertaken in consequence of representations made to the Government by the Western District and Associate Areas Development League, a body representing many of the municipal councils throughout the area under inquiry, as well as municipal councils in New South Wales having kindred interests with Victoria, especially from a transport point of view.

### **Trade Prospects of a Port at Portland.**

The Committee desires to make it clear that it was not requested to consider the economics of developing the port of Portland as an all-weather, overseas port. In fact, harbor works had already commenced when this enquiry began, and to date an amount in the vicinity of three quarters of a million pounds has been spent on the project. Rather have we interpreted our task as being one of stating in broad terms the requirements necessary to ensure that the port becomes a practical reality and that the huge amount of money involved, namely £5,000,000, is not mis-spent, but shows a good return to the people of the State.

**We wish to emphasize that the harbor construction works are proceeding apace and that now is the time to prepare a master plan of action calculated to ensure the economic operation of the port.**

At the outset, we regard it as fundamental to consider how resources in the hinterland, comprising one of the greatest primary industrial potentials in Australia, could be fully developed.

The Portland Harbor Trust Commissioners are actively discharging their responsibilities by promoting the co-operation of producers, manufacturers, traders, and consumers throughout the area. However, much remains to be done. In order to maintain the new port in a state of efficiency, there is an urgent need to increase the rural production and population of Western Victoria. Rising population will materially assist in balancing the economy of the Port and to attain this desired end all economic prohibitions and prejudices in the area must be removed, producers given the incentive to increase their output, new settlers attracted to the area, and secondary industries complementary to primary industry established.

Properly planned secondary development will create new investment, confidence, and wealth with a corresponding increase in the volume of population in the country districts of Western Victoria.

It is pertinent to state that, in developing Portland Harbor, consideration must be given to the development of an efficient transport system. Links, preferably rail, with such places as Ouyen, Patchewollock, and Warrnambool in Victoria and Hay in New South Wales will have a direct bearing on the prosperity of the area and the success of Portland as a sea port.

In its report to His Excellency the Governor of South Australia, dated the 28th May, 1954, the South Australian Public Works Standing Committee concludes that the cost of establishing a port at Cape Jaffa on present estimates would be about £7,000,000 for two berths and £9,000,000 for four berths. If provision were made for a direct rail link with Millicent these amounts would each be increased by £1,127,000. The Committee therefore found that the large expenditure involved in establishing an overseas port at Cape Jaffa is not at present warranted.

As all other prospective ports between the Victorian border and Adelaide have been rejected, Portland thus remains the only practical port between Geelong and Adelaide.

### **Primary Industrial Development.**

Primary industrial development is interpreted in broad terms to mean the clearing and use of new land, the improvement of production from land which is already being used by the introduction of new agricultural methods, or by land improvement such as drainage, or by the complete change of the type of land use as with irrigation.

Irrespective of which of these methods is used to increase agricultural productivity, it is essential that the increases in productivity will be permanent, and that the land will not deteriorate under the particular form of land use adopted. Temporary increases in productivity gained at the expense of soil deterioration represent an ultimate loss to the community, not for a few years, but for generations.



Forecasts from the Commonwealth Scientific and Industrial Research Organization estimate that Victoria could double the carrying capacity of existing pasture lands, provided that certain pre-requisites were ascertained, and information to ensure increased production was available. The attainment of the first objective to increase production, is based on the development of an alternative vegetative cover capable of maintaining pastures at all times with some degree of success.

Since receiving some of the evidence, however, the general economic outlook for primary products exported from Australia is emerging more clearly and world prices have already taken a downward trend in many cases. In common with other commodities, dairy products face a period of increasing competition. Thus, estimates of production increases and the period of development necessary to achieve these increases involve an unpredictable factor, namely the level of prices at the time this additional production is forthcoming. Proposals for land settlement by the State should therefore be approached with caution and due regard paid to costs of development in relation to future prime levels for primary products.

An important question to be answered is "What land have we available within the cost range which will not mean over-capitalization of a settler and making him the loser before he starts?" If we do not have regard to the capital cost of improving the land, the time will come when settlers will be forced to overwork the land in order to try to achieve more production than is possible from it.

Certain holdings in the Western District provide the most attractive terms of settlement for any settler. Here, there are 227 holdings of between 2,000 and 3,000 acres, 178 holdings of between 3,000 and 5,000, 127 holdings of between 5,000 and 10,000 acres, and 32 holdings of larger areas. The most productive land within these aggregates is held in the 5,000 to 10,000 acres group. However, present costs of acquisition place them for the time being beyond the scope of any governmental settlement scheme.

The intensive cultivation of Gippsland with its numerous small, prosperous towns within a short distance of each other, is in marked contrast to the land-locked towns of the Western District.

While it is agreed that the major increase in production in the Western areas of the State will result from the more intensive development of existing pastures, both improved and native, there is no evidence to suggest that, by any means which are known to be economic, agricultural production of the order of that attained in Denmark or New Zealand would be possible in the Glenelg Region, as claimed in evidence. Large areas of the unimproved pasture land in this Region are very stony and cannot readily be top-dressed, except possibly by aeroplane. The degree of improvement claimed is perhaps a little optimistic.

The choice of Robinvale by the Soldier Settlement Commission for development has proved to be a wise choice as evidenced by the comparison of results from blocks as they come into bearing with all other dried fruit areas in the Commonwealth at the same stage of development. The Commission's organization, supported by the active co-operation of the settlers is efficient and smooth working, and the staff is not only capable of developing the present area but further extensions as well.

To set up a new organization to develop comparatively small new areas elsewhere, as suggested by witnesses, would involve a considerable capital outlay in building plant, &c., adding considerably to the unit cost per settler. At present, a number of soldier settlers are placing share-farmers on their blocks and taking up residence in the towns ostensibly for the purpose of providing their children with a higher education. The Committee supports the Soldier Settlement Commission in its opposition to this practice, and considers that the settler should be required to discharge either his loan or have it converted to a rate of interest applicable to ordinary mortgages.

### **Water Supply.**

The greatest bar to the improvement of waterworks generally is the lack of Government loan money and, as this aspect represents a problem of greater significance than that which arises in the area under enquiry, the remedy must be more widely sought accordingly.

With an improvement in the financial position, however, the Committee considers that special consideration should be given to waterworks proposals designed to increase production in the area under review, so that this part of the State will fulfil its true destiny as the principal economic factor in the successful operation of the Port of Portland.

The financial year just passed produced the peculiar result that the Waterworks Trusts of the State were forced to vie with each other for the available man-power and materials including the professional services of the consulting engineers who draw up their plans and specifications and the Trusts were thus unable to spend the £628,500 Government loan money allotted them, despite the usual precaution of granting money considerably in excess of the amount intended to be spent.

This discloses a grave weakness in the system of granting loan money on an annual basis, and indicates the urgent need for the period in which the money may be spent being extended, preferably to three years.

### **Electric Supply.**

The Committee finds that the State Electricity Commission's important objective is to make available a service of electricity at the earliest practicable date to those country residents who have as yet been denied the benefits and conveniences of supply.

The Commission's Developmental Plan, mentioned in our First Progress Report, provides for the final stages of rural electrification in Victoria by 1961. By this time—

- (a) 228,000 consumers will be connected in areas outside the metropolis at a rate which will be limited only by the availability of necessary manpower and materials ;
- (b) many local undertakings in country areas will be acquired and supply will be extended to about 650 centres and other small settlements not at present having electricity available from public mains.

It is anticipated that, on the completion of the plan, there will remain without supply only 15,000 homes in the most isolated parts of the State, but every effort will be made to include as many as possible in the plan.

The Commission will rely on its own financial resources augmented by public loans and loans from prospective consumers in undertaking the plan. Tariffs will be framed to supply new urban and larger town areas at cost, leaving the Commission to provide by subvention from established areas a subsidy for the further development of the more remote areas in the new regions.

### **Roads.**

The position in the North-Western and Western districts is generally typical of the whole of the State. Less than half the total length of main roads is sealed. This applies to the "important shire roads" also, some sections near townships being especially urgent.

Roads are a very important factor in rural development, particularly in areas where rail services are limited, and, in order to encourage and facilitate such development, the existing road system requires improvement and extension.

In many cases, grants to councils are inadequate to enable them to maintain and improve roads to a desired standard. Also, the large volume of work required on roads and bridges throughout the State is far beyond the Board's present resources, which are sufficient only to provide for little more than bare maintenance.

Present road construction costs are  $3\frac{1}{2}$  times greater than pre-war, and, although there has been a natural increase in road revenue such increase has not kept pace with the rising cost of works.

Pavements constructed between 1927 and 1939, which was an intense period of roadbuilding activity, are now beginning to reach the end of their economic life. Progressively each year, as failures become imminent, renewal of an appreciable mileage becomes necessary, generally involving the construction of wider and heavier pavements to cope with the increased flow and weight of traffic. Six years of war caused a great lag in such work, and, in the post-war period, the rate of reconstruction has been too slow even to conserve the assets.

Motor transport will be required to meet the rapid expansion which will take place in the area under review and it is only commonsense to face up to the necessity for constant and increasing expenditure on roads.

One of the major problems confronting the Soldier Settlement Commission in subdividing large estates for settlement, is the provision of roading facilities. A great deal of road construction has been undertaken by the Commission and more will be required. Apart from the actual acquisition of land, the provision of roads is one of the Commission's largest individual costs in settlement.

### **Re-afforestation.**

By reason of climatic and soil factors, the forests of the area under enquiry are not capable of high per acre production and the desirable reservations even to meet purely local timber requirements must thus necessarily be of greater extent than would be the case if the forest land were of high yielding capacity. It is pointed out also that a considerable proportion of the forest land handed over for reservation in the early history of the State was considered of little value for any use and the better forest lands, particularly those carrying stands of red gum, were alienated and cleared for settlement. The extent of existing reserves is thus by no means a true reflex of the timber production potentialities and is apt to give a false impression of the position.

### **Soil Conservation.**

The basis of soil conservation, land development, and usage is the proper knowledge of the soils and their reactions under the proposed form of land use. Therefore, it is a matter of investigation to determine the manner in which the maximum productivity can be obtained from each type of land without loss of soil or its fertility.

Throughout Western Victoria there are thousands of acres of alienated land which present no technical problems of development to a much higher level of productivity than at present, but throughout there are scattered areas of land of varying extent which have not been taken up and used by people in the past. These areas usually have a vegetation of stringybark or heath, and are recognized as low fertility soils. There is a superficial similarity in all of these areas, although they are found occurring in a wide range of climatic conditions.

In the areas occurring near Portland and northward into the drier country, there is not only a similarity in the vegetation, but also in the surface soil conditions which are mainly grey infertile sands. However, this similarity of soils is only a surface phenomenon. The soils in these different areas of stringybark—heath country vary from place to place in certain physical characteristics of the sub-soils which can be quite important. The sandy material from which the soils have been formed was originally the top soil from areas further to the westward, which has been moved by wind to the east and deposited to varying depths over varying kinds of materials during an Arid Period several thousand years ago. In some places there may be only a few inches of sand overlaying clay, in other places over limestone, and in other places there may be several feet of sand. As a result of present day climatic and other environmental conditions, the existing soils have been formed. In some places they are quite acid and contain large amounts of partly decomposed organic matter, while in others they are not so acid and contain little organic matter.

The soils have in common, an extremely low fertility level, being particularly deficient in phosphate, nitrogen and, of course, certain trace elements. It is because of this common property that the superficial vegetation appears to be similar, the areas having been colonized by plant species able to grow in such infertile soils. But even in the matter of vegetation there are some confusing occurrences which could be misleading to the laymen.

In the Southern occurrences near Portland and Casterton, heath occupies areas which consist of relatively shallow soils in which there is either clay or stone or an organic hardpan holding the water to give relatively wet conditions; conditions which are unsatisfactory for stringybark. In the northern areas, for example in the "desert" country, such areas are occupied by mallee and broombush, and the heath, together with an occasional stringybark, occupies the areas of deeper and drier soils.

Heath country, therefore, which is the most desirable for development because of low clearing costs, cannot be considered to be the same in various parts of the area.

## COMMENTARY ON THE QUESTIONS CONTAINED IN THE FIRST PROGRESS REPORT.

### 1. THE PORT OF PORTLAND.

*(a) The Desirability of Accelerating Harbor Construction Activities.*

The development of Portland Harbor is the only public undertaking of major importance in Western Victoria under construction at the present time.

The Harbor Trust Commissioners are endeavouring to adhere to a works programme within a planned economy. Accordingly, the Trust has made a resources survey of the requirements for labour, materials, capital equipment, and technology to complete Stage 1 of the deep sea harbor by the year ended 1959 at an estimated cost of £5,000,000. Initial borrowing power was £1,000,000, but legislative action taken towards the latter end of last year increased this amount to £3,000,000.

The fact that large capital funds have been made available for developmental projects in the Eastern part of the State, notably in the Latrobe Valley and in connexion with the extension to the Eildon Reservoir, has compelled the Commissioners to plan on a minimum scale, thus reducing the speed with which it could reach its final objective.

Hydraulic works at Portland have been scientifically designed from scale models to prototype after intense research into local maritime and weather conditions. Rubble mounds of the sea walls are now extending into increasing depths of water and, in order to protect them, it is becoming imperative for the tempo of work output to be accelerated. This relationship is dependent upon an appreciation of necessary capital financing and the following target, as determined by the Commissioners, is considered to be the minimum period for safe and economic planning.

Financial Year.	Phase of Work.	Order of Expenditure.
		£
1951-1952..	{ Already spent on Establishment Investigation, Design and some Preliminary work	250,000
1952-1953..		
1953-1954 ..	Investigation, Design, and Preparatory Work—(First full year) ..	200,000
1954-1955 ..	Completion of Investigation and basic Design and production of Contract Documents, calling and closing of main tenders (Second full year of preparations)	300,000
1955-1956 ..	Design Continues—Third Year of Preparatory Work. Contractors established and main work started	750,000
1956-1957 ..	First full year of Construction .. .. .	1,250,000
1957-1958 ..	Second full year of Construction .. .. .	1,500,000
1958-1959 ..	Third full year of Construction .. .. .	750,000
	Total Cost .. .. .	5,000,000

*(b) "The Need for a Co-ordinated Plan which will Ensure that Provision of the Various Facilities Keeps Pace with the Work being Undertaken by the Harbor Trust Commissioners."*

Two facilities of fundamental importance essential to the development of the Port, namely, water and electric supply, are deficient, and will require consideration and action beyond the scope of the Harbor Trust Commissioners. These matters are dealt with under their respective headings.

Bulk handling of wheat and the manufacture of superphosphate, are considered of paramount importance to the fuller development of the Port. These items are also dealt with under the heading of Primary Industrial Development, and Industrial Development and Decentralization respectively.

In other respects, negotiations between the Harbor Trust Commissioners and the several authorities concerned in the provision of the necessary facilities are proceeding satisfactorily and require no special comment by the Committee.

## 2. PRIMARY INDUSTRIAL DEVELOPMENT.

### (a) *The Need for a Rationalized Plan of Settlement.*

This question has been somewhat simplified by the enactment of a Land Settlement Bill designed to achieve an increase in primary production by a more intensive use of existing lands under pasture, the bringing into production of virgin land under cultivation, and to make it possible for men of determination and ability with or without capital to settle on the land. Thus, Victoria is the first State with legislation on the Statute Book enabling a settler, on the basis of efficiency alone, to go on the land. Hitherto, only persons with sufficient capital, but not necessarily the greatest ability for settling, have been able to do so.

Under the Act (No. 5768) the administration of closer settlement is vested in the Soldier Settlement Commission, obviously for the reason that the Commission has been actively associated with this type of settlement. Although the legislation is not designed to deal with soldier settlers, provision is made in it for the Service records of an applicant to be taken into consideration in determining whether he will be allocated a block of land.

The cost factor of acquiring large tracts of existing pasture land and applying it to more intensive cultivation methods places the proposition beyond the scope of any Government for the time being. Therefore, it is apparent that the emphasis will be on the bringing of hitherto unproductive land under cultivation, i.e., chiefly Crown lands.

All applicants will be interviewed by a Land Board which will determine those who are qualified. The object of that Board will be to ascertain which applicants possess the ability to make good farmers and put the land to its best possible use. After being approved, selection will be by ballot.

There will be two types of settler—

- (1) A private settler, who will possess sufficient money to improve an individual block himself; in which case he will receive it in its virgin state;
- (2) A Crown settler, who will be placed on a block under perpetual lease in an estate after pasture has been established and the land brought to the stage where the block is capable of earning an income.

Crown lands which are relatively small, more or less isolated, and surrounded by freehold land will be made available to any applicants who have the capital to improve them in accordance with the terms of the Land Act, but if the lands concerned are part of a large area which can be handled more effectively by mass clearing, sowing down, fencing and improving by the provision of water, drainage and so on, such alienation will not be allowed.

