

1922.

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA



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PARLIAMENTARY STANDING COMMITTEE ON
PUBLIC WORKS.

J. Morrison
Clerk of the Senate.
29-6-22

REPORT

TOGETHER WITH

MINUTES OF EVIDENCE

RELATING TO THE

CONSTRUCTION OF A HOSTEL AT CANBERRA,
WITH NECESSARY ENGINEERING AND OTHER SERVICES.

MEMBERS OF THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.
(Third Committee.)

The Honorable HENRY GREENY, M.P., Chairman.

Senate.

Senator Huttill Spencer Foll.*
Senator George Henderson.†
Senator John Newland, Vice-Chairman.††
Senator Edward Needham.§
Senator William Plain.*

House of Representatives.

Llewelyn Atkinson, Esquire, M.P.‖
The Honorable Frederick William Bamford, M.P.
David Sydney Jackson, Esquire, M.P.**
George Hugh Mackay, Esquire, M.P.
James Mathews, Esquire, M.P.
Parker John Moloney, Esquire, M.P.

* Appointed 28th July, 1920. † Resigned 22nd July, 1920. ‡ Re-appointed 28th July, 1920. § Re-appointed 15th May, 1921. ‖ Appointed 14th May, 1921.
†† Elected to be a Member of the Senate, 30th June, 1920. ‡‡ Resigned 12th May, 1921. ** Appointed 14th May, 1921.

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EXTRACT FROM VOTES AND PROCEEDINGS OF THE HOUSE OF REPRESENTATIVES.

No. 204 of 6th DECEMBER, 1921.

16. PUBLIC WORKS COMMITTEE—REFERENCE OF WORK—HOSTEL AT CANBERRA.—Mr. Groom moved, pursuant to notice, that, in accordance with the provisions of the *Commonwealth Public Works Committee Act 1913-1914*, the following proposed work be referred to the Parliamentary Standing Committee on Public Works for its investigation and report thereon, viz. :—The construction of a hostel at Canberra, with necessary engineering and other services.

Mr. Groom having laid on the Table plans, &c., in connexion with the proposed work—

Debate ensued.

Question—put.

The House divided—

Ayes, 31.		Noes, 21.	
Mr. Bamford	Mr. Marks	Mr. Atkinson	Mr. Lister
Mr. Bayley	Mr. Mathews	Mr. Bell	Mr. Livingston
Mr. Blakeley	Mr. McDonald	Sir Robert Best	Mr. Maxwell
Mr. Bowden	Mr. Parker Moloney	Mr. Bruce	Mr. McWilliams
Mr. Chanter	Mr. Poynton	Mr. Donald Cameron	Mr. Prowse
Mr. Considine	Mr. Riley	Mr. Robert Cook	Mr. Stewart
Mr. Corser	Mr. Rodgers	Mr. R. W. Foster	Mr. Wienholt
Mr. Cunningham	Mr. Granville Rylie	Mr. Gabb	
Mr. Fenton	Mr. Laird Smith	Mr. Gibson	
Mr. Fleming	Mr. Watkins	Mr. Gregory	
Mr. Foley	Mr. West	Mr. Hill	Mr. Jackson
Mr. Greene	Mr. Wise	Mr. Hunter	Mr. Jowett.
Mr. Groom			
Mr. Hay	Tellers :		
Mr. Lambert	Mr. Mackay		
Mr. Lamond	Mr. Mackay		
Mr. W. Maloney	Mr. Story		

And so it was resolved in the affirmative.

THE CONSTRUCTION OF A HOSTEL AT CANBERRA.

REPORT.

The Parliamentary Standing Committee on Public Works to which the House of Representatives referred for investigation and report the question of the construction of a hostel at Canberra with necessary engineering and other services, has the honour to report as follows :—

INTRODUCTORY.

1. Up to the present time, while there has been suitable limited accommodation for Members of Parliament and "Officials" visiting or residing at Canberra, no provision yet exists for accommodating tourists or members of the public visiting the Federal Territory on business. The Government now suggests that the time has arrived when a suitable public hostel for visitors is necessary.

2. At this early period in the development of the Territory doubt has been expressed as to whether private enterprise could be induced to provide the requisite accommodation, and it is suggested to the Committee that, at least, an initial undertaking of this kind is a matter for which the Government might legitimately become responsible.

PRESENT PROPOSAL.

3. The proposal now submitted to the Committee is to erect, on a site facing Commonwealth-avenue, and opposite the proposed Governmental Group, a hostel on garden pavilion-lines capable of affording first-class accommodation for about 200 visitors.

4. The design of the structure shows a central building containing the usual public rooms, the administrative section, kitchen, &c., and accommodation for the residential staff; while grouped round an enclosed garden on each side of the central building are separate pavilions containing the guests' private, sitting, and bed rooms, connected with each other and with the central building by verandah corridors.

5. It is proposed that the building shall be of brick with tiled roof and rough-cast walls—the central block and the four corner pavilions to be two stories high, the remaining six pavilions being single story.

ESTIMATED COST.

6. The estimated cost of the proposal, as submitted to the Committee, was as follows:—

Hostel Building	£28,500
Two-story Pavilions (No. 4)	14,680
Single-story Pavilions (No. 6)	26,700
Covered ways	3,900
Sunk Gardens	720

ENGINEERING SERVICES.

Heating and Hot-water supply, Freezing machinery, Cooking plant	6,500
Lighting and Power	4,670
Storm Water Drainage	1,500
Sewerage, including connexions	3,000
Approach roads and channelling, fencing and gates, planting and turfing	3,500
Water Mains and Hydrants	2,000
Contingencies	3,080

£98,750

COMMITTEE'S INVESTIGATIONS.

7. The Committee, after taking evidence in Melbourne, constituted a Sectional Committee, which left for Canberra on the 16th December, 1921, visited the site of the proposed Hostel, took further evidence in the Federal Territory, and then proceeded to Sydney where evidence was obtained from Mr. John Sulman, Consulting Architect, Chairman of the Federal Capital Advisory Committee, Mr. H. E. Ross, Architect, a Member of the Committee; Mr. Leslie Wilkinson, Professor of Architecture at the Sydney University, and others.

8. After having had the plan of the building explained in detail and carefully considered the views expressed by the various architects in the matter, the Committee is of opinion that, from the point of view of comfort and convenience, economy and architectural effect, the Hostel as designed is eminently suitable for conditions such as will obtain at Canberra, and the proposal to set the standard with this building by having white walls and red-tiled roofs is one with which the Committee concurs.

9. The position selected for the Hostel in Commonwealth-avenue, opposite the proposed Governmental Group, and at no great distance from Parliament House, is one that commends itself to the Committee, and the level stretch of land available at this point is admirably adapted for the class of structure intended to be erected there.

10. The erection of a structure of this kind, however, opens up a number of questions, probably only indirectly connected with the subject under consideration, but having an important bearing on the establishment of the Federal Capital as a whole, and as such received attention at the hands of the Committee.

One of these to which particular attention might be invited is the provision to be made for housing the workmen during the progress of the work of building the City.