Certain avenues of primary production, such as vegetable growing and olive production, require special aptitude on the part of the applicant for settlement, and no doubt the new Closer Settlement Commission will pay particular attention to this aspect of their functions. Likewise, certain small areas will require to be developed in a special manner rather than in a routine way applicable to agriculture generally. The Lake Cullulleraine area is a good example of an area requiring special consideration and attention.

In the administration of the new Act, consideration should be given to the size of the block from the point of view of providing more than a minimum return so that a farmer may employ at least one son on his property. The Committee has been sorry to learn of the number of farmers' sons with considerable experience on the land who have migrated to secondary industry in the big cities of the State.

Considerable interest has been shown by the Committee in the A.M.P. Society's Land Reclamation Scheme. The venture will be successful despite the rising cost of bringing the land into production but, in our opinion, this would not have been the case had the Society not been very careful in the choosing of the settlers and had it not been on a basis whereby the workers could see it was to their ultimate advantage to ensure that the work was done cheaply. This contrasts with past settlement schemes and indicates that some incentive should be provided whereby the intending settler will work hard, not only in his own interests, but also that of the State.

The Soldier Settlement Scheme has been a great success from the point of view of actually settling men on the land and raising a group of contented people, and no doubt the new Closer Settlement Commission will carry on in the same efficient manner.

The Committee believes that, by choosing the right type of land with discrimination it will be possible to effect settlement considerably cheaper than is possible at present by the agent States under the Commonwealth Land Settlement Scheme and under the State's present Soldier Settlement Scheme.

*(b) The Classification of Crown and Undeveloped Lands in the Area and the Preparation of a Plan Showing the Order in which Areas Selected for Farming should be Developed.*

An urgent need exists for a thorough and co-ordinated survey of all Crown and undeveloped lands in the area with a view to classifying them as follows :—

- (a) forest lands ;
- (b) water catchment areas ;
- (c) soil conservation areas ; and
- (d) areas suitable for primary industrial development.

It is true that certain inspections are already being carried out by Regional Committees, the Soil Conservation Authority, and the Department of Agriculture with a view to selecting areas suitable for settlement. Also, the Land Utilization Advisory Council set up under the Soil Conservation Act to deal with land utilization in catchment areas, is particularly active within its own sphere. But, so far as the Committee can discover, there has been no serious attempt to consider the Portland hinterland, i.e., the Mallee, Wimmera, Glenelg, and part of the Corangamite Regions, as a whole, and to report collectively on the area. This should be done without delay, and a plan drawn up showing the order in which areas selected for farming should be developed.

The Committee is satisfied that the existing Regional Committees, the Central Planning Authority, and the Land Utilization Advisory Council as a final arbiter could be utilized for the purpose. This would involve a closer working together of the four Regional Committees on matters of common interest and an enlargement of the scope of the Land Utilization Advisory Council to include (i) other than water conservation areas, (ii) representation by the Soldier Settlement Commission and the Central Planning Authority.

The already good work performed by the Regional Committees proves conclusively that they are capable of making the initial review of their areas, but before final decisions can be reached and a plan drawn up much technical data and other advice from departmental sources is necessary. Hence our preference for this work to be done by an enlarged Land Utilization Advisory Council, which at present comprises the Permanent Heads of the Agriculture and Lands Departments, the Chairman, State Rivers and Water Supply Commission, the Chairman of the Forests Commission, and the Chairman of the Soil Conservation Authority.

After having decided which areas of land are to be made available for timber production, and having taken into account the requirements of water and soil conservation, there will undoubtedly be large residual areas that can be made available for effective settlement. The delineation of these areas will be a major problem and many aspects will need to be considered before the best answer can be found.

*(c) Ways and Means of Stimulating Greater Production on Existing Farm Lands Including Pasture Improvement (Ley Farming Methods).*

The Department of Agriculture has shown that, by establishing subterranean clover in suitable areas with a rainfall of over 20 inches per annum or certain species of trefoil, e.g., barrel medic in the lower rainfall areas, soil fertility can be increased, and the Department looks to the extension of this practice to improve wheat quality. It is desirable that the period under pasture be as long as practicable, as evidence

suggests that at least two years under a leguminous pasture is required for increased fertility. A reasonable period under pasture is also necessary to recoup costs associated with its establishment. Although the extension of Ley farming along these lines may result in a lesser tonnage of wheat being produced, livestock numbers would increase.

The Mallee Research Station initiated experimental work with barrel medic in this State, and being impressed with its possibilities as a pasture legume for dry areas, the first field trials were established in the Mallee in 1939. Subsequently, private farmers were influenced to try this legume on their properties. Barrel medic has been featured at many of the field days conducted annually at the Research Station since 1939 and the experiments have now been extended to provide information on the carrying capacity and build-up of soil fertility of land under sown barrel medic compared with that under natural volunteer pasture. Special soil fertility trials have been established to compare the yields of wheat after periods of 2, 4, and 6 years under barrel medic pastures compared with similar periods under natural pastures or under regular cropping on a "fallow wheat" rotation.

While barrel medic is the best legume for the Mallee at present available in commercial quantities, the fact that more suitable types might be available by introduction from other countries, by selection, or crossing of existing types has not been overlooked. In this regard, the Department of Agriculture is in constant liaison with the Commonwealth Scientific and Industrial Research Organization to obtain seed of any promising introductions from other countries, and such seed is sown under ordinary field conditions at the Mallee Research Station alongside the standard commercial barrel medic. In this way, it has been possible in recent years to select several species which have performed at least as well as barrel medic, and seed of the most promising species is now being bulked up for testing on a larger scale.

Research work of this nature is a slow, painstaking task, but there is reason to believe that the greater concentration of endeavour in the field of research into leguminous pasture species for the low rainfall wheatgrowing areas in Australia will lead to the production of types more suitable than existing species. In the meantime, farmers in the Mallee and Wimmera who have not had any experience with barrel medic could, with advantage, give this legume a trial and make observations on its growth and persistence under their own conditions.

The use of early primrose (evening primrose) and lucerne as a pasture species have been tested at the Mallee Research Station on a number of occasions, but their successful establishment is erratic and their persistence limited.

The net result of all these experiments and their ultimate practical use will tend towards a Ley farming system which will make the northern areas rather less unreliable than in the past with a good deal more capacity to carry sheep than hitherto. This will be a very promising development, because a stability will be added which has not always been enjoyed. Induced rain, of course, would overcome the difficulty and, if the investigations being conducted by the Commonwealth Scientific and Industrial Research Organization could produce two falls of half an inch say in April or May in a drought year and another fall of an inch in September, the whole of the Mallee could be established as a good wheat growing country.

The Committee visited the Mallee Research Station and witnessed experiments being conducted into a wide range of problems relating to wheat growing and sheep raising under Mallee conditions, including wheat variety and fertilizer tests, soil fertility and pasture establishment investigations, soil drift control measures and fat lamb experimental work.

In the interests of the fuller development of the area under enquiry, the Committee considers that work, particularly on pasture establishment investigations, should be considerably stepped up and that conditions generally should be made attractive to induce the requisite staff to join the Research Station.

Active steps are already being taken by the Department of Agriculture to expand generally its extension services in country areas with the assistance of funds provided by the Commonwealth Extension Services Grant. However, the general question of extension service is fully dealt with under the heading of "Additional Technical Advisory Services for Farmers" on page 44 of this report.

The Committee accepts the evidence that production from existing holdings could be considerably increased. Apart from the introduction of advanced farming methods and an increase in educational facilities, the following aids would no doubt assist to increase production :—

1. Adequate roads to allow all the year round marketing of produce ;
2. Adequate supply of electricity ;
3. Adequate supply of water, especially to enable an increase in areas under irrigation ;
4. Reduced rail freight charges ;
5. The introduction of a system of farm apprenticeship for boys.

With regard to the latter, the Committee learnt that a national scheme of farm apprenticeship is proposed in the United Kingdom and that a national joint apprenticeship council has been set up by farmers' and workers' organizations to work out details.

Subsequently, it was brought to our notice that the National Catholic Rural Movement has already enunciated such a plan for Australian boys on a non-sectarian basis and has submitted it to the Apprenticeship Commission of Victoria for consideration. We have examined the plan, and consider that, despite certain difficulties which will need to be overcome, the idea has considerable merit.

We agree in principle that there should be an apprenticeship scheme for boys wishing to be employed on farms and consider that the plan of the National Catholic Rural Movement could very well be accepted as a starting point for the working out of details.

*(d) The Wisdom of Planting Additional Areas to Dried Fruits.*

In view of the grave deterioration in the dried fruits position overseas since this inquiry began, the Committee has little option but to confirm the claim of the Australian Dried Fruits Association that to allow uneconomic expansion of an industry whose production is vulnerable to world competition is to ignore the welfare of dried fruits settlers who are already committed to costly capital improvements and who possess permanent plantings which cannot be altered from year to year.

This state of affairs is rather unfortunate because, so far as the area along the River Murray between Swan Hill and the South Australian border is concerned, dried fruits is one of the few types of production that shows promise of being able to withstand the high charges involved in pumping water and still leave a margin of profit for the grower.

Loss of overseas markets can be offset to some extent by an increase in home consumption. We consider that an intensification of the Dried Fruits Association's publicity campaign along the lines of that promoted by the Railways Department in the 30's would considerably assist in the disposal of any surplus stocks that are likely to accrue as a result of world conditions in the industry.

Shortages of dried fruits on the retail market, especially just prior to the Festive Season, have been apparent in the past. The Dried Fruits Association should resolve that this state of affairs will not occur in future.

*(e) Investigations for the Purpose of Improving Pastures in Low Rainfall Areas Within the Mallee and Wimmera Regions, Including Ley Farming Methods.*

This question has been conjoined with 2 (c) above.

*(f) The Suitability or otherwise of the Dry Feeding Method of Dairying in Low Rainfall Areas.*

The Committee deprecates the necessity during dry spells of transporting whole milk to the City of Mildura and other Mallee towns from as far afield as Gippsland, and believes that appropriate action should be taken to ensure a permanent local supply.

Production of milk is already planned in the Drung area south-east of Horsham for supply to the Wimmera region and no doubt limited quantities from this source will be available for distribution in the Mallee.



There are odd sections of land along the River Murray which are not and cannot be made part of the centralized irrigation system but could, with the development of carefully arranged pumping, be run as dairy farms to provide a milk supply for Mildura. The Lake Cullulleraine district would come within this category. The Soldier Settlement Commission indicated in evidence that it would not rule out the settling of small numbers of returned soldiers for whole milk production in these circumstances, provided a suitable type of settler was available.

While areas suited to the normal methods of milk production are available in the area concerned, the "Rotolactor" or dry feeding method of dairying is perhaps a little too revolutionary at this stage, but if or when the population considerably increases, the system could be given a trial, preferably under the supervision of the Department of Agriculture.

(g) *Fodder Conservation.*

The Department of Agriculture continues to stress per medium of its publicity campaign the many advantages associated with proper methods of fodder conservation. In this regard the Committee considers that everything possible is being done to awaken an awareness in the minds of farmers particularly in the Wimmera and Mallee regions of the dangers associated with the cycle of dry seasons which inevitably occur in these parts of the State.

At the proper time, representations should be made to the Commonwealth Government to have the taxation concession of 20 per cent. per annum on buildings erected for fodder conservation purposes extended beyond the 30th June, 1956.

(h) *Wheat Storages, including Terminal Facilities at Portland—Wheat Storages.*

The Committee is in entire agreement with a decision of the Grain Elevators Board to recommend construction of new concrete facilities calculated to raise the present storage capacity of the system from 19 million bushels to 28½ million bushels. These additional facilities are proposed at the following places in the area under review:—

*New 100,000 Bushel Williamstown Type Elevators—*

Torrita	Tatyoan	Swan Hill
Turriff	Lake Boga	Kulwin
Diapur	Mittyack	Dahlen
Nandaly	Dimboola	Ninda
Remlaw	Arapiles	Goroke
Borong	Goyura	Rupanyup.
Glenorchy	Kooloonong	

*60,000 Bushel Annex Bins—*

Woomelang	Salisbury	Jeparit
Watchupga	Kiata	Tarranyurk
Curyo	Gerang	Antwerp
Kinnabulla	Wail	Arkona
Birchip	Pimpinio	Patchewollock
Morton Plains	Dooen	Hopetoun
Watchem	Jung	Rosebery
Massey	Lubeck	Beulah
Litchfield	Yaapeet	Galaquil
Donald	Albacutya	Brim
Rainbow	Lah	Pullut
Batchica	Ellam	Sheep Hills
Lillimur	Yanac	Nullan
Kaniva	Netherby	Minyip
Miram	Lorquon	Coromby
Tarranginnie	Detpa	Bolangum
Marnoo	Nyah West	Banyena
Pira	Burrum	Manangatang
Jackson	Chinkapook	Nyarrin
Gowanford	Sea Lake	Ultima
Boigbeat	Meatian	Berriwillock
Culgoa	Nullawil	Dumosa
Boort	Wycheproof	Wedderburn.
Glenloth	Piangil	

In all, 43 elevators and 89 annex bins are contemplated throughout the wheat growing areas of the State which if constructed under present conditions, may cost £4,250,000 thus raising the over-all cost of bulk handling facilities to approximately £6,550,000.

To yield to the demand of providing storage accommodation on the basis of being able to receive all the wheat grown in a peak year of production without some inconvenience to growers could carry the total cost of bulk handling well beyond the £10 million mark. Such a course of action would cause the system to become over-capitalized whereas most of the difficulties likely to be experienced in a year of high production could be simply overcome by the laying down of a suitable floor in an existing shed on the farm to provide temporary storage.

The additional storage accommodation proposed by the Grain Elevators Board will enable the wheat grown in this State to be handled in such a manner as will maintain the good name of our wheat and permit of its being handled on a sound economic basis.

The recent introduction of diesel electric traction will eliminate certain of the disabilities obtaining at Donald and will still further increase the economic advantages of the emergency wheat storage at Dunolly.

#### *Terminal Facilities at Portland.*

The question of erecting bulk handling facilities at Portland was the subject of investigation in 1950 by the Parliamentary Public Works Committee which, after giving various reasons why it was inadvisable that a bulk terminal be constructed at Portland, finally made the following recommendation—

“That the possibility of the need for terminal silo at this location in the future be borne in mind by those who are charged with the design of the harbor and associated works”.

Notwithstanding the many cogent reasons to the contrary, the Committee considers that the shipment of wheat *ex* Portland is of paramount importance to the ultimate success of the port and the time is now ripe to make a final decision in the matter.

The provision of a terminal at Portland of an assumed capacity of 3·6 million bushels or 100,000 tons of wheat is estimated to cost in the vicinity of £2,000,000.

The Grain Elevators Board states that nothing has occurred since the Public Works Committee made its findings in 1950 that would vary its approach to the problem, and that it opposes the suggestion principally on the grounds that the Geelong terminal is capable of shipping far more wheat than is ever likely to be grown in Victoria and that any variation in the existing system would be an unnecessary financial burden upon the wheat growing industry.

On this latter point, the Committee appreciates that there must be some limit to the further capitalization of these facilities so far as the wheat growers are concerned, and, as the development of Portland Harbor is a decentralization project, we consider the capital cost should be included in the capital outlay of the port rather than a charge on the wheat industry.

The difference between erecting additional concrete storage at Geelong and terminal facilities at Portland may not be as great as imagined, because of the following factors :—

1. The turn around of shipping at Portland would be much quicker than other Victorian ports being only 12 miles off the main southern sea route thus permitting ships to approach within 1 mile of the port at undiminished speed ;
2. Considerable savings in rail freights would accrue, especially in the areas enjoying a freight differential of 1s. 3d. per ton because the forwarding railway stations are closer to Portland than Geelong.

The ability of the facilities at Geelong to actually ship all of the wheat is undoubted, but there are the relevant factors of storage and transport to be considered. A terminal silo at Portland would to some extent ease the storage situation while the shipment of wheat *ex* both Geelong and Portland would apart from the above-mentioned savings in freight charges, overcome many difficulties experienced by the Railways Department in transporting the crop to the seaboard. With regard to the aspect of storage, it is a matter of some regret that the emergency storages to cope with surplus wheat have been erected at Geelong rather than at Portland.

One of the several reasons advanced by the Parliamentary Public Works Committee in reporting adversely on the question of terminal facilities at Portland is low protein content and it would, therefore, be necessary to transport high protein wheat from other parts of the State to obtain a satisfactory blend for export.

The Committee does not agree with this finding. Rather do we subscribe to the view that, as blending of Australian wheat overseas with other wheat of a higher protein content is already common practice, any wheat *ex* Portland that may be of slightly lower protein content would not evoke any dissatisfaction on the part of the customer. In fact, in the United Kingdom only between 10–20 per cent. of Australian wheat is used by millers in their blends.

Our general policy therefore should be to produce as much wheat per acre of the present quality as possible ; the higher the yield per acre the lower the cost of production.

However, the loss of protein quality is a little related to the bad quality of bread in the capital city of Melbourne, but, as all the wheat *ex* Portland would be shipped overseas, this aspect does not come within the terms of Reference. Suffice it to say that millers could obtain the desired quantity of special wheat from Queensland or by private contract with farmers to ensure a satisfactory protein content in their flour.

(i) *Barley Storage.*

The Committee considers that the storing of barley in permanent sheds would result in the grain being much better protected than under the present method of annually roofing open stacks and that, over a period of years, a saving in storage costs would result.

The Barley Board is not empowered to provide permanent storage sheds but, even if the necessary authority were provided, it would probably be financially unwise for the Board to contemplate the enormous expenditure involved having regard to the precarious nature of the existing barley marketing scheme.

Therefore, three alternatives for the handling of barley present themselves—

1. That an organization similar to the Grain Elevators Board be constituted from amongst the growers with authority to receive all barley ;
2. That the licensed receivers themselves undertake to provide permanent storages ; or
3. That the Grain Elevators Board be empowered to also receive barley.

The Grain Elevators Board has indicated in evidence that, if requested, that Authority would examine the whole question of Barley storage and would propound a scheme for consideration by the Honourable the Minister of Agriculture.

(j) *Specific Areas Suggested for Development.*

As indicated earlier in this Report, the Committee subscribes to the view that an urgent need exists for a thorough and co-ordinated survey by a Statutory body of all Crown and undeveloped lands throughout the areas under review with a view to finally ascertaining *inter alia* which areas are best suited to primary industrial development.

Therefore, it is not our intention to make recommendations concerning those areas which were specially mentioned in evidence as being suited to development and which were enumerated in the First Progress Report. Nevertheless, certain trends appeared in the evidence heard subsequently and we make the following comments accordingly.

**The Mallee Region.**

*Lake Cullulleraine District.*—A pumping plant in good order is available for an irrigation project and a supply of water could be given when improvement occurs in the quantity available to Victoria from the River Murray, but there are hazards, both economic and geophysical, attached to irrigation under conditions likely to prevail in this district which suggest that development should be approached with caution.

A considerable portion of the most suitable land in the district is held by private individuals on perpetual leases under the North-West Mallee Settlement Areas Act, and this land would need to be resumed and sub-divided before satisfactory settlement could be effected in the normal manner.

If the initial difficulties were overcome, there would be no reason on present indications why dairying could not be carried out for the purpose of supplying the Sunraysia area, also tree-fruits and some vines included, if the quota system permits.

Whatever form of farming is established, strict attention will need to be given to the economics of the venture in view of the high cost of water, and the doubtful nature of some of the soil.

*The "Mid Area" between Mildura and Red Cliffs.*—This tract of freehold land is highly suited to citrus and dried fruits production, and is possibly slightly more desirable for early development than the Merbein South area, but being on rising ground, a re-lift will be required before irrigation can be carried out.

A survey made by the Commonwealth Scientific Industrial Research Organization some years ago indicated that a good part of the area was suitable for citrus growing. However, a recent and more detailed survey carried out by the Department of Agriculture in connexion with proposals for the establishment of a citrus research station in the district revealed that the proportion of land suitable for citrus growing may be considerably less than was at first imagined.

*Merbein-South-West Area.*—This area comprises comparatively good land and could be watered from existing channels, but a re-lift pumping station would be necessary.

Soil types range from Murray to Barmera sands on two sand hills which would be suitable for citrus growing down to rather highly calcareous loams occupying about 50 per cent. of the area. This latter type of soil would be more suitable for irrigated pastures than for horticultural production.

### **Wimmera Region.**

*Haven and Quantong Districts.*—The development of irrigation areas around Horsham is limited to the amount of water available. There are many thousands of acres suited to irrigation, but development can only take place when the extension of water schemes will permit.

*The Little Desert Area.*—Experimental plots conducted by the Department of Agriculture on the fringe of the Little Desert indicate that pastures can be established, but, in view of the low rainfall, much investigation will need to be carried out before large-scale development commences.

Development of the area will be attractive to land owners in the higher income tax group who will find it economical to spend large sums of money on manures and equipment. The peculiar economics associated with a venture of this kind will have a considerable bearing on its ultimate success.

*The Dooen Swamp Area.*—There appears to be an impression amongst local farmers that, because the resources of the Glenelg River are being utilized, there will be a surplus flow in the Wimmera River. This is quite erroneous. In dry years, when water for irrigation purposes is needed most, the Wimmera River will be drawn upon as much as ever.

The permissible amount of extension of irrigation in the district has been computed on the combined output of both the Wimmera and Glenelg Rivers, and, as the supply of water is very limited, it necessarily follows that irrigation must be practised on the best ground available. Dooen Swamp, being low lying, cannot be classed as such. The cost of construction of levee banks to protect the area would be greater than the cost of purchasing better class land adjacent to headworks.

Consequently, it is illogical to say that production could be increased by developing this area.

*Lake Lonsdale Area.*—Lake Lonsdale is the weaker side of the Wimmera-Mallee Stock and Domestic System, and, because there is a tract of country extending as far as St. Arnaud which cannot be commanded from Rocklands, the State Rivers and Water Supply Commission does not favour providing water for irrigation from Lake Lonsdale.

Furthermore, it would be unthinkable to construct a reservoir for a demand of only 500 acres of irrigation.

*Buloke Swamp Area.*—The running of water through earthen channels long distances from Batyo Catyo Basin would result in the amount of water finally available for irrigation being so low that the project would not be worthwhile.

However, a certain amount of irrigation at the storage end should be allowed, especially if used for whole milk production to meet shortages in Donald and nearby areas.

*Grampians Area (Olive Cultivation).*—The land being developed by Mr. J. Friedman, farmer and grazier of Horsham, is sandy foothill country, and provides excellent fire protection for the forest. On the contrary, cultivation of this type of soil in a heavy rainfall area can present problems affecting soil conservation and water supply, and the throwing open of further land should only take place after due consideration has been given to these aspects.

The present price of olives places them in the luxury class as a food, and, unless the cost to the consumer can be considerably lowered, profits of between £4,000 and £5,000 per block of five acres, as claimed by Mr. Friedman, could scarcely be sustained if further areas are developed.

Olive growing should be encouraged, but steps should be taken to ensure that Crown lands are not improperly used by experts in the cultivation of olives, who sell their holdings on a rising market and withdraw, leaving development in the hands of inexperienced people.

### **Glenelg Region.**

*Areas within the Counties of Follet, Normanby, and Lowan.*—The Committee agrees with Mr. K. L. Chappel, Assistant Surveyor-General that some 500 farming blocks could be developed on Crown Lands in these counties, and there is little doubt that, having regard to the assured rainfall and the comparative ease with which blocks could be brought into production, the Closer Settlement Commission and the proposed new Land Utilization Advisory Council will give the area the attention which it deserves.

In the meantime, soil trials should continue and if necessary one or two sample farms conducted as a trial.

## **3. WATER SUPPLY.**

(Including Sewerage and Flood Protection Measures).

### **Mallee Region.**

(a) *Construction of the Marraboor Weir.*—The Committee upholds the argument placed before it by the Mid-Murray Water Users' Association and considers that construction of the Marraboor Weir will have the joint effect of saving a considerable quantity of water in Victoria and at the same time will bring into production a vast area of land on the New South Wales side of the River the produce from which will be marketed in Victoria and transported by this State's transport system.

The Governments of Victoria and New South Wales and the River Murray Commission are known to be in favour of the Weir being constructed, but, as two States are involved in the cost, the work can only be commenced when joint finances will permit. At the moment, Victoria is passing through a difficult period financially owing to the huge undertaking being carried out at Eildon, but River Murray water-users will gain a temporary advantage from this project because the water stored at Eildon will be channelled down the Murray until such time as the Goulburn channel systems are enlarged to take advantage of the extra water.

In considering water works on the River Murray it is generally agreed that the enlargement of the Hume Reservoir must take priority over all other works because of the disastrous results from water restrictions in a drought year.

We consider that construction of the Marraboor Weir should be commenced immediately the financial pressure occasioned by the two above-mentioned projects will permit, and that an endeavour be made to secure agreement on these lines between Victoria and New South Wales.

*(b) Financial Aid for the First Mildura Irrigation Trust to Maintain a Satisfactory Distribution System.*

Proposals to improve the channel distribution system originally estimated to cost £300,000 have been included in a ten years programme which has been proceeding steadily over the past four years, and, on present day costs, is a little less than half completed. Outstanding works include concrete linings of the channels where linings have deteriorated or where no linings exist, also the replacement of channels by pipe lines wherever an improvement will result.

The Committee considers it essential that a satisfactory distribution system should be maintained and that the rate of progress under the above-mentioned plan should be stepped-up immediately additional funds are available.

*(c) Ouyen Water Supply.*

This item was inadvertently omitted from the Summary of Questions to be Resolved contained in the First Progress Report.

Additional storage, together with rising main and pumping plant is estimated to cost £12,000 and, in view of the likely increase in the importance of the town as a centre on the main transport communication link between Hay, New South Wales, and Portland, authority for this work to proceed should be given at an early date.

**Wimmera Region.**

*(a) Pipelines in Lieu of Open Channels (The Wimmera-Mallee Domestic and Stock Channel System).*

The Committee is reluctantly compelled to the view that no tangible alteration in the position (costs apart) has occurred since reporting previously on this question.

The capital cost of installing a pressure supply of water instead of a gravitation supply from channels, as at present, is estimated to cost £29 million. Interest on this amount at 3½ per cent. plus depreciation at 1 per cent. represents an annual charge of £1,305,000, whereas the average cost of cleaning channels over the past five years, despite large increases in wages, has amounted to only £65,000 annually.

We confirm that the additional supply from a pipeline system would not appreciably raise production on the farms, and, even if the extra water were used for irrigation near the headworks, a return in production sufficient to offset the annual cost of the pipelines would not result. We also confirm that the carrying out of the works would almost certainly deprive the State for many years of other major developmental works of very much greater value to the community, which could be carried out with the same expenditure of labour and materials.

The channel system is in particularly good condition at the present time. This is evidenced by the fact that watering in recent years has been carried out in quicker time than ever in the history of the system although it must be admitted that to some extent the seasonal conditions have been favourable. The State Rivers and Water Supply Commission is accumulating a quantity of efficient plant designed to clean the channels more rapidly and efficiently than by horse teams.

The campaign designed to prevent channels from being filled with sand as a result of wind storms is recommended to all farmers served by the system.

*(b) Investigation and Subsequent Development of Artesian Water in North-Western Victoria.*

Hitherto, the main use of artesian water has been for domestic and stock purposes, but isolated instances of the water being used for irrigation have established that production could be appreciably increased by this means.

There is no evidence that the vast underground lake known to exist in these parts will fail to meet the maximum demand likely to be placed upon it, but the fears of the farming community should be respected, because of the financial outlay (estimated to be in the vicinity of £2,000) involved in sinking bores and equipping their farms with spray equipment.

As large-scale development is unlikely to take place until the potential of the underground lake has been established, the Committee considers that the research undertaken in Victoria by C. S. Gloe, B.Sc., Geologist of the State Rivers and Water Supply Commission, who has resigned from the Service, should be continued conjointly by the Water Commission and the Department of Mines, without delay, not only in respect to this particular section of the area under review, but also at other places where underground water could be used with beneficial results.

In this regard, the Committee is pleased to learn of the Press statement made by the Hon. the Minister of Mines to the effect that six heavy-duty percussion drills have been purchased and that drilling operations in another part of the State have already commenced.

As an adjunct to such a survey, and to enable a wealth of information to be gathered, private boring contractors should be compelled to notify the Mines Department of their intention to carry out boring operations and keep a log of their activities. Notification should not be confused with permission, because it is realised that, particularly in times of drought, water is urgently required and both the contractor and the farmer would be handicapped by having to await the result of official processes in these matters.

The principal question to be resolved is the capacity of the sub-artesian areas to provide sufficient water for irrigation. Once this has been established, an experimental farm should be set up to demonstrate the type of agriculture most suited to the quantity and quality of water available and the economics of farming under these conditions.

The evidence on the question of underground water elicited several aspects which are detrimental to the full and satisfactory use of bore water. Firstly, there is the question of contamination from the disposal of night soil and other rubbish which is being deposited in old mining shafts and holes and secondly the bore casing can become corroded thus allowing saline water to travel *via* the faulty pipe and mix with fresh water. Correction of these two disabilities should be regarded as urgent and the necessary legislative action taken to prevent their continuance without delay.

(c) *The Need for a Water Storage at Glenwylln near Glenorchy.*

At the present time, storage facilities are ample to cope with the likely demands through the Wimmera and Mallee domestic and stock channels, but having regard to the importance of such a reservoir to future development, particularly in the Glenorchy, Marnoo, St. Arnaud, and Charlton areas, and the added advantage of promoting settlement by releasing land which is at present subject to flooding, the Committee considers that a reservoir at Glenwylln should be constructed.

The site of the reservoir was surveyed many years ago and the proposed earthen bank, capable of impounding approximately 50,000 acre feet, on present date costs, would cost approximately between £500,000 and £750,000.

The suggestions in evidence that, by the use of an already natural basin, some 20,000 to 30,000 acre feet of flood flow water could be converted to a suitable storage at relatively little cost is worthy of serious consideration by the State Rivers and Water Supply Commission, because the dearth of loan funds may preclude completion of the full scheme for some years to come.

(d) *Subsidized Electric Power to Reduce High Pumping Charges at Nhill.*

Electricity charges at Nhill are relatively high compared with many other country towns, but having regard to the fact that water is available adjacent to the town, the cost of pumping compares favourably with the cost of bringing water long distances through pipelines and channels and providing expensive headworks storage.

The State Electricity Commission anticipates connecting Nhill to its grid by June, 1956, and, as power costs are likely to be considerably lower than at present, the disability claimed by the Trust will disappear.

*(e) Water Supplies for Rural Towns Within the Shire of Stawell.*

Town water supplies have been approved by the State Rivers and Water Supply Commission for places within the Shire of Stawell, as follows:—

*Hall's Gap.*—Approved in August, 1950, at an estimated cost of £36,000 which includes a Government grant of £27,000.

*Great Western.*—Approved in March, 1951, at an estimated cost of £25,000 which includes a Government grant of £17,000.

*Glenorchy.*—Approved in 1950, and already parts of the township are being supplied.

The Shire of Stawell is advised to submit its proposals concerning Pomonal to the State Rivers and Water Supply Commission without delay.

*(f) The Need for Early Commencement of a Reticulation Programme at Horsham.*

The works now in progress will fully occupy the Trust's available day labour resources for the current financial year, and an adequate and modern reticulation system for the town appears to be assured.

**The Glenelg and Corangamite Regions.***(a) Improved Water Supply for the Town of Portland.*

As indicated earlier in this report, an adequate water supply for the Town of Portland is essential to the development of the port.

Of the many possible sources of supply, it would appear that the final choice will be made from the following:—

1. The Fitzroy River catchment area ;
2. Rocklands Reservoir ;
3. The Wannon-Jimmy's Creek catchment area ; or
4. The existing bore water supply in conjunction with a modern water softening plant.

Possibly the best surface supply is obtainable from the head waters of the Fitzroy River, some 23 miles from Portland. A supply from this source would involve construction of a storage reservoir, main pipeline, and service basin near the town and would possibly only meet the requirements of some 20,000 persons.

There is ample water in the Rocklands Reservoir, but at least 80 miles of pipeline would need to be constructed and, as a considerable area of high country intervenes, it would probably be necessary to lift the water by pumping before it could reach Portland. While such a pipeline and pumping costs might not be prohibitive for a big city with heavy industries such as Whyalla or Broken Hill, it would doubtless be uneconomical to supply Portland in this manner.

The Wannon-Jimmy's Creek catchment in the Grampians which is as yet undeveloped, is estimated to be sufficient for a population of 35,000, but nearby centres, including Hamilton, would appear to have first call on this source of supply.

Therefore, the question of utilizing the existing supply of bore water plus a modern water softening plant seems to be the most attractive, provided, of course, that adequate and permanent supply is assured. Adequate supply should be interpreted to mean sufficient water for an ultimate population of 100,000 plus the requirements of the port and industry.

The quality of the present Portland bore water is comparable with the quality of water available in many large towns and cities throughout the world, including London, and is better than that available in many Victorian inland towns. Provided the quantity can be established it should prove the most economical, even after adding the cost of softening.

The local Waterworks Trust is at present investigating proposals for augmenting the existing water supply and its report which is now awaited by the State Rivers and Water Supply Commission will no doubt include comparisons between the costs of gravitation schemes and the softening of bore water.