At first sight, this may appear foreign to this reference, but the Committee feels that this will have a marked effect on the cost of the Hostel as well as upon other works to be subsequently undertaken.

At the present time, a number of the workmen employed at Canberra are occupying huts, which they have apparently erected themselves, whilst others are more or less uncomfortably housed in a large group of wooden buildings, originally erected to house German internees. Possibly, on account of this fact, it was ascertained in evidence that, at times, it has been found difficult to obtain skilled labour at Canberra, and all workmen who are employed have to be paid 2s. per day extra on account of the remoteness of the locality. It is probable that this allowance will have to be continued until Canberra has become what is called an industrial centre, and this can only be brought about when the average workman is able to readily obtain accommodation on similar lines to that obtainable by him in the cities or larger towns, and have prospects of regular employment.

The question of housing workmen has not been referred to the Committee, but until it is undertaken, and until Canberra has been declared an industrial centre, it may be expected that any works carried out there will cost considerably more than in either Sydney or Melbourne.

Having drawn attention to this aspect, the Committee does not, at the present time, intend to pursue the matter further.

11. In the course of evidence, it has been stated variously that the Hostel may be expected to accommodate Members of Parliament, visiting dignitaries, Ministers and their attendants, senior officials and tourists. It must be borne in mind that, under the existing ordinance, no liquor may be sold at Canberra, and it is generally recognised that in most hotels the profits from the bar go a long way towards meeting the expenses of the dining-room. Under these circumstances, the Committee made careful inquiries with a view to ascertaining whether, if a high standard of comfort were to be maintained, the tariff would not have to be fixed at such a figure as to restrict the occupants to visiting dignitaries and wealthy tourists.

Estimating the cost of furnishing and equipping the Hostel at £15,000, and allowing a nominal rental for the land, 7 per cent. to cover interest on capital cost of the building, maintenance and sinking fund, and 15 per cent. depreciation on the furniture and equipment: assuming also that the establishment could be expected to be only half full for the whole of every year, the evidence adduced goes to show that, if a moderate dietary scale be adhered to, it will be possible to take guests at £1 per day, or less, if no profit is to be allowed for. If a more liberal menu be demanded, the cost per day will have to be increased.

12. In the course of evidence, it was ascertained that, in addition to this Hostel, which it is hoped will be completed, perhaps, twelve months before Canberra is ready for official occupation and will accommodate tourists and others interested in the new City and its surroundings, the Government has in contemplation the erection of two additional Hostels at a total cost of £152,900. These are to be on a less pretentious scale and are destined for married and unmarried officials, whom it is hoped to accommodate at a rate of from 10s. to 12s. per diem. Furthermore, it is hoped that, by the Government giving this lead, private enterprise may be influenced to erect two more hostels.

13. If the Government policy is to proceed at once with the progressive development of Canberra until the whole of the functions of Government are established there, it is of course essential that some place of public accommodation should be available. As it had been stated, that private enterprise, if given the opportunity, would be glad to undertake the erection and

management of a hostel of the description now under consideration, some Members were inclined to offer them that opportunity, but the majority of the Committee realizing that it is improbable that, at the present time, the erection of a building on similar lines to the proposed Hostel would be undertaken by private enterprise, consider that it devolves upon the Government to do it.

The decision arrived at in connexion with the matter is shown in the following extract from the Minutes of Proceedings, namely:—

Mr. Gregory moved—That in the opinion of the Committee the building of a Hostel as proposed should be undertaken and controlled by private enterprise, and that applications should be at once invited in the press for a lease of the land selected for the purpose, subject to such conditions as may be necessary to insure the erection of a suitable hostel.

Seconded by Mr. Jackson.

The Committee divided on the motion.

AYES (2).

Mr. Gregory,
Mr. Jackson,

NOES (3).

Senator Plain,
Mr. Mathews,
Mr. Moloney.

And so it passed in the negative.

14. It appears to the Committee that the need for accommodation at Canberra of the class proposed is at present purely a matter of conjecture, and there is no guarantee that a Hostel capable of taking 200 guests will, in the initial stages, be reasonably filled. It was ascertained in evidence that if the accommodation to be provided were restricted to 100 guests, an immediate reduction of £36,750 in capital cost would be effected. Under these circumstances, the Committee recommends that, for the present, the construction be limited to the Central Administrative block and one-half of the number of pavilions proposed.

The decision arrived at in connexion with this matter is shown in the following extract from the Minutes of Proceedings, namely:—

Mr. Jackson moved—That, in the opinion of the Committee, the erection of a Hostel at Canberra be restricted in the first instance to the Central Block and one-half of the number of pavilions proposed for the completed project.

Seconded by Senator Plain.

The Committee divided on the motion.

AYES (4).

Mr. Gregory,
Mr. Jackson,
Mr. Moloney,
Senator Plain,

NO (1).

Mr. Mathews.

And so it was resolved in the affirmative.

H. GREGORY,
Chairman.

Office of the Parliamentary Standing Committee on Public Works,
Parliament House,
Melbourne,
11th April, 1922.

MINUTES OF EVIDENCE.

(Taken at Yarralumla, Canberra.)

MONDAY, 10TH DECEMBER, 1921.

(SECTIONAL COMMITTEE.)

Members present:

Mr. H. GREGORY, Chairman;

Senator Flinn,

Mr. Parker Moloney.

Mr. Mathews,

Percy Thomas Owen, Director-General of Works,
Department of Works and Railways, sworn and
examined.

1. *To the Chairman.*—The proposal for the erection of a hostel at Canberra originated before the Advisory Committee was formed. Ministers and members of Parliament were visiting the Federal Territory, and the matter was discussed, and, subsequently, when the Advisory Committee was formed, it was requested to consider the advisability of erecting a hostel. The idea was to accommodate the visiting public, people having an interest in Canberra, whether official or private, and, to some extent, to popularize the Federal Capital by bringing it more prominently under public notice. At the present time, by the way, there is no accommodation whatever for visitors who may desire to come to Canberra. The Committee took the matter up before dealing with the general question of Canberra immediately, because it was thought then that a hostel would be erected and a convention held here. The Committee reported on the Convention Hall, and, subsequently, on the general scheme of Canberra. The members of the Committee were, to the best of my recollection, all in favour of the erection of an hostel as forming part of the general scheme. It was considered that when Parliament sat here the hostel would then be used by members, or by visitors and officials, and for such other official use generally as the Government might think proper. For instance, there would be the question of housing at the capital dignitaries from other countries and persons in high official positions who might be here at the invitation of the Government. A question of great importance which came before the Committee had to do with the housing of members of Parliament during the first sessions conducted in Canberra. That subject is dealt with in the Committee's report. It is proposed to erect a residence for the Prime Minister and one each for the President of the Senate and the Speaker of the House of Representatives and, in addition, ten bungalows for the accommodation of members of Parliament. Ministers would be fairly constantly at Canberra whether the Houses were in session or not, in order to carry on their administrative duties. In the schedule of accommodation proposed for the first stage it was suggested that members would occupy the hostel, but I do not think the Committee intended that that should be obligatory. Other accommodation will be erected, and during the third period of construction it is anticipated by the Committee that a large number of houses will be erected by private enterprise. The total number of houses which it was thought would be built, is set out in Appendix E (page 35 of the Advisory Committee's report), which sets out the proportion of housing estimated to be erected by the Government and by private enterprise. It will be seen that in the first three years there is a working up to the point where Parliament will be sitting, and it is

considered that the Government would erect all the cottages except 30 on the governmental side. That is to say, there would be 310 built by the Government and 30 by private builders, whereas, on the northern side—the civic centre—private enterprise would, in the latter part of the second and in the third period of construction, erect 338 cottages. They would be of varying size, and the Committee thought that an average price of £1,100 would cover the cost. Some reduction of costs is anticipated under which £1,100 would be a reasonable price. That is for a cottage complete up to its boundaries; and the prices would vary between £800 and £1,700 or £1,800. We have been building here at the zenith of construction costs, and even since we began there has been a tendency for prices to come down. In addition to the cottages it is proposed that a hostel shall be erected for the officials, one by the Government and one or more also by private enterprise. In arriving at those figures an analysis was made of the married and single men and women of the permanent and temporary staffs. It was reckoned that a large proportion of the married men on the permanent staff would desire cottages, but that there might be some of the married men having smaller families and receiving smaller salaries who would prefer to live in a hostel with a couple of rooms, depending on the general management of the hostel for their meals. It was considered also that private enterprise would erect hostels on the northern, or civic, side for some married and single men and women. The numbers of married men, single men and women are set out also in Appendix E of the Advisory Committee's report. The figures were taken from particulars supplied by the various Departments. In the circumstances it is thought that the Government would erect on the southern side hostels for 70 families, and would construct hostels to accommodate seventeen families on the northern side, and that private enterprise would erect hostels capable of holding 90 families on the northern side. Then, for the unmarried men and women, it is thought that the Government would erect hostels for 310 of both sexes on the southern side, whereas private enterprise would erect accommodation for 338 on that same administrative side. The Advisory Committee thought that it would be justified in assuming that private enterprise would step in (see report, page 12, paragraph 33). We took it that we would not be justified in assuming that private enterprise was coming to Canberra before the Commonwealth had set the seal of permanency upon the whole project. Private enterprise would not step in if it thought that anything was going to stop Canberra's progress. It was on that basis that it was considered that in the second and third periods private enterprise would be actively associated with the construction of the city. The figures of the Committee are based on that assumption. I mention these particulars because there is before this Sectional Committee the provision for only one hostel, whereas the construction of one is not the proposition at all. It is to be the principal official hostel. The Committee in considering this particular building regarded it as being of very great importance, because, when Canberra becomes the Seat of Government, it will be the house for the reception of members of Parliament, dignitaries from abroad, and high officials of the Commonwealth. It will be, in fact, the principal residential house of the Commonwealth. In the circumstances, to have put up any

thing short of a house of which the Commonwealth would be proud would be a great mistake. On the other hand, the Advisory Committee did not think there should be any great elaboration of ornamental detail, but that there should be the utmost simplicity, depending on grouping and on the growth of lawns, shrubs, and flowers and colour effect generally to get an agreeable which would be a credit to the Commonwealth and a means of comfort to members and other guests. The Committee thought that there was offered a unique opportunity in respect of the design of this place to make it something which would present features suitable for the climate and the surroundings generally, rather than that there should be erected a two-storied, or multi-storied hotel, such as is to be seen in any city or large town in Australia. There is now afforded a general basis and an opportunity which will permit of making the place more picturesque and quite unique in the direction of accommodation of this sort. There was one consideration which was regarded as very important. It is admitted that in winter-time Canberra can be very windy and bleak. Further, during the summer it is sometimes visited by strong, hot winds, and there is required protection. Shady lawns and gardens would be the most desirable and appropriate form. Those factors led to the general idea of open garden courts and lawns, protected alike throughout winter and summer. The Committee desired to avoid the two-storied proposition so far as possible, but the Chief Architect (Mr. Murdoch) made certain suggestions which were adopted by the Advisory Committee. The only other principle held in mind by the Committee as being of importance was that, having in view the requirements of the official and high-class section of the community, to which this building will be appropriated after Parliament has met at Canberra, there should be some method of securing seclusion if so desired; that is to say, if a summer suite or an entire pavilion were desired to be segregated for private use. The arrangements of the kitchen and accommodations generally are such that meals can be exclusively provided in any one of the pavilions. As for the proposal for the erection of a Conference Hall, it was originally proposed to be a separate building which would eventually merge into administrative offices or would be devoted to some other official purpose. First, the hall was suggested as a very small thing without any necessary rooms. But, after more mature consideration, the number of people attending the conference and the number in attendance upon those made a very much larger scheme essential; and, eventually, it was considered that the Conference Hall should be a portion of the future Parliament Houses. The idea of the Conference Hall was that it should be a place where a convention could be held at comparatively short notice, to be erected in a few months, in fact; and was to be a structure such as could be used afterwards for official purposes. In its general report, the Advisory Committee said:

At the Minister's request, the Committee furnished a report upon the proposed Conference Hall, and, in submitting a plan of the building, it was stated that the design provided for extension, if desired, at a later date, to form a temporary Parliament House, with the requisite accessory accommodation. The Conference Hall has been designed, but the extensions have not yet been planned, although sufficient preliminary work has been done to permit of making a rough estimate of the probable cost. In the temporary building the legislative chambers, committee rooms, library, dining-room, and other accessory accommodation would afford the space and comfort necessary for legislative work, and due attention would be given to the question of acoustics and sound resistance between rooms. The legislative chambers and other

apartments would be embellished internally with restraint, and the external architecture would be simple, but decorous.

2. To Mr. Mathews.—If the Parliament is to sit in Canberra within a few years, the erection of the permanent Parliament buildings cannot be accomplished to house members in time. Therefore, a temporary house must be constructed. It was proposed to adopt a site for the provisional Parliament Houses, and erect portions of those buildings thereon in which to house the Convention. That was to be the Conference Hall. The Advisory Committee were not aware of any change of policy on the part of the Government, and officially they are not now aware of any change which does away with the necessity for building the Conference Hall. That is to say, the Conference Hall proposition still stands good. Apparently, however, the proposed Convention is not to be held at an early date. Therefore, the question becomes simply one of the erection and design of a provisional Parliament House. All this is apart from the reference concerning the hotel, however. One purpose for the erection of the hotel, so far as the Committee understands, is that during the construction of Canberra there will be a great public interest in the project, and in that period the hotel will be available to the general public for accommodation. When Parliament has been established here, however, the proposition is that the hotel shall be used, either solely or, at any rate, preferentially for members of Parliament; and it will become the official residence in Canberra. I am asked whether, in view of the desire to establish Parliament here as speedily as possible, it would not be advisable to proceed with the erection of a temporary Parliament House together with the buildings required for administrative purposes, and the work of the erection of a hotel and other accommodation be a gradual development. It was considered essential that the hotel should be finished before Parliament sat here. For Parliament to meet at Canberra without any such accommodation would entail some other construction in lieu of the hotel. I should say that the erection of a temporary Parliament House and administrative offices should take about as long as the building of the hotel. The main idea underlying the construction of this place is to facilitate the early establishment of the Federal Parliament at Canberra. As to whether it is wise that work upon the hotel should take precedence over the erection of Parliament House and administrative quarters, I must say that the erection of Parliament House is dependent on the whole scheme. It will be of no use to have Parliament House built and the legislative work going on here before the administration can be accommodated and its work accomplished in Canberra. It will be seen in Appendix II (page 39 of the Advisory Committee's report) that it is proposed to spend on Parliament House £50,000 in the first year, £20,000 in the second year, and £20,000 in the third year. For the hotel it is proposed to spend £50,000 in the first year and £40,000 in the second year. That infers that the hotel would be finished for the better part of a year before Parliament House has been completed. There would be a lot of accommodation required if the public were allowed to come here, and it is of no use to anticipate accommodation other than that which the Government will provide in the first year. Private enterprise would not set up its activities during the first years of consideration, carrying out its work upon the lines considered requisite, for reasons which I have already given, namely, that there would not be, at that stage, sufficient guarantee of the permanence and progress of the city. My opinion is that the erection of the hotel should be coincident with the building of Parliament House and the erection of administrative accommodation. Sketches have been prepared for the construction of a Conference Hall, but that has been held back