To summarize, the Committee considers—

1. That the Portland Water Works Trust is a competent body capable of surveying the situation ;
2. That the pros and cons of the several likely schemes should be analysed by the Trust and its recommendations submitted to the State Rivers and Water Supply Commission without delay ;
3. That provision be made for an ultimate population of 100,000 persons ;
4. That, in view of the likely preference for utilizing local bore water, a team of experts with the necessary equipment should be immediately despatched to the area for the purpose of proving the suitability of the water both as to quality and quantity.
5. That, in view of the growing importance of the Port of Portland, the necessary finance should be provided to enable the work to commence immediately the most suitable plan has been evolved.

*(b) Improved Water Supply for City of Warrnambool.*

Although the existing supply to the City of Warrnambool is adequate and of good quality, augmentation of the capacity of the Otway System will need to be made to provide for the future development which no doubt will take place in this city.

The State Rivers and Water Supply Commission should be encouraged to press on with its investigation into ways and means of achieving this object, but, whatever the final result of these investigations may be, it is clear that a very large capital expenditure will be involved.

*(c) Improved Water Supply for City of Ararat.*

Plans have already been approved for the enlargement of the present reservoir at Mount Cole so that the catchment may be fully utilized, but the extra water thus gained will not provide for much future development. In a drought cycle, even the enlarged reservoir would not supply a population of more than 8,000. Underground water has been mentioned as a possible method of augmenting the present supply but information to date is that this water has a high salt content. If considerable development is to take place within the City of Ararat, therefore, it will be necessary to pipe water from long distances at considerable expense.

The Committee considers that, in addition to the six sites mentioned on page 29 of the First Progress Report as being worthy of consideration, the Wannon catchment and Lake Lonsdale should also be investigated.

Pending expert advice as a result of further investigations, we are not in a position to say which location possesses the most possibilities, but, in the interests of State Development, the problem of a water supply for Ararat should receive all possible departmental assistance.

*(d) Preservation of the Resources of the Upper Reaches of the Wannon River—for supplying towns along its course and for irrigating the lower reaches of the Wannon Valley.*

As all the natural waters of the State are vested in the Crown, no particular community can be given permanent rights over any particular stream, but so far as the waters of the Wannon River are concerned, they should not be diverted to the North without due regard to the needs of the South.

So far, no local authority has made proposals for the development of these water resources, but it is apparent that the claim of Hamilton and surrounding district would be high in the order of preference.

*(e) Improved Water Supply for the Township of Casterton.*

The local Water Works Trust has already been granted approval for the construction of a new service basin of eight million gallons estimated to cost £25,000, including improvements to the reticulation system. The new service reservoir is urgently required to avoid interruptions to supply caused by land slips in the unstable country through which the long main pipeline passes and to meet peak consumption during summer months. Commencement of the work has been held up due to the lack of loan funds, but water works trusts are now empowered to borrow money from private sources.

If the Trust fails to raise the necessary money privately, preferential treatment in the allocation of Government loan money should be afforded this project in the interests of State development.

*(f) Improved Water Supply for the City of Hamilton.*

It seems probable that, by extending the main pipeline to tap streams from the Victoria Range north of the present headworks, sufficient water could be obtained during a critical cycle of dry years to supply a population of from 16,000 to 17,000 persons. Such a scheme would also involve progressive enlargement of the existing main pipeline and the construction of additional storages.

For the fuller development of the city and to provide a water supply for a population in excess of 17,000 persons under all weather conditions, detailed investigation by the Water Works Trust of the headwaters of the Wannon River and Jimmy's Creek should be undertaken but, as the scope of these investigations will tax the resources of the Water Works Trust, all possible help should be provided by the Government.

The work of utilizing the available water by increasing storages and providing an effective reticulation system continues, and this aspect requires no further comment by the Committee.

*(g) Reticulated Supply for the Township of Balmoral.*

The State Rivers and Water Supply Commission has found it necessary to refer the proposals back to the Wannon Shire Council with a view to seeking additional technical data concerning the site for the proposed reservoir and the run-off available from the catchment area.

The present position is that the Council's further advice is awaited.

*(h) Completion of Sewerage Scheme for Town of Portland.*

Considerable development has taken place in the Town of Portland since the War which has caused the population to increase from 3,000 to approximately 4,500.

It now seems probable that the cost of installing the second stage of the reticulation system will cost between £100,000 and £120,000. Of this amount, some £40,000 to £50,000 would be provided by Government grant under the current assistance formula.

As there is a present dearth of Government funds to provide finance for sewerage schemes, it would be necessary, if the work is to proceed in the near future, for the local Authority to finance the whole of the project by borrowing funds from private sources. This would appear to be financially practicable, as preliminary estimates indicate that the annual charges could be met by increasing the present rate of 1s. 9d. in the £1 to approximately 2s. 10d. in the £1. The rate would be reduced to about 2s. 4d. in the £1 if the Government grant was available.

If genuine attempts by the Trust fail to raise the necessary funds, the Committee considers that, in the interest of the development of Portland as a deep-sea port, Government loan money should be provided to bridge the gap between the amount actually raised privately by the Trust and that required to complete the work.

*(i) A Sewerage System for the Township of Coleraine.*

There is no record of any proposals being initiated by the Local Municipal Council or Water Works Trust with a view to the constitution of a Sewerage Authority under the provisions of the Sewerage Districts Acts.

The Committee considers that such proposals should be formulated without delay.

*(j) Flooding Protective Measures, Particularly in the Shires of Portland and Minhamite.*

Since this investigation commenced, the Chairman of the State Rivers and Water Supply Commission, Mr. L. R. East, travelled overseas to study drainage problems and, on his return, submitted to the Government a report entitled "River Improvement, Land Drainage, and Flood Protection" which has since been published for public information.

The Committee is in general agreement with the contents of the report, and, as legislation to deal with flooding is believed to be under consideration, no further comment will be made.

#### 4. ELECTRIC SUPPLY.

##### (a) Electric Supply Generally Throughout the Area.

*The Wimmera and Mallee.*—The State Electricity Commissioners on the 21st September, 1954, obtained the approval of the Governor in Council to a proposal for the extension of the State Electricity Supply system throughout the Wimmera and parts of the Mallee; this plan is additional to the Murray Valley Scheme approved by the Governor in Council in August, 1950, for supply to the Murray Valley, including parts of the North-Western Victoria which is now being implemented. The Wimmera-Mallee proposal provides that the Commission will shortly commence negotiations with the Horsham City Council for the acquisition of the local electricity supply undertaking, upon the successful completion of which the Commission plans during the next six years to link the following towns to Horsham (in order):—

Murtoa (to which Rupanyup and Minyip are at present linked), Natimuk, Dimboola, Nhill, Warracknabeal, Kaniva, Brim, Beulah, Hopetoun, Jeparit, Rainbow, and Goroke.

The areas to be served will be linked into the State supply system by the erection of a 66,000 volt transmission line from Ballarat to Horsham to be in operation temporarily at 22 KV. during 1955-56 and completed within the ensuing twelve months.

The following is the present position with regard to State Electricity Commission supply to the following towns:—

Town.	Anticipated Date State Electricity Commission Supply.	Remarks.
Ararat .. .. .	1957 .. .. .	Subject to investigation
Beulah .. .. .	December, 1957	
Birchip .. .. .	September, 1956	
Colignan* .. .. .	December, 1955 .. .. .	Approved for canvass
Donald .. .. .	March, 1956 .. .. .	Regional Manager in touch with Council
Dimboola .. .. .	December, 1955 .. .. .	Discussions opened
Goroke .. .. .	January, 1960 .. .. .	Discussions opened
Horsham .. .. .	March, 1955 .. .. .	Negotiations approved
Hopetoun .. .. .	June, 1958 .. .. .	Discussions opened
Jeparit .. .. .	December, 1958 .. .. .	Discussions opened
Kaniva .. .. .	June, 1957 .. .. .	Discussions opened
Manangatang .. .. .	.. .. .	May follow Ouyen
Murrayville .. .. .	1957-58	
Murtoa .. .. .	June, 1955, or earlier if possible	Discussions opened
Natimuk .. .. .	September, 1955 .. .. .	Discussions opened
Nhill .. .. .	June, 1956 .. .. .	Discussions opened
Nandaly* .. .. .	September, 1956 .. .. .	Wycheproof Council erecting line between Sea Lake and Nandaly
Nangiloc* .. .. .	December, 1955 .. .. .	Approved for canvass
Ouyen .. .. .	1957-58 .. .. .	Discussions opened
Robinvale .. .. .	1957-58	
Rainbow .. .. .	June, 1959 .. .. .	Discussions opened
Swan Hill .. .. .	1958 .. .. .	Subject to investigation
Stawell .. .. .	1957 .. .. .	Subject to investigation
Underbool .. .. .	1957-58	
Wycheproof .. .. .	September, 1956	
Warracknabeal .. .. .	December, 1956	

##### NOTES:—

1. The completion dates stated are based on the assumption that the necessary finance will be available as well as adequate manpower, materials, and transport. Further, that the Municipal Undertakings will fully collaborate in the matter.

2. \* Indicates a town without a local electricity supply undertaking.

3. Authorised or approved refers to Commission approval. All other details and dates are those proposed by the Electricity Supply Department, for investigation in due course.

4. The Wimmera-Mallee scheme has been adopted by the Commission in principle. The erection of the various sections depends on the provision of the necessary finance, and the co-operation of the Municipalities concerned.

*The Glenelg Region.*—The area covered by this context is interpreted to comprise the Glenelg Region as defined by the State Committee on Regional Boundaries, together with the municipalities of Belfast, Koroit, Minhamite, and Port Fairy which are on the fringe of the State Electricity Commission's supply system.

The present position as regards supply throughout this area is:

	Supply by State Electricity Commission.	Supplied by Local Supply Authorities.	Total Supplied.
Centres .. .. .	37	7	44
Dwellings .. .. .	5,850	4,050	9,900
Farms .. .. .	1,350	50	1,400

Since 1946, the Commission has operated the local power station at Hamilton (with additions to the generating plant) which now is connected to the State system and serves Coleraine to the west and Strathkellar to the east, including adjacent rural areas. Merino area (but not the township) will be completed this year, following which a further extension to Merino township is planned.

There are six main centres not yet served by the Commission, namely, Portland, Heywood, Goroke, Casterton, Edenhope, and Ararat. The electricity supply position at these centres (with the exception of Goroke which is included in the Wimmera-Mallee plan) is summarized in the following table:—

Centre.	Anticipated Date State Electricity Commission Supply.
Portland .. .. .	1957
Heywood .. .. .	1957-58
Casterton .. .. .	Latter part of developmental plan
Edenhope .. .. .	Latter part of developmental plan
Ararat (including Great Western) .. .. .	Latter part of developmental plan

*Portland and district.*—The Committee desires to specially draw attention to the serious position likely to obtain in the Portland area in the near future if action is not taken to ensure an adequate supply of electricity to meet the growing demands of an outer port and an area likely to become much more industrialised than at present.

The total capacity of the existing Portland generating plant is 1,200 kilowatts. Since the First Progress Report was submitted on the 31st December, 1953, the maximum demand has risen to 570 kilowatts. Harbor Trust requirements over the next few years are likely to be 500 kilowatts, and Messrs. Thos. Borthwick and Sons (Aust.) Ltd., whose generating equipment is now obsolete, require more electricity to meet additional demands arising from extensions to their works.

The extension of State Electricity Commission supply to Portland would involve the erection of about 62 miles of transmission line and associated works. The estimated cost of the extension would approximate £300,000 to £400,000, depending on a detailed survey of the route. Because of its remoteness from the State supply system, this extension presents special financial problems to the Commission which states that the only possibility of reducing the period of waiting will be for the necessary capital to be raised locally.

Heywood could be served from Portland when transmitted supply is available or an extension could commence from the Hamilton area, whichever proves the more expedient. In this regard, an extension from the Hamilton area to serve Branxholme has already been authorised by the Commission, and an extension from Branxholme would give limited supply to Heywood—sufficient, probably, until the Portland extension has been finalised.

If the genuine attempts to raise the necessary funds locally are unsuccessful, we consider that, in the interest of the development of Portland as a deep-sea port, Government loan money should be provided to bridge the gap between the amount actually raised locally and that required to carry out the extension.

(b) *Views on the Findings and Recommendations of the 1949 Electricity Supply Board of Inquiry.*

The Committee is of opinion that the vigour with which the State Electricity Commission has pressed on with rural extensions during a most difficult period financially has produced results which are a considerable contribution towards the State's expectations in regard to rural electricity supply, and that it is against the interests of the State and of the rural electricity consumer to divorce either the metropolitan or country distribution of electricity from the State's electrical undertaking.

The Board of Inquiry has not given any reasons whatever to substantiate its opinion that District Boards would be able to give a better, more reliable or cheaper supply of electricity to rural Victoria than can be done by the State Electricity Commission. Therefore, we cannot escape the conclusion that the proposal for District Boards is more academic than real as applied to Victorian conditions.

The general effect of the Board's proposals is to withdraw the financial aid which it has been possible for the Commission to give to country development. Accordingly, tariffs of the Metropolitan and Provincial Boards would decrease while those of the Rural Boards would increase.

Compared with the positive nature of the Commission's plan for the rural electrification of the State by the year 1961 and the results already achieved, the District Boards can at best be regarded as a risk, a point of view which Parliament has apparently endorsed, because the requisite legislation has not been introduced, nor has the Commission been asked by the State for further advice in the matter.

(c) *Extension of the System of Governmental Rebates on Electricity Charges.*

The Committee finds that the Government through the Decentralization Division provides reasonable opportunity for any decentralized secondary industry with the necessary qualifications to receive rebates on electricity charges, and no extension of this system is warranted.

When the financial position of the State improves sufficiently, however, the Government could greatly assist rural development by extending financial aid in respect of service lines, the cost of which is at present borne by consumers, except for the first 60 feet in each case.

(d) *The inclusion of Ouyen Power Station in the List of Undertakings Set Down for Future Acquisition by the State Electricity Commission.*

As the result of subsequent investigations by the Commission, it now appears that an extension to serve Ouyen, Underbool, and Murrayville as part of the Mildura supply system is feasible.

Subject to the detailed investigations proving favourable, the Ouyen-Underbool-Murrayville area is planned for supply during 1957, or early 1958.

(e) *Finance for the Erection of Transmission Lines to Enable Distribution to Outlying Districts.*

In the "Report on the Final Phase of the Rural Electrification of the State", the Commission stated that it would rely upon its own financial resources in undertaking the plan; however, at the time this plan was prepared, the financial restrictions of 1951 had not been imposed.

With the limitations placed on new loan raisings by the Loan Council in 1951 and, as the only alternative to almost complete cessation of work on rural extensions, the Commission introduced its "50 per cent. self-help plan" whereby supply extensions were undertaken upon the prospective consumers agreeing to advance half of the capital cost of the extension.

This arrangement has generally applied since 1951 except for a short period when more stringent conditions became necessary. During the past few years, the Commission has been able to offer an alternative to the prospective consumer, in that advances can be made by area loans at current interest rates—under this plan any person or organization may invest in an area loan and have the money credited against a particular extension in which they are interested.

Generally, these arrangements have received strong support from prospective consumers and, as a result, the Commission's development plan has been able to proceed ahead of schedule.

Because of the large amount involved, it is not possible to finance the major extensions into new areas under the self-help plan and special arrangements will need to be made in these cases. The Commission is at present investigating this problem and general approval has been given by the Government to a scheme whereby the whole of the capital required can be raised within the districts concerned by the formation of Co-operative Societies.

*(f) The Installation of a Hydro-generating Station at Wannan Falls.*

A preliminary investigation of the hydro-electric possibilities of the Wannan River was made by the State Electricity Commission in 1922. However, gaugings by the State Rivers and Water Supply Commission over the period 1921-1933 at Dunkeld showed that the river flow was such that power would be available only for a few months each year and the development of a hydro station at Wannan Falls would not be an economic proposition.

Actually, the interconnected State system, of which Warrnambool and Hamilton power stations form part, makes the erection of a power station at Wannan Falls of no practical advantage to the residents of the Western District, either in expediting the extension of the Commission's supply system in the area or improving the reliability of supply.

## 5. FUELS.

*(a) Firewood Supplies.*

In the opinion of the Committee, and notwithstanding the views previously expressed in the First Progress Report, the demand for this type of fuel will be on a diminishing scale in the immediate future and will ultimately be of little consequence as a heat raising medium both industrially or for use in the home.

The State Electricity Commission plans to completely electrify the State within the next few years which will lessen the importance of fire wood, but possibly the greatest factor in outmoding firewood, apart from the increasing quantities of briquettes likely to be produced in the Latrobe Valley, will be the vast quantities of residual oils which will need to be disposed of as the automotive industry expands, and increasing quantities of crude oil are refined in Australia. If payable oil is found in Australia, as already seems likely, more residual oil than ever can be expected to accumulate, which could become a problem unless ways and means are devised for its use.