because the Minister did not think it should be pressed so much as the hotel. Offices for central administration should be started in the first year of construction under the Committee's scheme, and should be carried on in the second and third years of Parliament. If we are to build houses for 200 persons, the cost will not be very much less in the main than the building of the hotel, which I now understand, according to an amended estimate of the chief architect—Mr. Murdoch—can be undertaken for £98,750. The cost of running individual homes to accommodate 200 persons would be very much heavier than the cost of running one hotel to accommodate those 200. The costs will be subject, of course, to the scale of living. Even in first-class accommodation one can live either very extravagantly or simply to suit. If the hotel is kept up to a standard of about 160 guests, I do not see that the ground rent will preclude guests from being given good accommodation at a fairly reasonable rate. But, if the place is to be run as a highly elaborate first-class hotel, the cost may go up to any figure. It is thought that private enterprise will build a large number of cottages and hostels. There will be no question of members of Parliament being forced to reside at the hotel and pay the rates being demanded if they do not desire to stay there. The Committee believes that private enterprise will very largely enter into consideration, and the view is that the parliamentarians and officials should be given preferential call upon the use of the hotel. Although Canberra at present is a series of big paddocks, when Parliament sits here, with its initial population of 5,000, matters will be very different, and there will be some modification of all kinds available. It was considered that small families and single men and women would not want cottages. There would be hostels required to house a proportion of these. These hostels would amount to a class of high-grade boardinghouses. I believe there is only very limited inquiry among the outside public at present for land at Canberra. The Committee has represented to the Government that anything in that direction is premature, and that there is plenty of time to lease land as we get the various services. The Commonwealth would secure better terms for its land if it leased the paddocks as at present. We should have deferred until water, sewerage, and light have all been provided. Thereafter, the Government would get an enhanced value, which would much more than make up for the loss involved by not leasing straightaway, having in view the fact that there is still plenty of time for private enterprise to come in before administrative activities begin. The time is coming, and within a few years, when it will be more beneficial to the Government to start leasing. We are now providing the necessary services, which will make the value of the land. The actual proposal for the construction of the hotel is that the work shall be of brick. It is considered that the building will be standing 50 or 80 years hence. The block will be well built, and all the material will be locally found. The question of planting during construction has been considered. It was suggested that, from the moment when the project itself was settled, planting of trees and shrubs should commence.

3. To Mr. Parker Moloney.—I am asked whether the proposed erection of ten houses for members of Parliament was based on the assumption that only a portion of the members of the two Houses would be occupying them. That principle was only arbitrarily taken into consideration by the Advisory Committee. It was thought that if ten houses were provided by the Government, independent of what private enterprise might do, that would be sufficient, perhaps, for the first session of Parliament. The Committee could not say how many members might like to live at Canberra dur-

ing the very earliest stages. It was considered that some of the Ministers particularly might be constrained to reside three beams of their administrative duties, and that they would bring their families. The idea was, in the circumstances, that ten houses should be made available. These would be of the langloog type and of average value of £1,500. As to the proposed Convention to be held here in a temporary Conference Hall the idea was that the inner portions of the Convention building should be planned, and that was gone on with; but the additions to the parliamentary block had not been put forward. The chief architect (Mr. Murdoch) designed a certain amount of the extension for the proposed inner chambers, but the Committee felt that, when it came to designing the actual provisional Parliament House—a block which will serve the necessary legislative purposes of the Federal Capital for very many years to come, in fact, until the ultimate permanent building shall have been established—that should be a matter for consultation with the dignitaries of Parliament, in order to insure that full necessary provision was made; and that has been done. Sketch plans have progressed still further. The Government designed a Conference Hall to be built within eight months. We were required to progress to the period mentioned, and the scheme had progressed to the extent that we could actually have done so. It would not have been possible to arrange for a meeting of Parliament at Canberra if it were now decided to meet here, in eighteen months' time. The actual Parliament building is not so much the difficulty as the accessories. There is, for example, the question of providing for the printing of Hansard and other parliamentary documents. There is also the question of the accommodation of the Hansard staff and of all the necessary officers of Parliament, the building of necessary committee rooms, and all the surrounding machinery for the conduct of Parliament. Further, there is the question of linking up the basic services. It would be impossible to have Parliament established here within eighteen months unless members were prepared to meet in a couple of bare buildings, corresponding to the drill hall type, with merely small offices grouped around these for the accommodation of accessories and the officials of Parliament. That is the only way in which the meeting of Parliament here could be hastened to such an extent. Otherwise, how and where could the printing be done? Where would the library be accommodated? The question of accessories could not be neglected. The whole subject is so interrelated that it becomes a most difficult one. Let me mention, further, the matter of dining accommodation for members and officers. I take it that Parliament, when it is to meet here, should meet in comfort, and that regard should be had to acoustics, lighting, ventilation, and the like. Concerning building activities at Canberra, when they are in full preliminary swing I do not think that the call upon construction workers would be sufficiently heavy to upset the labour market. To provide the accommodation for Parliament it would be necessary to erect legislative chambers properly constructed and suitably arranged. Failing such provision, the money spent upon chambers which would be in other ways large enough for legislative purposes would be relatively wasted. I hold that when the work is done it should be adequate for carrying on over a period of many years. In further addition to the legislative chambers there is the question of accommodation. Unless all this work is carried on as part of an entire scheme the disposal of sewage would be attended by some difficulty, and there would be considerable expense involved in temporary work. Even if the members of Parliament were prepared to meet attended by less than the ordinary staff equipment, and to dispense with Hansard, I consider that the suggested period of

eighteen months would still be insufficient. The Advisory Committee framed its report, at the request of the Government, to cover a minimum of time consistent with regard for economy of construction. In the view of the Committee, three years would be advisable and reasonable, if there is continuity in the voting of funds resulting in unbroken expenditure. Any interference with the work, as pointed out by the Advisory Committee in the final paragraph of its first general report, would be a matter of the utmost importance.

4. *To Senator Plain.*—In order to impress private enterprise with the earnest of the Government in respect of going ahead with Canberra, there might be something in giving a guarantee regarding the three-year period, but the best assurance that could be afforded private enterprise would be actual construction activity on the part of the Government. Besides putting up the hostel, it was proposed, under the scheme of the Advisory Committee, to spend £30,000 on the Parliament buildings. Upon buildings such as a telephone exchange, post-office, fire station, and garage—to make a start—it was proposed to spend £9,000. Then, to start putting up cottages, expenditure to the extent of £55,000 was set down, for hostels, £10,000; police offices and court and police quarters, £10,000; railway station, goods shed, and engine shed, £14,700; together with co-operative stores building, and recreation and sports grounds, covering between them about £15,000. Then there are the various engineering works. The Commonwealth will be spending on all these works, in the first year, £417,000. That is what the Committee regards as the most convincing assurance to private enterprise.

5. *To the Chairman.*—As to regarding the hostel as a financial success, it is the view of the Committee that that will depend upon management. With the capital outlay set down the place can be run, the cost depending on the scale of living. There are hostels in New South Wales where the capital outlay has been very much heavier and the various costs much smaller, yet they make a success by charges which apparently meet with the approval of the public. Members of Parliament, of course, will be absent for several months in the year; but, even so, the Committee considered that the hostel would always be fairly full, what with the attendants of Ministers and their suites, and various officials, visitors, and guests. With respect to the provision of workers' homes, we thought that that would be accomplished to a large extent by the aid of private enterprise. In the early stages, instead of putting up cottages which would entail fairly heavy rentals, we considered that for the casual artisan we could provide reasonable comfort. The instrument camp could be reasonably turned into a series of small flats, and would cover the requirements of the first eighteen months. The number of workmen would not be more than would be engaged, for example, upon some large construction work upon one of our rivers. We did not expect that there would be any great general influx of workmen's families during the initial eighteen months. Afterwards, private enterprise would come in. During the first three-year period it is proposed that the Government shall provide 340 cottages. As well as that number, there will be provision for 87 families in hostels, and for 310 unmarried people. That provision, of course, will be more for the officials; indeed, that is the proposal for housing the officials. And then it is thought that private enterprise would accommodate a further 236 families.

The witness withdrew.

John Smith Murdoch, Chief Architect, Commonwealth Department of Works and Railways, sworn and examined.

6. *To the Chairman.*—A summary of the Estimates in connexion with the building of the proposed hostel is as follows:—

Hostel building	£38,500
Two-storied pavilions (four)	14,680
Single-story pavilions (six)	26,700
Covered ways	3,900
Sunk gardens	720
Engineering services—	
Heating and hot-water supply, freezing machinery, cooking plant	6,500
Lighting and power	4,970
Storm-water drainage	1,500
Sewerage, including connexion,	3,000
Approach roads and channelling, fencing and gates, planting and tiring	3,500
Water mains and hydrants	2,000
Contingencies	3,080
Total	£98,750

With respect to the foregoing estimate, the first estimate which I took out, tentatively, was £117,000. That was placed before the Advisory Committee. The Committee approved of the scheme, and, in its report, mentioned the sum of £120,000. As the scheme has been worked out in closer detail, however, I think that the whole project can be brought to completion at the cost mentioned; which puts the proposition on a much better financial and economic basis compared with the estimate of £120,000. Members of the Sectional Committee have had the advantage of visiting the site. In arriving at the best plan to provide the most suitable accommodation a good many schemes were considered. The plan now before the Committee is by no means the only one which I discussed with the Advisory Committee; but, after debating the whole subject, this was the final plan arrived at for a hostel to meet the requirements of this climate. Instead of the ordinary hotel type, it was considered that, to induce people to stay here and enjoy the climate of the Federal Capital, it would be well to impart more home-like conditions; and so, eventually, the Committee approved of this plan, and I understand that its members will be prepared to recommend this Committee to advise Parliament to adopt it. The site faces Commonwealth-avenue. That is the great avenue leading from the future Capitol, as designed on Mr. Griffin's plan, on the western edge of the future legislative and administrative group. The hostel site is off the official area, but, since it will be pretty closely associated with the officialdom of the Territory, it has been placed as near as possible to it. The front will look across Commonwealth-avenue into the official area. The site is very level, and altogether suitable for a plan of this kind, which may be styled the garden pavilion type of hostel. It is practically new to Australia. Having considered all the surrounding circumstances, the Committee has decided that the hostel shall be built on garden-parcelling lines. The levels afford no difficulty at all. There is a fall of only about 8 feet from one end of the hostel to another, which is very suitable. It will mean that, taking a small quantity of excavation off one end, it can be spread at the other end; so that will provide at the lowest part of the ground about 8 feet under the floor level. That will be very handy for storage, and the space consequently will not be lost, assuming that the floor level is kept the same throughout the hostel, which I strongly recommend in a formal plan of this sort. In the central administrative portion of the hostel—that is the largest building of the group—the floor level is proposed to be kept 5 feet above the

permanent level of the centre of Commonwealth-avenue, which amounts to a very nice elevation. The pavilions surrounding the centre will have a floor level 2 feet lower; that is, the central floor level will be 2 feet higher than the floors of the ten surrounding pavilions. There is to be a central building, with connecting verandahs closed in to exclude the winds and the weather and to permit of the enjoyment of sunshine, so that the ten separate pavilions will all be given connexion from the centre. The most economic plan will be at least to complete one side of the hostel in addition to the central block, and to add on the remainder as the demand for accommodation may warrant. The whole of the centre will have to be built without contemplating additions; that is to say, on the basis of the complete hostel, although even that might be put up piece-meal. However, it would be best to build the centre and one side group first. My original instructions were to plan a one-story hostel, but the fitness and general depression of the sketch was appalling. I considered, therefore, that at least a portion of the middle building should be raised. The original idea was to have the four angle pavilions of one story, just as in the case of the other six pavilions, but I came to the conclusion that it would be well to raise the four corner pavilions a second story in order to give interest and elevation to the group generally; and, incidentally, by doing that it contracted the area of the four angle pavilions and so provided a better view from the windows of the other six. Coming to details of the central building, it has its main entrance from Commonwealth-avenue with a drive from each side for motor cars and other vehicles will be able to approach and stop at the entrance under the usual covering. By way of steps guests will then enter the verandah. There are three entrances from the verandah to the main lounge space of the hostel; and right through, at the other end of the lounge, there is the dining hall. On each side of the lounge are arranged four rooms—billiard-room, smoking-room, drawing-room, and writing-room—these being the four great public rooms of the hostel. Telephone accommodation, bookshelves, and bookcases will all have access from the lounge. The extreme size of the central building is 122 x 188 feet, approximately. The lounge is 64 by 30 feet; the billiard-room is 36 x 28 feet, and the smoking-room, writing-room, and drawing-room will each be of similar size. There will be ladies' and gentlemen's cloak-rooms and lavatories having access from the lounge also. The dining-room will be 70 feet x 36 feet. That will seat about 210 people. There being a loggia at each end of the dining-room, tables on occasions of banquets and other functions can be laid out there also. The total dining capacity of the hostel could be extended, perhaps, to accommodate 350 people. At each end of the dining-room will be a loggia facing into the two sunk gardens. Thus, guests will be able to walk out on to the loggia looking into the gardens, which will be sunk 3 feet below the level of the covered ways connecting the ten pavilions. The width of the covered ways will be 13 ft. 6 in. Behind the dining-room will be the kitchen, having a floor space of 47 x 48 feet. The services from the kitchen will be directly into the dining-room, after the manner of the usual first-class hotel. The most modern arrangements have been adopted in this department. From the loggia at the north end of the dining-room there will be entrance to a private dining-room, where Ministers and visiting personalities may be provided for. This will be 30 feet by 14 feet. Behind that there will be a children's dining-room, 30 feet by 16 ft. 6 in. All of these will be contiguously arranged with the kitchen for service purposes. On the other side of the kitchen, at the end of the loggia, will be the managerial office. I consulted with one or two hotel managers, who