Pending the more universal use of oil fuels and briquettes, the Forests Commission can be relied upon to ensure a plentiful supply of firewood.

*(b) Assessment of Brown Coal Deposits Throughout the Area.*

The remarks relating to coal under the heading of "Fuels" in the First Progress Report are a complete summary of the position and subsequent evidence has not materially affected the view previously expressed that the coal reserves of the entire State should be ascertained so that, as occasion demands, they can be brought into use.

So far as the area under enquiry is concerned and on present indications, brown coal is of most importance. Isolated bores sunk in the area indicate that this type of coal may be present in payable quantities, and if geological surveys prove this to be so, secondary industrial development would be greatly enhanced.

Sufficient money should be provided each year to enable boring operations to continue and completion of the general programme without interruption. Proper accommodation should be provided for the professional staff, both at head office and in the field, as this tends to make the officers happier in their surroundings, engenders efficiency, and renders them less likely to be attracted by offers of employment made from outside the service.

The Geological Museum is a necessary adjunct of the Mines Department activities and should be maintained.

## 6. TRANSPORT.

### (a) *New Rail Services.*

*Patchewollock-Ouyen-Hay (New South Wales).*—Rail connexions fanning out from the port of Portland will be as necessary as the equivalent rail services which at present feed into the ports situated on Port Phillip Bay. In particular, rail links between Patchewollock-Ouyen-Hay are rendered attractive by the new areas situated in the Murrumbidgee and Murray Valley being brought into production as a result of the additional water available from the Snowy Mountains project. Therefore, the Committee supports in principle the construction of these rail links which are estimated to cost—

					£
Patchewollock-Ouyen section ..	..	..	..	..	400,000
Ouyen-Hay section ..	..	..	..	..	2,500,000
Total estimated cost ..					2,900,000

In giving this support, we have disregarded to some extent the advice that such lines would not pay. We believe that the cost of railways designed for developmental and defence purposes, and to promote decentralization, should be borne by the people as a whole.

However, we stress the point that these rail links would considerably shorten the distance by rail between Sydney and Adelaide, which, from a national viewpoint, is very desirable, but which would present problems of significance to the people of Victoria, as much valuable traffic would be lost. Also, we point out that the recent decision of the Privy Council granting freedom of travel to interstate road hauliers may have a bearing on the ultimate construction of these lines. For these reasons, a highway may be more practical means of providing a direct route to Portland within a reasonable space of time.

The Railways Commissioners oppose the construction of these links. They say that the development of Portland as a major port will depend, not upon the provision of new rail links but upon factors outside the control of the Department, especially the policy adopted by bodies concerned with the export of wheat and other primary produce and the marketing of wool. If, as the result of a change in marketing practices or otherwise, a proportion of the traffic in these and other primary products were to be diverted from Melbourne or Geelong to Portland, the Commissioners would experience no difficulty in handling the increased traffic by rail with the existing facilities.

Other comments by the Railways Commissioners are :—

- (i) At a point situated between Hay and Balranald the distance via the proposed route to Portland would be shorter than the existing routes, but as regular services are provided along the latter lines it would be more economical to use them than cross-country lines which experience has shown are unprofitable to the Department.
- (ii) It is obvious that Melbourne would be more attractive than Portland for export traffic because of the distance factor and the extensive shipping facilities available at Melbourne.
- (iii) The existing lines adequately cater for the traffic between Adelaide and Sydney, and it is considered that any savings in operating costs as a result of reducing the length of rail haul between these cities would fall short of the additional interest and maintenance charges that would require to be met in respect of the new railway required to effect the projected connexion.
- (iv) The proposed link would not overcome the break-of-gauge problems ; on the other hand, heavy expenditure would be involved for the provision of transfer facilities at Hay, which would be additional to those already provided at Broken Hill, Tocumwal, and Albury.
- (v) No worthwhile advantage can be seen in effecting links between parallel railway lines where tributary areas are already served by rail.

To preserve the practicability of these rail links, trial surveys of the proposed lines should be conducted by the railway constructing authorities of Victoria and New South Wales and requisite legislative action taken to reserve or protect all necessary easements, river crossings, and provide for ample station grounds.

The Ararat City Council's suggestion that extending the Ararat-Navarre spur line to St. Arnaud would bring more land within the area served by Portland than the Patchewollock-Ouyen link is not favoured because the latter line would be an integral part of the proposed short railway route between Sydney and Adelaide.

*Warrnambool-Heywood.*—We uphold the view expressed in the First Progress Report that this rail link, together with the Patchewollock-Ouyen-Hay link, would have the effect of assisting maximum production throughout the area coming within the sphere of influence of the port of Portland and would contribute towards Portland, like Melbourne, becoming the origin of an efficient, fan-like railway system.

A link between Warrnambool and Heywood would in our opinion give the rich Warrnambool district economic rail access to the port of Portland, but should this link not pay its way, the losses should be borne by the people as a whole in the interests of development and decentralization.

Whether this line should be built through Port Fairy or Koroit could only be established after due enquiry by the Parliamentary Public Works Committee, but whatever route is chosen the cost is likely to be in the vicinity of £750,000.

The Railways Commissioners oppose construction of this line on the grounds that traffic between Warrnambool and Portland would be insufficient to warrant the heavy cost involved in constructing such a link. Their detailed objections may be summarized as follows:—

- (i) An investigation in 1951 disclosed that only a limited area would be better served by a line from Koroit to Heywood than by existing lines, and revenue earned by the suggested line would be mainly at the expense of existing lines ;
- (ii) The only new traffic induced by the proposed railway would possibly be some barley and peas, but no development in this direction is expected while wool prices maintain their existing levels ;
- (iii) The investigation referred to above showed the estimated loss per annum at that time to be in the vicinity of £19,300 and this would doubtless be greater to-day having regard to increases in wages and other costs.

(b) *Track Improvements—Horsham-Hamilton, via Toolondo.*

For reasons outlined on page 18 of this report, the Committee considers that facilities for the bulk handling of wheat should be installed at Portland and it necessarily follows that, if our recommendation is implemented, improvements to railway tracks leading to the port will be necessary if the wheat harvest is to be smoothly and expeditiously transported to the seaboard at this point.

The questions of bulk handling and track improvements to the Horsham-Hamilton railway line (via Toolondo) were the subject of enquiry by the Parliamentary Public Works Committee which on the 7th December, 1950, recommended that no action be taken for the time being in regard to either proposal.

The Railway Commissioners object to-day, as they did then, to the carrying out of this work, chiefly on the grounds that there is no necessity to provide a terminal silo at Portland and that they can convey wheat from the north-west to Geelong at less cost and more conveniently.

Regrading of this line to coincide with the existing grade between Hamilton and Portland is estimated to cost £200,000 and provision of operating staff and additional track maintenance to keep the line in sufficient order to carry the additional traffic would amount to approximately £10,000 per annum.

(c) *Freight Rates.*

The present freight rate structure has evolved from one originally designed to serve a very different economy from that of to-day. The historic pattern, established at a time when railways were the only effective means of overland transportation, was intended to encourage the opening up of new land areas and to develop the commerce of a young nation. It is therefore understandable that a dominant consideration should have been to ensure that the products of the farm, the forest, and the mine would be moved to the market place at minimum rates. It is not surprising, in view of the fact that competition was a relatively insignificant factor in those days, that supervision and control of railway freight rates by public authority was an unimportant element in the transportation policy of the nation.



The practical application of this early policy found expression in what is known as the value of service principle. Relatively low rates were granted for low-valued and raw commodities. Higher rates governed the movement of processed commodities and those of high value. When first established, the low rates for low-value primary products covered the direct costs of rail haulage and made a relatively small contribution towards overhead. Rates on processed goods and high-value commodities, while intended to offset the relatively low return on unprocessed and low-value products, were nevertheless not so high as to prevent or discourage their movement.

To-day, however, the situation is vastly different from that which hitherto has prevailed. No longer are railways the exclusive means of transportation for the high-value traffic upon which they relied to offset the marginal revenues derived from the haulage of primary commodities. The growth of other modes of transportation has rendered high-value traffic vulnerable to competition. Truck competition has become more intensive because, unlike railways, the trucking industry is not required by law to carry all types of traffic at published scales of rates, enjoys the privilege of using public highways at low cost, and is relatively free from regulations.

The serious problem confronting the railways is that of meeting truck and other competition while they themselves remain bound by a pattern of rates designed at a time when competition was a relatively unimportant factor.

Tapering rates for long distances are universal in railway rating and, as well as reflecting the reducing cost per ton mile of terminal and other charges, are designed to afford some relief to rail users domiciled in places far distant from main centres.

The Railway Commissioners say that in no case on the Victorian Railway system is the rate per ton at the ordinary mileage rates less for a longer than a shorter journey for the same commodity.

They add that Murtoa and all stations on lines west and north are all nearer to Portland than Melbourne and, therefore, have a definite advantage in rail rates for export traffic if exporters desire to utilize Portland.

The question of improving the Victorian rail freight structure is known to be under review by the Government and therefore no specific recommendation by the Committee is required. We should like to point out, however, that if rail links, as recommended herein, are connected to Portland and having regard to the huge expenditure of public money in establishing Portland as a port, it will be incumbent upon the Government to ensure that incentive to use the Port Phillip ports will be removed.

Finally, it is negative to determine potentialities unless factors, other than transport costs, are taken into consideration. In the overall picture, the need for the decentralization of other industries closely associated with the requirements of primary producers must be recognised. By the planned establishment of such manufacturing and assembling centres, encouragement will be given to producers to expand production by means of more intense cultivation and will give an incentive to new settlers to assist in the fuller development of the area.

*(d) Increased Rail Workshops Facilities Within the Area.*

The nature of the repair work carried out at locomotive depots such as Ararat, and at workshops such as Ballarat North, differs widely. At the former, the work is restricted broadly to normal running repairs, i.e., routine maintenance necessary to keep rolling stock in a serviceable condition until major repairs are required. At workshops, major overhauls, involving the lifting and complete dismantling of locomotives, are carried out.

The establishment of workshop facilities to enable the latter class of work to be carried out at Ararat, as suggested in the evidence, would involve duplication of expensive machine tools and equipment far in excess of the economic use that would be made of them, and no doubt the expenditure involved would not be justified.

Furthermore, if rail links of a developmental nature are constructed, as recommended herein, it will be essential that maintenance costs be kept to an absolute minimum.

*(e) Improved Facilities in the Rail Marshalling Yards at Ararat.*

The Railways Commissioners recognize that additional siding accommodation is required and they propose to proceed with the work when funds and manpower are available.

*(f) Road Transport Services.*

The Committee considers that the railways must remain the chief means of transport for heavy haulage in the foreseeable future, but in the area under review, where land settlement can yet undergo great intensification and where large areas of Crown lands are still to be thrown open for development, the internal combustion engine must play a big part as a means of transport to and from the rail heads.

The Railways Department which, due to early post-war problems of deferred maintenance, shortage of rolling stock, including locomotives, manpower, and coal, was unable to provide satisfactory service for some considerable time, now has been rehabilitated and is again in a position to provide adequate service within the meaning of Section 26 of the Act (No. 4198) for the great majority of goods traffic. This section reads as follows :—

“ 26. Before granting or refusing to grant any such licence the Board shall have regard primarily to the interests of the public generally including those of persons requiring as well as those of persons providing facilities for the transport of goods and without restricting the generality of the foregoing requirement shall take into consideration—

- (a) The advantages of the service proposed to be provided and the convenience which would be afforded to the public by the provision of such service ;
- (b) The existing transportation service for the carriage of goods upon the routes or within the area proposed to be served in relation to—
  - (i) its present adequacy and probabilities of improvement to meet all reasonable public demands ; and
  - (ii) the effect upon such existing service of the service proposed to be provided ;
- (c) The benefit to any particular district or districts or to the residents thereof which would be afforded by the service proposed to be provided ;
- (d) The condition of the roads to be included in any proposed route or area ; and
- (e) The character qualifications and financial stability of the applicant.”

However, authority for road transport is still available for particular commodities which, because of fragility, difficulty of adequately packing for rail, considerations of delivery time, return of empty containers and other special reasons acknowledged by the Transport Regulation Board, present difficulty in handling by rail.

In addition, there is also considerable freedom of operation permitted “ as of right ” under Section 22 of the Act which includes *inter alia* the transport of certain perishables anywhere in the State and for operation within defined radii by carriers and business concerns generally. A number of discretionary licences, i.e., licences which go beyond the “ as of right ” limits in the Act have also been issued by the Transport Regulation Board authorising extended operations ; for example, in the Edenhope area a number of licences are current which, in effect, make the whole area between the railway lines a road area and permit road transport to operate freely to and from the main centres of Horsham and Hamilton and to rail heads at Casterton and Coleraine. Thus under licences or permits, there is a considerable amount of road transport occurring in the area, supplementing the rail service to and from Melbourne and Geelong and also the more local rail service connecting centres such as Portland and Warrnambool with districts north and west.

With regard to the increased permit fees on the transport of petroleum products by road, it is clear that the fees would not have the effect of restricting road operations as road cartage charges are well below the comparable rail freight plus cost of terminal handling and cartage. The current scale of permit fees being charged by the Board is still considerably below the maximum of £15 per permit which may be charged under the Act, and the average fee is roughly equivalent to 1d. per ton mile. The charges are much higher in Queensland and New South Wales, where a ton mile tax is payable based on the weight of vehicle and goods. The comparable fee in New South Wales is 3d. per ton per mile for journeys of more than 50 miles in competition with the railways.

## 7. ROADS.

### (a) *Ways and Means of Raising Additional Funds for the Construction and Maintenance of Roads.*

Increasing cost of construction and maintenance has, over the years, led to a progressive wasting away of one of Victoria's most vital assets, its road transport system. The results are cumulative. Each year, a bigger proportion of the road budget has to be spent on maintenance leaving less for new works.

More loan money would seem to be an obvious answer, but the expanding economy of a young nation may well curtail the amount of finance available from this source for years to come.

The Country Roads Board suggests a substantial rise in motor registration fees which have not been increased since 1925, but it is debatable whether the motorist should be asked to bear a much larger part of the road bill, since roads enrich the community as a whole. However, it should be borne in mind that better roads result in reduced repair bills, and therefore it may be an economical proposition for motorists to pay higher registration fees, provided the additional money thus gathered is used exclusively for the purpose of building and maintaining the roads.

The adoption of the growing practice in America of toll gates on main highways, whilst possibly repugnant to Australian tradition, would succeed in servicing large loans for new construction and providing the super-highways which are demanded by the tremendous growth in the volume of road transport.

The Committee does not propose to enter into a long discourse on the question of a greater proportion of the petrol tax for Victoria, except to say that moneys spent on highways pay rich dividends in the form of lower costs, greater population, and more business generally, and therefore better tax returns for the nation.

Under the statutes, the Country Roads Board Fund has to meet all interest and sinking fund charges amounting to approximately £600,000 annually on loan moneys expended on permanent works by the Board and Councils under its jurisdiction. As a major portion of railway loan indebtedness has been written off and similarly the cost of State water supply headworks, the same principle might be applied to road finance, especially as no separate contribution is made by the general taxpayers towards road finance.

Most fees collected from road users after administrative costs have been deducted should as a general principle be used exclusively for road works and appropriately the residue from drivers' licence fees and the Transport Regulation Fund could be made available for this purpose.

### (b) *Suggested Roads, Including Improvements to Existing Roads.*

#### (c) *Alternate Route for Murray Valley Highway.*

#### (d) *Provision for Increased Traffic on Sea Lake-Robinvale Road.*

### (e) *Declaration of Ouyen-Patchewollock and Underbool-Patchewollock Roads as Main Roads.*

The Committee considers that the roads listed in Recommendation No. 25 on page 49 and which were enumerated in the First Progress Report under these four sub-headings, would play a big part in the development of the area if maintained as high standard, all-weather roads, and declared highways or main roads, if not already so declared.

*Ouyen-Hay.*—Although the Committee recommends that a developmental railway should connect Ouyen with Hay (New South Wales), it realises that, in view of the interstate ramifications of the project and for other reasons, many years would elapse before such a railway is built. Taking the practical viewpoint, an all-weather road between Hay and Portland constructed in collaboration by the two States, would cost much less and would provide an effective link between the Riverina in New South Wales and all that part of Victoria comprising the hinterland of the port of Portland. When surveying the route, consideration should be given to utilizing the existing roads wherever practicable.

*(f) Completion of Sealing of Pyrenees Highway.*

Existing unsealed sections between Ararat and Castlemaine total 17·37 miles and it is estimated that reconstruction and sealing these sections would cost £208,000. The estimated costs of other works required to bring the highway up to a standard required to carry the anticipated traffic amount to £467,000 and replacement and widening of bridges and culverts £162,000.