thought that that arrangement would be ideal. It at once commands the guest life of the hostel, and is, at the same time, in close contact with the working life of the buildings. A card-room is also to be provided. Behind the private dining-rooms and guests' card-room and manager's office there will be the usual accessories, including a linen and sewing room, 18 feet square. Behind that, again, will be a private laundry, where lady guests, who may not desire to send out their smaller possessions for laundering, will be able to attend to their own requirements; and, in connexion with this laundry there will be a secluded drying ground. Then there will be coal stores and cold stores, the latter, and the cook's room, together with room for the "boots," and the male employees' changing-room. Also there will be lavatories for the various employees—waiters, and the like. On the other side—that is the north—there will be the servants' dining-room, 28 x 17 feet; also the matron's room and the women employees' changing-room and conveniences. On the north side, also, there is to be a children's garden adjoining the children's dining-room, so that after meals the children can be conducted direct by their charges to their own exclusive playground. Underneath the kitchen it is proposed to put the boilers for heating and providing hot water. There should be hot and cold water for every bedroom throughout the block. Also there will be an air-compressing plant for vacuum cleaning. Down below, there will be the men's quarters, consisting of ten rooms devoted entirely to the male staff. There will be garden space for the men servants, with a verandah and with lavatories. Behind these, also, the level of the kitchen, will be the stores. Very good storage accommodation is proposed, there being two stores each 30 x 16 ft. These will be dry stores. In my first plan I had the female employees' accommodation on the ground floor behind the pantries and stores. I have been informed that the success of a hotel largely depends upon the quality of the female staff. The chief consideration is to secure a staff which will command the respect of all, and that can only be done by providing proper accommodation. After a consultation with the manager of a somewhat similarly arranged establishment, at Leeton in New South Wales, I formed the idea of raising the dining room block to two stories, and of placing the female staff above the dining-room accommodation. This I secured a central feature into the hostel. The project forms an economical way of providing the necessary accommodation for the girls. Incidentally, of course, this upper story provision will be a very good thing for them. From the kitchen department there will be staircases, one leading from each service corridor. These will land one on the upper floor above the dining-room. In the front there will be a verandah, and there will be recreation space for the girls over the flat roof of the kitchen. No one will be allowed to go up those stairs except the female staff and the matron. Inside this floor there will be a general sitting room 36 x 15 ft. There will be ten bedrooms altogether, and all except two of these will be able to hold two beds. Since the plans were made I have conversed with Mr. John Salmon, Chairman of the Advisory Committee, who considers that it will still further provide for the girls' comfort if each be given a room to herself. There is involved a question of difficulty of lighting, but Mr. Salmon suggested the cubic idea; that is, that the rooms should be separated by partitions 7 ft. 6 in. high. I doubt if such cubicles could be compared with a room in such conditions. In the bigger plan which I am working up I have also a cubicle arrangement on one side and ordinary bedroom accommodation on the other. Either the one or the other system can be decided upon. At the other end of the big sitting-room, from the entrance verandah, is another verandah; so that really the female staff will

have the best position in the hostel both for view and for privacy. The heights of the walls vary throughout the buildings. In the lounge the height will be 15 feet, and the height of the walls in the dining-room will be the same, while those of the public rooms will be 12 feet. The height of the walls of all the bedrooms will be 10 feet. There will be two bathrooms and lavatory accommodation for the female staff, and each of the girls' bedrooms will have built-in wardrobes. To the pavilions containing the guests' rooms, from the entrance lounge one will proceed through a corridor dividing the billiard and writing rooms on the one side and the smoking and drawing rooms on the other side of the lounge, and will thus get out on to the glazed verandahs. I repeat that there are ten pavilions, five on each side, three being single-story and two angle pavilions of two stories each. I am asked if and where any provision has been made on the plan for a bar, should it be decided to provide the hostel with a licence. I take it that the smoking-room might be transformed into a bar-room or saloon. The first pavilion arrived at along the glazed corridor is a one-story pavilion. Its size will be 32 ft. x 34 ft. 6 in., or part of its distance; and then, at its end, it will extend to a width of 75 ft. 6 in. These pavilions will be so divided that they can be let in suites either as bedrooms and sitting-rooms with private bathrooms, or the sitting-rooms and the bedrooms can both be let separately as bedrooms. The one-storied pavilions will each contain fifteen rooms. As soon as you enter the central corridor, the width of which is 6 ft. 6 in., you get into a sitting-room 13 feet by 13 feet, off that again there is a bedroom 14 feet by 13 feet. Off that again there is a bathroom containing W.C. If one desires to take a sitting-room with two bedrooms one can get a suite consisting of sitting-room, two bedrooms, and bathroom. If one does not want a sitting-room at all, all the rooms can be let separately—as I have just pointed out—as bedrooms. Each single-story pavilion contains fifteen rooms and five bathrooms. Then there will be a linen-room; and each bedroom will contain a built-in wardrobe and wash-basins for hot and cold water. We should be able to provide those things at a very much cheaper rate than by installing furniture. In these bedrooms all that would be wanted would be a little chest of drawers and the bed. The bedrooms are so placed as to permit of recesses in each room; and in these recesses will be the basins, while, instead of mirrors and cabinet work, bevelled glass can be screwed directly on to the walls. Verandahs will be built at each end of the transverse projections. Expert advice is to the effect that there should be no entrance to the pavilions from outside. The average size of the sitting-rooms will be 14 x 13 ft., and there will be double bedrooms of the same size, and in the single bedroom, the small rooms will be 10 x 13 x 10 feet. The two-story angle pavilions will each contain fourteen rooms, six upstairs and eight downstairs. All will be so arranged that they can be let as suites or as single rooms, just as in the case of the single-story pavilions. Between private bedrooms and sitting-rooms there is accommodation for a total of 146, but when you consider double rooms and so on, the capacity of the whole building, as designed, is for about 200 people. If only one side is provided for initially, the accommodation will be sufficient for 100. With respect to construction, my idea is that the building should be of brick. There is not a wall thicker than 9 inches. The bricks at Canberra are excellent. There should be no extravagances. I suggest tiled roofs and roughest walls, and, at any rate, on the one-story building, we should save money by building bricks on their edge. The ceilings will be of plaster. If the walls are to be of red brick, I would prefer the grey-tiled roof, but I suggest the white walls with the red tiles. A very important factor is that of the