Because of its magnitude, the Committee considers that the work must be spread over a long period, but nevertheless indicates that the bringing of this highway up to a satisfactory standard is a necessary concomitant to the development of the area.

*(g) The Planning of Roads to Serve the "Little Desert" Area.*

In view of the contemplated development in the "Little Desert" and the possible opening up of other large tracts of land elsewhere in the area under review, the question of roads should receive separate consideration and a master plan evolved setting out the road requirements.

## **8. INDUSTRIAL DEVELOPMENT AND DECENTRALIZATION.**

*(a) Decentralization of Government Administration.*

The Committee observed during its travels that this question has lost some of its former importance in the minds of country people, and therefore we conclude that action already taken or proposed by the various departments closely associated with the people in rural areas, such as Agriculture, Lands, Water Supply, and Electricity Supply, to station officers locally has met with general approval.

This policy should be continued.

*(b) The Setting Up of Appropriate Decentralized Industries Throughout the Area.*

Attention is drawn to the various matters which will need to be taken into account if decentralization is to be effective. They fall roughly into five groups, each of which will require equal attention.

### **1. Appropriate Industries.**

In selecting industries for establishment in country areas only those should be chosen—

- (a) in which the cost of transport forms a relatively small part of the final cost of manufacture;
- (b) which can be supplied effectively with the coal, power, and water they require.

The general policy being followed by the Decentralization Division, with which this Committee agrees, is to study the actual resources of a region or, particularly, what a town has to offer to an interested industrialist and endeavour to decentralize the most suitable industry.

### **2. Allocation of Suitable Sites for Industry, particularly at Portland.**

The vast industrial development which has taken place at Geelong has been due in no small measure to the fact that the Geelong Harbor Trust has had land adjacent to the waterfront and elsewhere directly under its control for allocation to industry associated with port development.

The Committee considers that the Portland Harbor Trust should be similarly placed and that suitable land at Portland should be purchased by the Crown for allocation on the recommendation of the Trust.

Suitable sites are sometimes situated outside city, town or borough boundaries and the higher municipal rates usually prevailing in rural shires where the rating structure is not designed to meet industrial development presents difficulties to industrialists proposing to decentralize. This gives rise to the desirability of city, town, and borough boundaries—and particularly the town boundaries at Portland—being extended where practicable to include adjacent industrial areas.

### 3. Reservoirs of Labour.

Since country areas generally have no large reservoirs of labour when new industries are being set up, steps should be taken to ensure—

- (a) that an appropriate number of new workers move into the district ;
- (b) that the necessary housing is provided for this extra population.

Evidence shows that for an industry to be established in a rural centre it is necessary that houses be provided firstly to accommodate the specialist or expert staff forming the nucleus of the organization.

Decentralization of industry and housing must be hand-in-hand and in this regard the Committee commends the policy of the Housing Commission granting priority to key employees of decentralized industries. We consider, however, that the housing of operatives should not be the sole responsibility of the State, but where protection of a State asset is involved, such as at Portland, a more generous attitude by the Housing Commission in the number of houses allocated to industry is warranted.

### 4. Transport Systems.

Transport systems and the regulations under which they operate must be adapted to the new requirements, especially in the following ways—

- (a) The construction of all necessary railway lines and the reconstruction of existing lines to enable them to carry the increased traffic ;
- (b) The adjustment of rail freights to protect decentralized industry, if necessary ;
- (c) The rationalization of motor transport control so as to enable cross-country deliveries to be effective, especially where railways do not provide cross-country lines.

The unbending opposition by the Railways Department to decentralized industries carrying their goods by road is a very near-sighted policy. Country industries create many other demands for rail transport, such as food, clothing, passenger fares, &c., which result in increased revenue to the Department.

The special committee set up under the Decentralization Division to study disabilities of country industries provides ample machinery for decentralized industry to seek and receive assistance where merited.

### 5. Amenities in Country Centres.

Amenities to a standard as near to those of the cities as practicable should be provided in rural towns. This will involve the provision of—

- (a) water, sewerage, and power systems in accordance with prospective demands and the expectation of expansion ;
- (b) schools and general educational facilities up to secondary standards, with transport arrangements and/or hostels ;
- (c) medical services and hospitals ;
- (d) financial arrangements to centres which are expanding rapidly to assist them in shouldering the extra burden they will have to bear. This financial assistance will need to be continued until increased size enables them to carry the added burdens alone.

(i) *Inland Killing.*—Although the Committee does not suggest that it is in the general interest of the State to move the killing industries away from Melbourne, we have reached the conclusion that the amount of congestion obtaining at Newmarket at times causes a serious loss of quality to the meat treated there and consequently a considerable loss in value.

For any killing works to be successful, the supply of stock should continue for a reasonably long period, otherwise costs are very high. The now closed treatment works at Murtoa and Donald in Victoria and at Deniliquin and Nimmitabel in New South Wales are examples of what is bound to occur unless sufficient stock is available.

In selecting sites for country killing works, it is very important to ensure that a hinterland exists from which various types of stock can be drawn. It is also very helpful that a killing works should have a fairly substantial local demand and a large local population to supply. Bendigo and Ballarat are far more likely to prove satisfactory than smaller towns in the west, because these cities have many thousands of people within close proximity who will consume large quantities of meat throughout the whole year.

So far as the area under review is concerned, the Committee finds it difficult to envisage the possibility of additional works except possibly at Swan Hill—because there is no centre with sufficient stock for treatment or a population large enough to offer a reasonable local trade.

Portland is the site of the only existing killing works within the area under review and enjoys a fairly long period of supply. Fat lambs arrive during the period September to December from the Middle West and later further supplies are drawn from the Western District, whilst there are large dairying centres and cattle properties in the hinterland.

Swan Hill is definitely a good market for all classes of stock, but until there is considerable development as a result of extended irrigation on the New South Wales side of the River Murray, the establishment of additional inland killing works at that centre would not be advisable.

Therefore, we consider that for the time being Portland is the correct location for decentralized killing in the area under review and that the activities of Thomas Borthwick and Sons (Australia) Ltd. who operate the existing works should be encouraged.

(ii) *Manufacture of Superphosphate at Portland.*—As stated in the introductory passages to this Report, the Committee considers that the manufacture of superphosphate at Portland is an essential concomitant to the full development of the port of Portland. This view is supported by the conclusion reached in 1945 by the Public Works Committee that such a port is desirable to promote development of Western Victoria, to assist in the decentralization of population and industries, and to reduce the costs of transportation of Australian exports from and imports to Western Victoria.

The superphosphate companies in Victoria say that the fertilizer business has always been intensely competitive, that the existing factories at Geelong and Melbourne have been progressively modernized from the points of view of improvement in quality and reduction in costs of manufacture, and that no opportunity has been left for an appreciable saving in working expenses at a new factory. Summarized, their objections are chiefly—

- (a) That the erection of a plant at Portland could only be carried out at an excessively high cost, and the capital charges involved would of necessity have to be added to the cost of superphosphate produced at the new factory ;
- (b) That tonnages of superphosphate supplied from a plant at Portland would be taken from the output of existing Victorian factories, thereby creating idle capacity and increasing the costs of production in these factories ;
- (c) That the practicability of unloading the raw materials directly from ship to works at Portland is in doubt and this could involve several shillings per ton additional cost for handling.

The view of the Department of Agriculture is that nothing should be done to bring about a rise in the cost of superphosphate.

The Bureau of Agricultural Economics claims that the total superphosphate needs of Australia could increase from 1.6 million tons per year at present to an amount greatly in excess of the capacity of existing manufacturing plant in Australia, but we consider that this would be contingent upon—

- (a) the trend towards increased use of superphosphate for pasture improvement continuing ;
- (b) the considerable areas of undeveloped land being brought into production ;
- (c) maximum effective dosage being given to land already treated.

If these premises are correct, and on the basis of 1 cwt. of fertilizer per acre, 678,525 tons (a little more than the total manufacture of the State) could be used in the area under review.

This colossal increase in the use of superphosphate could possibly occur, but the Committee takes the more sober view that prices of primary produce may drop and farmers would be less likely to use so much superphosphate. Therefore, the maximum usage in the area under review is more likely to be somewhere in the vicinity of 300,000 tons as against the 171,000 tons being used at present.

Superphosphate manufactured at Portland by a company possessing the necessary skill would cost approximately 35s. per ton more than at Melbourne or Geelong, but if a combination of existing companies could be induced to go to Portland, it would be possible for agreement to be reached on a fixed charge for the whole State in which case the increase would be about 5s. per ton on the assumption that 100,000 tons would be manufactured at Portland.

Notwithstanding all the views to the contrary, we cannot overlook the fact that the creation of the Port of Portland is a decentralization project, and the Government, having already spent a considerable amount of money in port development, is left no alternative but to ensure that the port becomes a practical reality.

We consider that superphosphate should be manufactured at Portland, even if it is finally necessary to provide direct financial assistance similar to that which the Government of Western Australia made available at Albany. Before such a course is taken, however, overseas superphosphate manufacturing companies should be acquainted with the advantages of extending their operations to Portland.

Notwithstanding the serious objections raised by the superphosphate companies against the manufacture of superphosphate at Portland, we are of the opinion that they would prefer to be included in any development that may take place.

(iii) *The Local Production of Agricultural Lime.*—The future requirements of lime within the area under enquiry are difficult to assess in view of information gained in recent years suggesting that responses in pasture growth, obtained by using heavy dressings of lime, may also be obtained by the use of very small quantities of molybdenum. The relationship between lime and molybdenum in pasture development is complex and further intensive investigation is being undertaken by the Department of Agriculture on this problem throughout the State. Therefore, the local production of lime is not warranted at this stage.

(c) *Fostering of the Timber Industry.*

Forestry is merely long-range farming. In the case of softwoods, it is farming on a 30-year rotation as against one year in the case of wheat. Timber growing has been proved to be profitable in Victoria, and therefore there should be no question of direct subsidies being granted.

Rather should this industry be fostered by the usual methods including the construction of good roads leading up to the forests, and where concentrated milling activity is taking place in areas served by rail, the provision of adequate loading facilities at railway stations.

(d) *The Provision and Organization of Machinery Spare Parts Stores.*

It is most desirable that adequate and comprehensive stocks of machinery spare parts should be held in the main business centres throughout the State, thus obviating costly delays in obtaining items from Melbourne.

This question is worthy of consideration by the Decentralization Division which should render all possible assistance to any machinery organization willing to meet demands locally.

(e) *A Subsidy for the Municipal-controlled Ice Works at Ouyen.*

In the opinion of the Committee, service industries in country districts and particularly those not meeting with competition from city areas should not be subsidized from decentralization funds, as they are not forced to make any adjustment in their costs.

## 9. RE-AFFORESTATION.

### Conservation of Timber Resources throughout the area with Particular Reference to—

(i) *Formation of an Overall Plan Calculated to meet the Timber Requirements of Future Generations.*

Increased settlement, population, and development of rural industries in the area under inquiry is certain to be associated with an increased demand for timber.

Unfortunately, few forest reserves exist in the area, and it may never become self-supporting, although present production could be considerably improved. Out of a total of over 20 million acres comprising the Western Forest Division, which corresponds approximately to the area under inquiry, the aggregate area permanently reserved for forestry purposes is less than  $4\frac{1}{2}$  per cent. and this includes a considerable proportion of land not capable of producing commercial timber. Environmental conditions are such that tree growth is relatively slow, forest stands open in character, and the carrying capacity of timbered land low by comparison with forest areas in other regions. A greater area is thus required to produce a given quantity of timber than is the case in most other parts of the State.

Apart from a few reserves along the River Murray, and in the extreme South-West and the Grampians State Forest, timbered areas fall into the category of unoccupied Crown lands.

It should be stated here that the need for further conservation of local timber resources and the planting of additional softwood forests is of immediate concern to the Forests Commission which is already conducting a thorough survey of the area with a view to securing additional reservations of productive or potentially productive forest land.

In this part of the State, however, timber production may not be the sole, or even the primary consideration in determining whether a particular area of timbered Crown land should or should not be alienated. In the northern half of the region under discussion, retention of tree cover in relation to soil conservation is of vital importance irrespective of its value for timber production, whilst the timbered hill country of the Grampians must be considered from the aspect of water supply for both domestic use and irrigation.

We provide the following brief replies to the items suggested by the Glenelg Regional Committee for consideration:—

- (i) The formation of an overall plan calculated to convert waste lands to the production of timber—

*Reply.*—We consider that such a plan should be completed without delay ;

- (ii) A survey to determine localities suitable for the planting of softwoods—

*Reply.*—We consider that, in view of the State-wide shortage of softwoods, this aspect of afforestation should be given the prominence it deserves ;

- (iii) The undertaking of research to discover the cause of failure of natural species to mature and to find trees, not necessarily of the soft variety, for a re-afforestation scheme—

*Reply.*—The immediate need is for additional stands of softwoods. Therefore, research of this nature, although important, is not urgent at this stage ;



- (iv) An investigation to explore possible markets for existing inferior timber as wood flour for wood pulp, wood board, &c.

*Reply.*—It is obvious, from reports received, that opportunities do exist for the investment of capital in the development of industries which process forest waste in its various forms and by various methods. Because of the value to the State of this processed material in relieving shortages of building materials, as well as assisting in the proper maintenance of the forests, encouragement should be given to any business concern willing to commence an industry of this nature.

Briefly, the Committee considers that the Statutory powers of the existing Land Utilization Advisory Council should be extended to include areas other than catchment areas, as fully outlined in Recommendation No. 2 on page 46. Following upon the classification of the Crown and undeveloped land in the area along the lines indicated, work of creating additional forest areas should continue without delay. As the creation of a body envisaged by the Committee will of necessity take some time, the Forests Commission should continue with the good work it has already commenced in the matter of surveys and consequent recommendations concerning the alienation of land suited to its purposes.

When the forest requirements have been fully met, all other land not required for water or soil conservation purposes should be thrown open for settlement in accordance with the provisions of the recently enacted Land Settlement legislation.

(ii) *The Murray Valley Area.* (Red Gum and Murray Pine).

Owing to climatic conditions and the very irregular nature of floodings in the region, the regeneration of Murray Pine and Red Gum must necessarily be of a very slow and scattered character.

In the Mildura forest district, serious consideration has been given, and action taken, to promote and preserve regeneration. The results of this are now to be observed in the cumulative response which has taken place in those areas where grazing has been either prohibited or restricted according to the requirements of seedling establishment.

In order to take advantage of the seedling growth of Red Gum and Black Box which occurred in parts of the Kulkyne State Forest (including the Hattah Lakes area), as a result of high flooding during the year 1951-52, the Forests Commission has prohibited the grazing of sheep in certain areas until establishment is secured, and is now carrying out investigations to determine whether the grazing of cattle should be continued on expiry of current licences.

Experimental regeneration plots of Murray Pine have been in operation since 1934, and the technique for the establishment of this species is well understood. Plots are at present established at Yarrara, Meringur, Kurnwill, Mounpoul, Brockie, Timberoo, and Psyche Bend.

The evidence does not disclose any dissatisfaction with the manner in which the Forests Commission of Victoria is tackling the problem of regeneration of these two species of trees, but rather that the Forests Commission of New South Wales has not been able to do all that it might wish to do in relation to the problem. In fairness to New South Wales, however, it should be stated that the forest authorities in that State are handicapped by reason of the fact that much of the timbered land is not dedicated as permanent forest.

The north-west section of the State will do little more than serve to meet a portion of the local demand for timber, and it thus becomes important to conserve, develop, and regenerate such limited areas as are capable of commercial timber production, including Red Gum and Murray Pine. In these circumstances, therefore, it is probably a better economic proposition to import from other parts of the State any additional requirements of the local communities and industries than to attempt to extend reservations on a large scale or undertake expensive artificial establishment.

## 10. SOIL CONSERVATION.

(a) *Additional Assistance for the Soil Conservation Authority to Combat Erosion, with particular Reference to Increased Staff and a Reduction in the Size of Soil Conservation Districts.*

Limited investigations are being made by officers of the Soil Conservation Authority, particularly in the stringybark and heath country, to determine the nature of the soils and vegetation, and in some places trial plots for pasture establishment have been set up. This very important work should continue at a much faster rate than at present.

The Soil Conservation Authority does not participate in the Commonwealth grant for extension work in the field of agriculture despite the fact that extension services are provided to assist the man on the land with problems including those of soil erosion. The Committee considers that at least a portion of this grant could, with advantage, be allocated to the Authority, especially if the Agriculture Department finds difficulty in spending the money.

If the necessary safeguards are to be observed before large-scale rural development commences, it will be necessary for adequate funds to be provided so that the Soil Conservation Authority may station the requisite staff throughout the areas concerned.

No reduction in the size of soil conservation districts can be contemplated, but rather it is more likely that, when sufficient trained officers are available, sub-centres within existing districts will need to be established.