bedroom pavilions all opening off continuous verandahs, or balconies. It is a group arrangement. In this scheme there is the social life afforded by the glazed corridors, while all the bedrooms will be looking straight out on to gardens. A prominent hotel proprietor has said that he would not again conduct an hotel on the old lines of a verandah running all round outside the various bedroom windows, where guests are apt to be disturbed all night long by persons smoking and talking outside. For timber we will use the local hardwood. For the joinery I would suggest using hoop pine, stained. I do not think that the bricks which are being supplied for the postal building in Perth are the equal of those obtainable at Canberra. They are good enough for use in this area, however. I cannot say why bricks should be 58s. per 1,000 in Melbourne and 80s. here. I think that with the dry process now in vogue the cost of the local brick will be 13s. or 14s. less.

(Taken at Sydney.)

TUESDAY, 30th DECEMBER, 1921.

(SESSIONAL COMMITTEE.)

Present:

Mr. GIBSON, Chairman.

Senator Plain, Mr. Parker Moloney,
Mr. Mathews,

John Sulman, Consulting Architect and Town Planner, sworn and examined.

7. To the Chairman.—I am Chairman of the Federal Capital Advisory Committee, which has submitted a report making its recommendations to the Government. Our instructions were to follow Mr. Griffin's plan, which provides for general development on both sides of the river. In connexion with the necessary services for Canberra I am asked whether, in the first stages of development, I consider it essential that the business and civic development on the north side should be put in hand side by side with the development of the southern or administrative side, or whether activities in the civic area could well be postponed to a later period. My personal opinion is that it would be desirable to limit activities as suggested, but against that there is the definite instruction of the Government to follow the Griffin scheme. Of course, even if it were considered inadvisable to go ahead immediately with the services on the north side, Mr. Griffin's scheme could eventually, and in its entirety, be carried out. With respect to the proposed erection of a hotel at Canberra, I suggested the site originally myself, and my colleagues agreed therewith. The site is on the western side of Commonwealth Avenue. It is a fine site; indeed, the best that we could have found. I have seen Mr. Murdoch's plan for the hotel, which comprises a main two-story building with ten pavilions, the four at the angles being two-story, and the other six single-story, among which are to be planted gardens, lawns, and the like. I have carefully gone over the plan of the Chief Architect. I am quite satisfied with it; it is, indeed, a good one. The female domestics are proposed to be housed on the upper story of the main building in the group, and that is a very desirable feature. I think the architectural appearance will be excellent, and that it will fit in in a very desirable way with the nature of the locality as a whole. I concur with Mr. Murdoch's ideas concerning the detailed arrangements. Concerning the proposal to place the female domestics on the second story, I am asked whether the idea of a staircase leading thereto, and of the accommodation above being made available for guests would not be preferable, the female staff being accommodated in one of the outside pavilions. I may say that I prepared a rough sketch for a two-story

building, but the conditions under which it was expected that this would have to be built, together with further information obtained regarding the probable eventual use of the hostel, led me to the conclusion that, on the whole, a mainly single-story building would be preferable. Instead of making the first upper floor an important feature, as in the case of ordinary hotels, it should be comparatively subordinate, and the main features should be concentrated on the main floor. This method of planning also facilitates rapid erection. It would take much longer if the proposed hotel were to be concentrated upon two or three stories. Here one can get to work all over the ground at the same time, so to speak. In this particular instance, therefore, I think it a good idea to allocate the top floor of the main building to the female staff, as Mr. Murdoch has planned. I am reminded that there would be a fine view from the upper windows, and that the rooms would be good, large ones, and that they would, perhaps, command high prices from guests who might not prefer the ground floor. It is well to remember that the domestics above will not have access to the gardens within the glazed corridors, and to the various amenities which will be found all round the ground floor. With respect to the enclosed courts and gardens, I regard them as a very important feature in the plan. That is, from the viewpoint of protection from the winds of winter and also heat of summer-time. Parliament will be meeting at Canberra at times during the winter season, and the hostel will be used by members and officials, and guests generally will welcome the enclosed sunk gardens. The estimated cost of the hostel complete was originally set down at about £130,000. Mr. Murdoch's revised estimate, however, amounts to £95,000. The intention was to enable the Government to build portion of the hostel now, and the rest at a later stage if and when desired. The general feeling of the Advisory Committee was that the south side should be begun first, because the levels are more favorable than those towards the north. There will be a necessary basement accommodation on the other side for children's rooms and for the staff. With respect to the question of cost, the Committee had in view other hostels and residences at Canberra, some of which would be built by the Government and others by private enterprise. These would cater for all classes and for all incomes. The hostel under review will accommodate distinguished visitors and the like. I think it may not be a financial success for some years, but it should pay when the institution is in full going order, with all the activities of the Federal Legislature about it. I scarcely think it will be a paying proposition for some years; it will be a public hotel which, I take it, the Government will be bound to provide in order to facilitate the usage of the city. I would consider it absolutely necessary to have some building or other of this general type if I were establishing the whole scheme in the interests of private enterprise. Private enterprise cannot be expected to come forward and proceed with building operations for the housing of the people at Canberra, at any rate, until the Government has shown an earnest of their wish of establishing the Federal Capital. Private enterprise will naturally wait until the Government have planted a considerable stake in the city, and have indicated their intention to proceed with all reasonable speed. I feel sure, then, that private people will step in and assist in the development of the Capital. I am asked, in view of the fairly large amount of permanent labour which will be engaged, whether it is essential that the Government should erect workers' cottages that the former intermittent camp would accommodate a considerable proportion of the labour. Some of the accommodation from that camp has already been removed to the city area in the neighbourhood of the brick works,

and other cottages have already been completed—buildings such as will serve to house the foremen and superior workmen, together with their families. It would be good policy to erect a few more cottages of that kind for the better class of labour. Experience has proved that cottages of brick with three bedrooms, a sitting-room, and a kitchen, together with accessory accommodation, cost from £1,000 to £1,050. Possibly such buildings can be built at Canberra for rather less. The Advisory Committee is keenly alive to the desirability of reducing the cost of the cottages. I suggested to my colleagues, and they have examined a certain system of concrete buildings on which, on a house of the size to which I have just referred, there would be a saving, it is claimed, of fully £50. We would like to see still cheaper structures, but the problem is a difficult one. One factor which would help us would be a policy of continuous procedure with building work by which we could keep a settled population of workers going year in and year out. At present, the Department of Works and Railways has had to get labour to Canberra for specific works, and when that work is done the employees leave; so that, when fresh work is required to be done, all the trouble and expense of getting the workers together has to be repeated. I think we shall see a reduction upon present costs when we get continuous work. We cannot expect to get first-class permanent labour unless continuity of employment is guaranteed, together with the provision of reasonable living conditions; and it would be desirable to erect cottages for such men within reasonable distance of their work. I do not hold the view that bricks should be capable of manufacture at Canberra as cheaply as in Melbourne and Sydney, for the reason that the present cost of labour is much higher. I have not the data upon which to assert that bricks should be more cheaply made on the Capital site than would be represented by their cost and the freight charges from Sydney or Melbourne. The reason why labour is more expensive at the Federal Capital than in Sydney is partly due to the fact of non-continuity of employment. Moreover, workmen generally prefer city jobs. They are not keen upon leaving their city homes for work in the country so long as they can find employment here. With unbroken work ahead at Canberra, I am confident that better labour conditions would prevail. I do not know of any buildings in Australia of a type similar to that which is planned for the Canberra Hostel. I do not think that harm would be occasioned to Mr. Griffin's scheme for the development of the Capital if work upon the northern portion were delayed for a year or two.