(b) *Increased Technical and Financial Aid to Enable Municipal Councils and Landholders to Carry Out Special Erosion Control Work.*

Financial assistance is already available to municipalities from funds held by the Soil Conservation Authority, but the demand exceeds the amount allocated. Grants are made to municipalities for erosion control on a basis of £1 for £1 and, in addition, technical advice and assistance in the design and building of structures is provided.

In approved cases, land-holders wishing to undertake erosion control work on their properties are also assisted by being supplied with materials, such as cement and steel, and the Authority will undertake the design and supervision of structures.

The active co-operation of civic authorities and land-holders is necessary if soil conservation is to be effective and adequate financial assistance should be forthcoming in order that correct procedure may be observed in combating existing erosion and preventing its appearance, especially in those areas considered to be doubtful from a soil conservation point of view.

(c) *The Formation of Additional River Improvement Trusts to Co-ordinate the Control of Erosion along Streams.*

This question is directly related to matters of river improvement, land drainage, and flood protection investigated by the State Rivers and Water Supply Commission, a full report of which has already been submitted to the Government by the Chairman, Mr. L. R. East.

As legislation is believed to be under consideration in relation to these and allied matters, the Committee does not propose commenting further at this stage.

(d) *The Establishment of Machinery Pools for Hire by Landholders.*

Special plant and machinery may be necessary for some types of soil conservation activities, but most phases of the work can and should be done by the landholders with ordinary farm machinery.

The Soil Conservation Authority operates plant and machinery for demonstration and experimental purposes as well as for reclamation works. When this plant and machinery is not being used for such purposes, it is made available by the Authority for hire by landholders to undertake work beyond the normal capacity of farm equipment.

The establishment of machinery pools would involve a large capital expenditure as well as a considerable increase in staff, both of which are not possible at present, even if such a policy were justified.

(e) *Re-afforestation to Combat Erosion.*

This aspect of the enquiry could conceivably be considered by the enlarged Land Utilization Advisory Council, as recommended by the Committee.

We are of opinion that the activities of the Forests Commission and the Natural Resources Conservation League in assisting settlers in their tree planting problems and by propagating planting stock for distribution are a worthwhile contribution towards rural development.

## 11. REGIONAL PLANNING.

(a) *Re-alignment of Regional Boundaries so that Western and North-Western Victoria May be Included in the One Region.*

Although many advantages would accrue from having the area within the sphere of influence of the port of Portland in the one region, the Committee considers that, having regard to the extent of the territory involved, administration would be unwieldy. Rather do we consider that a co-ordinating Committee representative of the Mallee, Wimmera, Glenelg, and Corangamite Regions and the Portland Harbor Trust should be set up under the framework of the Central Planning Authority to consider and make recommendations on all questions of common interest having a bearing on the development of the Port of Portland. Members of the co-ordinating committee should receive the same fees and work under the same conditions as regional committees.

(b) *Representation by all Municipal Councils on Regional Committees.*

After consideration of all aspects of this question, the Committee concludes that representation from every municipality and every interest would result in the regional committees being too cumbersome.

The question of rotation of membership would appear to rest with the municipalities who could, if they so desire, agree amongst themselves to share membership on the regional committees.

(c) *A Co-ordinating Authority for the Development of the Murray Valley.*

The Committee is of the opinion that, as the scope of the Murray Valley Development League is greater than the area under review, it is not required to make any recommendations in the matter.

## 12. MISCELLANEOUS.

(a) *Multi-purpose High Schools which would Provide Technical Education of Particular Application to Agriculture.*

The Committee considers that there should be equality of educational opportunity for all. In effect, the high schools should primarily provide the courses leading to the leaving certificate and matriculation. Having achieved this, they should also provide a limited choice of other courses of a more general and less exacting type some of which should be related to the actual experiences of the pupil in his home and the community. Hence, most subjects in this category taught in a rural area should be given a bias towards farming and the land.

The evidence discloses that the Education Department is proceeding on correct lines with regard to the provision of technical education of particular application to agriculture in high schools. Training courses have been inaugurated at Dookie Agricultural College to train teachers in agricultural subjects, the number being limited only by the need to provide staff for the rapidly expanding school population. The necessary woodwork and metal work shops, girls' craft, housewifery and cooking blocks and practice flats are being added to country high schools as fast as finance, man-power and materials will permit.

The Department is also grappling with the difficulties which arise in maintaining continuity in the work of Young Farmers' Clubs brought about chiefly by the large number of teachers recruited from within the metropolitan area of Melbourne. The junior clubs are now administered by the Department which appoints an experienced teacher in each district as a leader who guides the young teachers in the work.

The group scheme shows promise of being successful, but there appears to be a lack of liaison between the senior clubs (which are the responsibility of the Royal Agricultural Society) and the schools. The Committee considers that there should be a much closer link between the two groups and that more senior clubs should be formed in secondary schools.

We consider that, in view of the number of pupils who leave school at the intermediate certificate standard, Melbourne University regulations should be amended to include Agricultural Science as an intermediate certificate subject. Pupils wishing to gain their leaving certificates, however, should be advised to undertake the ordinary general science course.

*(b) A Rural University.*

The Committee is in general agreement with Dr. W. A. Merrylees, President of the Riverine Council's University League, whose views are fully set out in page 47 of the First Progress Report.

In the opinion of the Committee, however, a rural university could only become a reality if supported financially by the Commonwealth and provided adjoining States also made substantial contributions towards its creation and upkeep. Also, such a university would need to be supported by residential colleges for the training of teachers.

The site of the rural university is not important at this stage, but could be decided by mutual agreement between the States concerned.

In view of the present shortage of trained personnel in the various departments of the State actively connected with rural development, and having regard to the undoubted development likely to take place in the area under review, support in principle should be given to the creation of a rural university, and financial and other aid commensurate with the benefits likely to accrue therefrom provided at the proper time.

*(c) Additional Technical Advisory Services for Farmers.*

For some years, there has been an extreme shortage of agricultural graduates and the Department of Agriculture has experienced considerable difficulty in obtaining personnel of suitable training and personality for appointment as district extension officers.

In order to provide a flow of officers into the Department's extension services, various scholarship schemes have been initiated which should ensure a measure of relief. However, the inability of the Agricultural Faculty of the Melbourne University to meet the demand is of grave concern to the Committee.

Cramped conditions at present prevailing in the School of Agriculture make it impossible to accommodate more than two classes of over 20 at the same time.

If the School is to accommodate larger classes, as will be necessary if more men are to be trained for extension work, including veterinary services, or if the school is to undertake additional research and investigation work, a new building will be essential. A donation of £10,000 is already held by the University for the purpose, but, at present day costs, an amount of some £80,000 will be needed.

In view of the urgent need for additional extension officers in rural areas, and in the area under enquiry in particular, we consider that the financial wants of the school should be the prime concern of the Government and that priority should be given to the granting of funds for the purpose of enlarging the School of Agriculture.

Notwithstanding the need for additional extension officers, farmers should be encouraged to make full use of existing facilities. There are many farmers in the State who are not aware of the facilities available to them.

*(d) Provision of Adequate Pathological Facilities Throughout the Area, such Facilities to be Made Available Without Charge to the Medical Profession as well as to Veterinarians.*

The Committee agrees with the suggestion that pathological laboratories should be established at country base hospitals and considers that people in country districts are entitled to a service equal to that obtainable in the metropolitan area.

As part of its plan for regional hospital development, the Hospitals and Charities Commission proposes to place certain specialist medical officers in all base hospitals in Victoria. In particular, pathologists and radiologists are being sought as the preliminary move, and already one medical graduate has commenced training at the Royal Melbourne Hospital. All the general teaching hospitals are collaborating, as is the Professor of Pathology at the University of Melbourne, Professor E. S. J. King.

The Committee also agrees in principle that pathological facilities at the base hospitals should be made available to veterinarians, but sees serious problems inherent in the idea, which make the possibility of combining medical and veterinary service difficult. These problems relate to the physical difficulties of performing post-mortem examinations on large animals; the special knowledge of animal anatomy and pathology which would be required by hospital pathologists, and the special bacteriological and viral knowledge required for the important transmissible animal diseases. It seems, therefore, that the possibility could not be pursued without further investigation.

The problems of combining the two services must first be solved, and the Committee suggests that the Hospitals and Charities Commission continue its investigations and report direct to the Minister of Health in due course.

The question of payment for these pathological services is outside the Terms of Reference governing this investigation and the answer must be more widely sought accordingly.

*(e) Re-opening of Warrnambool Harbor.*

The final recommendation of the Parliamentary Public Works Committee which previously enquired into the advisability of improving the harbor facilities of Warrnambool was that dredging be carried out as soon as plant becomes available to keep the port open with a depth of twenty feet. Departmental policy is to implement this recommendation when dredging equipment is available.

The Committee, however, considers that in view of its recommendation concerning a rail link with Portland and the vast amount of public money being spent on this port, no specific recommendation is warranted so far as Warrnambool Harbor is concerned.

*(f) Improved Aerodrome Facilities, particularly at Portland, Warrnambool, and Hamilton.*

The Committee considers that an aerodrome will be a necessary facility at Portland and agrees that the cost involved—estimated to be £36,000—could not be borne without assistance by a community with a population of approximately 4 to 5 thousand.

In view of the urgent need to reserve land for an aerodrome, the Committee conferred direct with the Lands Department. Subsequently the Department advised that Crown lands comprising Allotments 20, 21, 21A, and 24, Section 13, Parish of Portland, within the boundary of the suggested aerodrome are being withheld from selection or sale.

Modern, all-weather air ports at Portland, Warrnambool, and Hamilton would make a worth-while contribution towards the fuller development of the areas which they serve and every effort should be made to prevail upon the Commonwealth Government to construct such aerodromes at these places as soon as possible.

## RECOMMENDATIONS.

The Committee recommends—

### THE PORT OF PORTLAND.

#### Recommendation No. 1.

That the Harbor Trust Commissioners receive all possible assistance to ensure that Stage 1 of the harbor construction activities is completed not later than the 30th June, 1959.

### PRIMARY INDUSTRIAL DEVELOPMENT.

#### Recommendation No. 2.

(a) That the statutory powers of the existing Land Utilization Advisory Council be extended to include areas other than catchment areas ;

(b) That the Soldier Settlement Commission and the Central Planning Authority be represented on the Council ;

(c) That the Council, with the aid of the Mallee, Wimmera, Glenelg, and Corangamite Regional Committees, undertake a complete survey of all Crown and undeveloped lands in the area with a view to their classification, as follows :—

(i) forest lands ;

(ii) water catchment areas ;

(iii) soil conservation areas ;

(iv) areas suitable for primary industrial development and the order in which they should be developed.

#### Recommendation No. 3.

That a system of farm apprenticeship for boys be instituted in Victoria.

#### Recommendation No. 4.

That governmental publicity resources be utilized to support the Australian Dried Fruits Association's publicity campaign designed to boost the consumption of dried fruits in Australia.

#### Recommendation No. 5.

That the Department of Agriculture be encouraged to considerably step-up its investigations into pasture improvement designed for the lower rainfall country.

#### Recommendation No. 6.

That sufficient dairy farms be encouraged in the low rainfall areas where irrigation is possible to ensure a safe and adequate milk supply to all towns and settlements.

#### Recommendation No. 7.

That, at the proper time, representations be made to the Commonwealth Government with a view to extending the taxation concession on buildings erected for fodder conservation purposes beyond the 30th June, 1956.

#### Recommendation No. 8.

That the recommendation of the Grain Elevators' Board concerning the erection of additional storage facilities be implemented as early as practicable.

**Recommendation No. 9.**

That terminal facilities of 3·6 million bushels capacity for the bulk handling of wheat be erected at Portland.

**Recommendation No. 10.**

That the Grain Elevators' Board be requested to examine the question of barley storage and report to the Honourable the Minister of Agriculture.

**WATER SUPPLY.  
(Including Sewerage).**

**Recommendation No. 11.**

That, as the loan money position eases, special consideration be given to waterworks proposals generally designed to increase production, both primary and secondary.

**Recommendation No. 12.**

That consideration be given to extending the period in which loan monies may be spent from one to three years.

**Recommendation No. 13.**

That construction of Marraboor Weir commence immediately the financial stress of enlarging the Hume Reservoir and Eildon Dam sufficiently eases and that the Government of Victoria seek an agreement with New South Wales accordingly.

**Recommendation No. 14.**

That the necessary financial aid be provided the First Mildura Irrigation Trust to achieve a satisfactory distribution system within the next four years.

**Recommendation No. 15.**

That the question of pipelines in lieu of open channels in the Wimmera-Mallee Domestic and Stock Channel System be re-considered in ten years' time.

**Recommendation No. 16.**

(a) (i) That a survey be commenced without delay by the Mines Department in conjunction with the State Rivers and Water Supply Commission to ascertain the extent and quality of the water in the underground lake known to exist in North-Western Victoria.

(ii) That a detachment of the survey party also carry out a similar survey at Portland.

(iii) That as an adjunct to the above survey, private boring contractors be compelled to notify the Mines Department of their intention to carry out boring operations and keep a log of their activities.

(b) That legislative action be taken to prevent contamination of subterranean waters caused by the depositing of night soil and other foul matter in old mining shafts and holes, and the corrosion of bore casing.

(c) (i) That improvement in the water supply for the Town of Portland be regarded as urgent and that all possible assistance be provided the Waterworks Trust in its endeavours to arrive at a satisfactory source of supply.

(ii) That provision be made for an ultimate population of 100,000 persons.

(iii) That the necessary finance be provided to enable the work to commence immediately a suitable plan has been approved.

**Recommendation No. 17.**

That, if the genuine attempts by the Portland Sewerage Authority fail to raise the necessary funds privately to complete the sewerage of the town, special consideration be given to bridging the gap between the amount actually raised privately by the Trust and that required to complete the work per medium of Government loan money.

**ELECTRIC SUPPLY.****Recommendation No. 18.**

That, if normal measures fail to raise the necessary funds to carry out the extension of State Electricity Commission supply to Portland, special consideration be given to bridging the gap between the amount actually raised and that required to complete the work per medium of Government loan money.

**FUELS.****Recommendation No. 19.**

(a) That steps be taken to ensure continuity of survey operations in order to ascertain the mineral resources of the State as soon as possible.

(b) That, if practicable, preference be given to those areas in the Western part of the State where brown coal deposits are known to exist.

**TRANSPORT.****Recommendation No. 20.**

(a) That, in view of the significance from a National viewpoint of rail links between Patchewollock-Ouyen-Hay (N.S.W.) and the growing importance of the Port of Portland, negotiations take place between the Governments of the Commonwealth, New South Wales, and Victoria, per medium of the Premier's Conference with a view to—

agreement being reached in principle that such links be ultimately constructed ; and upon such agreement being reached—

(b) That trial surveys be conducted by all concerned to ascertain the best routes ;

(c) That action be taken to preserve the practicability of such lines by the reservation or protection of all necessary easements, river crossings, and the provision of ample station grounds.

**Recommendation No. 21.**

That the Parliamentary Public Works Committee be requested to enquire into the question of constructing a rail link between Warrnambool and Heywood.

**Recommendation No. 22.**

That, if facilities for the bulk handling of wheat are constructed at Portland, track improvements be effected on the Horsham-Hamilton line (via Toolondo).

**Recommendation No. 23.**

That the work of providing additional siding accommodation at Ararat be commenced as soon as practicable.



**ROADS.****Recommendation No. 24.**

(a) That, if sufficient funds cannot be obtained by other means to enable the pursuance of a sound road building and maintenance policy, consideration be given to the question of increasing motor registration fees.

(b) That the Country Roads Board be relieved of at least part of its statutory obligation to meet all interest and sinking fund charges on loan moneys expended on permanent works by the Board and Councils under its jurisdiction.

(c) That the nett proceeds from all fees collected from road users be used exclusively for road works.

**Recommendation No. 25.**

That, upon the question of additional funds for the Country Roads Board being resolved, the following roads be maintained as high standard, all-weather roads, and declared highways or main roads, if not already so declared—

- (a) Pinnaroo—Ouyen—Piangil ;
- (b) Swan Hill—Sea Lake—Hopetoun ;
- (c) Kaniva—Edenhope—Harrow—Coleraine (linking with the Henty Highway at Condah) ;
- (d) Murrayville—Nhill ;
- (e) Gymbowen—Nhill ;
- (f) Birchip—Beulah—Rainbow—Nhill ;
- (g) Alternate route for Murray Valley Highway, as follows—  
Swan Hill, Boundary Bend, Robinvale, Mildura, using the Sturt Highway in New South Wales from Euston to Mildura ;
- (h) Sea Lake—Robinvale ;
- (i) Ouyen—Patchewollock ;
- (j) Underbool—Patchewollock.

**Recommendation No. 26.**

That, failing the practicability of a rail link between Ouyen and Hay (N.S.W.) and its construction within a reasonable period of time, negotiations be entered into with the Government of New South Wales with a view to the construction of an all-weather road between Hay and Portland utilizing the existing roads where practicable.

**INDUSTRIAL DEVELOPMENT AND DECENTRALIZATION.****Recommendation No. 27.**

That special consideration be given to the decentralization of any industry likely to contribute towards the successful operation of the Port of Portland.

**Recommendation No. 28.**

That suitable industrial sites at Portland be purchased by the Crown for allocation on the recommendation of the Harbor Trust Commissioners.

**Recommendation No. 29.**

That, where practicable, Shire boundaries be amended to include industrial sites in adjoining cities, towns or boroughs.

**Recommendation No. 30.**

(a) That overseas superphosphate manufacturing companies be acquainted with the opportunities existing at Portland for the manufacture of their products ;  
or alternatively,

(b) That Government assistance be provided any superphosphate company willing to manufacture at Portland, subject to the following terms and conditions—

- (i) the total advances by the Government not to exceed half the outlay on the project and, at any time, the paid up capital of the Company ;
- (ii) the loan to be repayable fifteen years after the commencement of production ;
- (iii) the loan be free of interest provided that the position is reviewed after five years of production with a view to determining whether the Company should pay interest thereafter.

**SOIL CONSERVATION.****Recommendation No. 31.**

That additional funds be made available to the Soil Conservation Authority—

- (a) in order that the work of conducting soil surveys and trial plots may proceed at a much faster rate than at present ; and
- (b) for the purpose of increasing technical and financial aid to municipal councils and landholders.

**Recommendation No. 32.**

That the Soil Conservation Authority participate in the Commonwealth grant for extension work in the field of agriculture.

**REGIONAL PLANNING.****Recommendation No. 33.**

(a) That a co-ordinating committee representative of the Mallee, Wimmera, Glenelg, and Corangamite Regions and the Portland Harbor Trust be set up under the framework of the Central Planning Authority to consider and make recommendations on all questions of common interest having a bearing on the development of the Port of Portland.

(b) That members of the committee receive the same fees and work under the same conditions as regional committees.

**MISCELLANEOUS.****Recommendation No. 34.**

(a) That steps be taken to effect a much closer link between Junior and Senior Farmers' Clubs ; and

(b) That the number of Senior Clubs in secondary schools be considerably increased.

**Recommendation No. 35.**

That the Melbourne University Regulations be amended to include Agricultural Science as an Intermediate Certificate subject.

**Recommendation No. 36.**

That a substantial grant be provided the Melbourne University for the purpose of providing increased accommodation in the School of Agriculture.

**Recommendation No. 37.**

That everything possible be done to ensure that requisite extension services are available throughout the area at the earliest possible moment.

**LIST OF WITNESSES.**

The names of the witnesses who gave recorded evidence are as follows:—

\* Unsworn Statement.

Name.	Occupation and Address.	Examined At.	Transcript Page No.
Allardice, M. D.	Secretary, Shire of Portland, Heywood .. .. .	Portland ..	353
Allnatt, W. L.	Farmer; Chairman, Mid-Murray Water Users' Association, Swan Hill	Swan Hill ..	194, 256
Ampt, R. L.	Farmer and Grazier; President, Shire of Kowree, Edenhope	Nhill ..	881
Anderson, K. S.	Chairman, Harbor Trust Commissioners, Portland ..	Portland ..	390
Appleton, R. H.	Grazier; Councillor, Shire of Wannan, Coleraine ..	Coleraine ..	630, 641
Armstrong, W. P.	Farmer and Grazier, Kewell North .. .. .	Warracknabeal	785
Aylmer, M. McL.	Farmer; Councillor, Shire of Portland, Heywood ..	Portland ..	384
Baldy, N. W.	Secretary, Glenelg Regional Committee, Ararat ..	Ararat ..	546
Bright, T.	Farmer; Councillor, Swan Hill Shire, Swan Hill ..	Swan Hill ..	237
Bromfield, W. E.*	District Engineer, State Rivers and Water Supply Commission, Swan Hill	Swan Hill ..	235
Brown, T. K.	Garage Proprietor, Coleraine .. .. .	Coleraine ..	619
Bunge, J. F.	Farmer, Sheep Hills .. .. .	Warracknabeal	775
Burgess, R. C.	Chief Commercial Manager, Victorian Railways Department, Melbourne	Melbourne ..	1,137
Bushby, L. O. E.	Farmer and Grazier, Dimboola .. .. .	Dimboola and Nhill	746 857
Cameron, I. A. G.	Farmer and Grazier, Natimuk .. .. .	Horsham ..	714
Cameron, L. G. C.	Member of the Board of Management, Australian Dried Fruits Association; Chairman, Mildura District Council of the A.D.F.A.	Mildura ..	109
Coulthard, A. G.	Officer in Charge, Regional Planning and Decentralization Division, Melbourne	Melbourne ..	1,408
Crawley, R. L.	Engineer, Shire of Warrnambool, Warrnambool ..	Warrnambool..	272
Curran, J. M.	Auctioneer, Manangatang .. .. .	Ouyen ..	953
D'Alton, J. R.	Farmer, Hall's Gap .. .. .	Horsham ..	707
Darwin, D. V.	Chairman, Country Roads Board, Melbourne ..	Melbourne ..	1,163
Delahunty, M. E. (Mrs.)	Home Duties; Member, National Catholic Rural Movement, Melbourne	Melbourne ..	1,428
Douglas, D. M.	Storekeeper; Mayor, Borough of Swan Hill, Swan Hill	Swan Hill ..	191
Downes, R. G.	Deputy Chairman, Soil Conservation Authority, Kew, Melbourne	Melbourne ..	1,102
Duffy, J. A.	Farmer and Grazier, Nhill .. .. .	Nhill ..	874
Eastick, T. A.	Organizing Secretary, South-Western Development League, Warrnambool	Warrnambool..	258, 291
Fletcher Jones, D.	Manufacturer, Warrnambool .. .. .	Warrnambool..	307
Francis, E. A.	Farmer, Lower Norton Creek .. .. .	Horsham ..	718
Friedman, J.	Farmer and Grazier, Horsham .. .. .	Horsham ..	704
Gardiner, C. E.	Stock and Station Agent; Councillor, Shire of Wannan, Coleraine	Coleraine ..	625, 633
Gaussen, H. P.	Farmer and Grazier; Councillor, Shire of Wannan, Coleraine	Coleraine ..	654, 659
Gerraty, F. G.	Chairman, Forests Commission of Victoria, Melbourne	Melbourne ..	1,068
Giles, W. G.	Farmer; Councillor, Shire of Karkaroc, Hopetoun ..	Ouyen ..	184
Gilmore, A. . .	Commissioners' Special Officer, Victorian Railways Department, Melbourne	Melbourne ..	1,137
Glare, F. G.	Councillor, Shire of Minhamite, Hawkesdale ..	Warrnambool..	318
Glowrey, H.	Chairman, Grain Elevators Board, Melbourne ..	Melbourne ..	1,291
Grant, J. C.	Farmer and Grazier, Kaniva .. .. .	Nhill ..	831 884
Gray, A. J.	Officer in Charge, Forest Nursery, Wail .. .. .	Warracknabeal	797
Grigg, A. E.	Farmer; President, Rail League, Patchewollock ..	Ouyen ..	137, 189, 920
Hargreaves, J. R.	Farmer; Commissioner, Casterton and Coleraine Waterworks Trust, Casterton	Casterton ..	524
Harman, L. H.	Electrical Engineer; Chairman, High School Advisory Council, Portland	Portland ..	465
Harris, H. R.	Timber Merchant, Nhill .. .. .	Nhill ..	868
Harvey, A. D.	Secretary, Shire of Mildura, Mildura .. .. .	Mildura ..	56
Hausler, F. W.	Retired Farmer, Warracknabeal .. .. .	Warracknabeal	808

Name.	Occupation and Address.	Examined At.	Transcript Page No.
Hayward, A. R.	Farmer; Speed .. .. .	Ouyen ..	949
Hedger, P. K.	Senior Investigation Officer, Regional Planning and Decentralization Division, Melbourne	Melbourne ..	1,408
Henry, E. N. T.	Town Clerk, Portland .. .. .	Portland ..	442
Hobbs, W. H.	Farmer, Dooen .. .. .	Horsham ..	689
Hughes, E. P. C.	Civil Engineer; Chief Engineer, Harbor Trust, Portland	Portland ..	482
Ingpen, T. E.	Farmer and Grazier; Tarranginnie.. .. .	Nhill ..	851
Jamieson, R.	Grazier; President, Corangamite Regional Committee, Woorndoo	Warrnambool..	296
Jardine, J. W.	Farmer, Kiamal .. .. .	Ouyen ..	945
Jarrett, T. C.	Farmer, Portland .. .. .	Portland ..	325
Johansen, M. K. N.	Engineer, Shire of Mildura, Mildura .. .. .	Mildura ..	77
Keiller, H. F.	Works Manager, Freezing Works, Portland .. .. .	Portland ..	381
Kingston, J. J.	Farmer and Grazier, Stawell .. .. .	Horsham ..	701
Kirkwood, L.	Grazier; President, Shire of Dundas, Hamilton .. .. .	Hamilton ..	501
Kruse, W. H.	Retired Storekeeper, Murrayville .. .. .	Nhill ..	826
Lawrence, G. V.	Organizing Secretary, Murray Valley Development League, Melbourne	Swan Hill ..	242
Learmonth, N. F.	Retired Grazier, Portland .. .. .	Portland ..	480
Levitzke, R. A.	Farmer and Grazier; Councillor, Shire of Wimmera, Horsham	Horsham ..	674
Lindell, J. H. (Dr.)	Chairman; Hospitals and Charities Commission, Melbourne	Melbourne ..	1,213
Loveridge, A. E.	Storekeeper; President, Western District and Associate Areas Development League, Ouyen	Ouyen ..	164
Middleton, W. F.	Horticulturist; Councillor, Shire of Mildura, Mildura	Mildura ..	124
Milkins, G. G.	Farmer and Grazier, Tarranyurk .. .. .	Warracknabeal	790
Minogue, M. E. (Miss)	Public Relations Officer; Member, National Catholic Rural Movement, Melbourne	Melbourne ..	1,428
Morson, W. J. H.	Sworn Valuer; Mayor, City of Horsham, Horsham ..	Horsham ..	664, 697
Moulton, L. C.	Secretary, Harbor Trust Commissioners, Portland ..	Portland ..	397
Murphy, L. L.	Farmer, Walpeup .. .. .	Ouyen ..	965
Murray, C. C.	Town Clerk, Ararat .. .. .	Ararat ..	530
McAuliffe, J. J.	Farmer; Councillor, Shire of Minhamite, Hawkesdale	Warrnambool..	312
McDonald, J.	Farmer; Councillor, Shire of Dunmunkle, Rupanyup	Horsham ..	683
McKeon, B. F.	Assistant Chief Inspector, Department of Agriculture, Melbourne	Melbourne ..	33 1,237
Mackinnon, D.	Farmer, Boorcan .. .. .	Warrnambool..	301
McLean, A. L.	Farmer and Grazier, Warracknabeal .. .. .	Warracknabeal	757
Nielsen, V. C.	Secretary, Shire of Walpeup, Ouyen .. .. .	Ouyen ..	969
O'Brien, E. J.	Senior Chemist, Department of Agriculture, Melbourne	Melbourne ..	1,312
Oliver, A.	Councillor, Borough of Stawell, Stawell .. .. .	Horsham ..	686
Oram, J. A. F.	Engineer and Manager, First Mildura Irrigation Trust, Mildura	Mildura ..	87
Page, J. McD.	Primary Producer and Merchant, Warracknabeal ..	Warracknabeal	765
Palmer, H. C.	Solicitor; Commissioner, Nhill Water Works Trust and Sewerage Authority, Nhill	Nhill ..	842
Patman, R. D.	Factory Manager, Nhill .. .. .	Nhill ..	845
Perkins, G. A. C.	Farmer and Grazier; President, Shire of Dimboola, Jeparit	Dimboola ..	723
Ramsay, A. H.	Director of Education, Melbourne .. .. .	Melbourne ..	1,055
Raven, D.	Farmer; Councillor, Shire of Swan Hill, Swan Hill ..	Swan Hill ..	227
Richmond, R. H.	Divisional Engineer, Waterworks Trusts and Sewerage Authorities, State Rivers and Water Supply Commission, Melbourne	Melbourne ..	1,337 1,364
Roberts, R. I.	Farmer; Councillor, Shire of Wannon, Coleraine ..	Coleraine ..	639, 658
Rogers, G.	Chief Traffic Manager, Victorian Railways Department, Melbourne	Melbourne ..	1,137
Scott, P. D.	General Manager, Portland Dairy Company, Portland	Portland ..	359
Sheahan, Hector	Executive Officer, Goods Services Section, Transport Regulation Board, Melbourne	Melbourne ..	1,386
Simpson, H. L.	Chairman, Soldier Settlement Commission, Melbourne	Melbourne ..	1,024
Teague, J.	President, Swan Hill Shire, Swan Hill .. .. .	Swan Hill ..	234
Thomas, A. J.	Estate Agent; Mayor, Town of Portland, Portland ..	Portland ..	323
Thomas, D. E.	Government Geologist, Melbourne .. .. .	Melbourne ..	1,191

Name.	Occupation and Address.	Examined At.	Transcript Page No.
Thompson, G. T. ..	Chairman, Soil Conservation Authority, Kew, Melbourne	Melbourne ..	1,102
Tilley, G. F. ..	Journalist, Mildura .. .. .	Mildura ..	132
Tobin, E. M. ..	Solicitor; Solicitor, Shire of Walpeup, Ouyen ..	Ouyen ..	148
Turner, W. L. ..	Farmer, Manangatang .. .. .	Ouyen ..	960
Vaughan, H. B. D. ..	Medical Officer of Health, Town of Portland and an Honorary Medical Officer, Portland and District Hospital, Portland	Portland ..	472
Wadham, S. McM. ..	Professor of Agriculture, University of Melbourne ..	Melbourne ..	886
Walsh, G. L. ..	Draper; Councillor of the Shire of Walpeup, Ouyen	Ouyen ..	931
Wathen, A. ..	Farmer; Councillor, Glenelg Shire, Casterton ..	Casterton ..	514
Welch, L. N. ..	Senior Divisional Engineer, Wimmera-Mallee Division, Department of Water Supply, Melbourne	Melbourne ..	1, 1,268 1,371
Whelan, C. P. ..	Dentist, Donald .. .. .	Warracknabeal	814
White, E. V. ..	Acting Chairmn, No. 4 Region, Murray Valley Develop- ment League, Wentworth, N.S.W.	Mildura ..	104
White, R. S. ..	Estate Agent; Mayor, City of Hamilton, Hamilton ..	Hamilton ..	485 513A
Williams, J. H. ..	Retired Farmer; Councillor, Swan Hill Shire Council; member of Mallee Regional Committee, Swan Hill	Swan Hill ..	213
Wormwell, R. ..	Horticulturist; President, Progress Association, Irymple	Mildura ..	128
Wright, J. C. ..	Engineer, Shire of Wannon, Coleraine .. .. .	Coleraine ..	611, 646

## ACKNOWLEDGMENTS.

The Committee desires to place on record its appreciation of the valuable assistance rendered by the witnesses, many of whom spent much time in an honorary capacity preparing their submissions.

Accordingly, we acknowledge our thanks to the representatives of Progress Associations, Development Leagues, &c., interested in the development of the Western and North-Western parts of Victoria, Heads of State Departments, Local Municipal Councils, the Portland Harbor Trust Commissioners, and all those individuals who, in providing their views, assisted the Committee in this extensive investigation.

As previously stated, this investigation resulted from representations made to the Government of the day by the Western District and Associate Areas Development League. We re-iterate the sentiments contained in the First Progress Report expressing our appreciation of the friendly co-operation provided by this organization, particularly in the persons of Mr. A. E. Loveridge, President, and Mr. W. H. Kruse, Secretary.

We express our appreciation to the Chief Shorthand Writer and Members of his staff who assisted us in reporting work.

Finally, we should like to place on record our appreciation of the services of the Secretary, Mr. N. T. Howard, who ably performed the duties of his office and rendered valuable assistance during the course of the enquiry. It is significant to note that the Public Service Board, on the recommendation of the Secretary, Premier's Department, recently raised the classification of the office of Secretary, State Development Committee, and re-appointed Mr. Howard to the position.

Dated at Melbourne the twentieth day of April, One thousand nine hundred and fifty-five.

R. K. WHATELY, Chairman.  
 J. P. O'CARROLL, Vice-Chairman.  
 A. R. MANSELL, Member.  
 H. C. LUDBROOK, Member.  
 G. E. WHITE, Member.  
 L. J. COCHRANE, Member.

N. T. HOWARD, Secretary.