8. To Senator Plain.—As to the claims of brickwork as against concrete, there is really no difference so far as concerns durability. For the building of cottages the different appearance would be merely a matter of taste concerning whether one preferred the colour of the bricks, or a color wash, or the concrete finish. If the cottages were of concrete, I would certainly prefer that they should be finished in white or buff, or some other light colour. For the greater part of the concrete work, only ordinary unskilled labour is required. It has been estimated that, on a five-roomed cottage, £50 would be saved; and, in addition, there is the point that one is not tied to skilled labour, which is somewhat scarce. I understand that there is a better supply of labour for housebuilding to-day than was the case six or nine months ago.

9. To Mr. Mathews.—Probably if all the activities at Canberra were concentrated upon the southern, or administrative, side for an indefinite period covering some years at least, there would be a danger of seriously retarding development of the civic area to the north, and thus Mr. Griffin's scheme would be in peril. Personally, however, I think it would be wiser and more economical to pursue the course of concentration for a time upon the south. Economy would be bound to follow,

but if concentration were carried on beyond a certain period, I should think that the development of the city side would be bound to suffer. I do not think that one would become so fully committed to the hasty development of the southern side if the concentration thereon were merely extended over a year or two; but if development proceeded exclusively for a matter of ten years upon the south, harm would undoubtedly be occasioned to Mr. Griffin's complete scheme for the development and growth of the city as a whole. I am not aware of the reason why the Government issued specific instructions to the Advisory Committee that Mr. Griffin's design should be strictly followed by the association of developmental work equally upon the north and on the south side. I do not think it would be altogether a misfortune if development did not proceed to the north. I have always held the view that development on the administrative side is preferable to that on the civic side. If the southern area were concentrated upon, there would not be the necessity for such expensive work as has been and must be undertaken in the provision of the necessary services. In my view, the arch texture of the Federal Capital should be expressive of Australian requirements, and the requirements of Canberra are identical with those of many similar districts throughout this country. Architects to-day are striving more and more to suit the buildings which they design to the needs of the people in relation to the demands of the climate. With respect to the preference for keeping the buildings single-story, as far as possible, I think that a city wholly of such a type would be most monotonous. I have always advocated a mixture of building heights to give relief, but most of the Australian people prefer single-story dwellings, and that is the predominant feature of a city of that type of structure. With respect to colour, a certain amount of diversity would also tend to relieve the monotony. To build the city upon the basis of a one-colour scheme would be a mistake. In fact, private enterprise would not follow the lead of the Government in that respect unless the strictest rules were laid down. I have always regarded the tick-pointing of bricks as a villainous sham, one often employed to cover up bad work; personally, I would never allow it. I think that the type of house which has been built at Canberra for £1,100 could be put up here for about £150 less. The Canberra bricks are excellent; as good, in fact, as any to be found in Australia. I do not think that the average Sydney cottage is built of anything like as good a brick. For certain uses, the Canberra brick would command a higher price than those made at Sydney. It is what is known as a very good facing brick. The Canberra brick would sell here at the price of facing bricks, which, of course, is higher than that for ordinary bricks. I am confident that in attracting labour to Canberra the question of living conditions would be as important as that of continuity of employment. Workmen would, no doubt, prefer a better type of cottage than the structures at the internment camp. That is why I suggested that it was desirable for the Government to build a certain number of workmen's cottages. There would be many workmen, no doubt, who would settle down permanently at the Federal Capital if proper living conditions were provided, together with accompanying features such as ought to be made available. I think that men could be got to remain and work continuously at Canberra on the basis of the same wages as are ruling in Sydney.

10. *To Mr. Parker Moloney.*—Experience has proved that it always costs more to build in country districts than in city areas. That applies particularly to erections of a certain size. I am asked whether the Advisory Committee expressed an opinion concerning whether it would seriously interfere with Mr. Griffin's scheme if developmental work on the north side were postponed. I expressed my strongest personal view in that direction to some of the Federal Ministers. It was my opinion

that it would be wiser to proceed with the development of the south. Concerning the question whether it was the feeling of the majority of the Committee that the designer's plan would not be seriously interfered with if building on the south side were proceeded with for a certain period exclusively, I may say that when I was asked to accept the Chairmanship of the Committee I told the Minister that I did not agree with the plan, and I stipulated that I should have the opportunity to suggest modifications. I put that statement into letter form, and the Minister replied. I believe, however, that my colleagues did not make any stipulation of the kind, and that they now feel themselves bound by the instructions of the Minister to literally follow out Mr. Griffin's scheme both in planning and in intention. I still adhere to the opinion that in many respects it might be improved. With regard to the planning of the hostel, I do not know of anything of a similar type in this country, although I happen to have prepared a much less extensive proposition, somewhat on the same lines, for erection at Manly. The principle, I think, is not novel; for example, there are some such structures in the United States of America. The plan was really developed for Canberra in order to meet the conditions which we apprehended would exist there from season to season. As to whether it would be possible to make provision in the case of Parliament desiring to meet at Canberra twelve or eighteen months hence, I should say that it could be done only with a very extravagant outlay. The Advisory Committee went most carefully into the matter of the establishment of Parliament at the Capital, within a reasonable time, at a reasonable expenditure; and, as will be found in the report, the shortest period which we considered practicable was three years. But with ample money available, and with no finding fault because of the necessary buildings costing a lot more than ordinary structures, I should say that Parliament could meet there in eighteen months.

11. *To the Chairman.*—The garden scheme in connection with the hostel, and the arrangement of the different pavilions appeal to one from the aesthetic point of view. They will be exceedingly useful for extremes of climate, and, generally, for comfortable occupation. For example, in any one of the pavilions privacy could be maintained, and that is a feature which cannot be provided in the ordinary type of hotel. For example, it might become necessary to house distinguished overseas visitors as guests of the Commonwealth, and one or more pavilions could be segregated for the purpose. I am asked whether the hostel would look lopsided if only one side, in addition to the central group, were proceeded with; until later developments warranted the completion of the scheme. That would be the case, but it often becomes necessary to construct in that manner. Eventually, as the city grows, it will be necessary to have a public hostel of such proportions as the completed design.

12. *To Mr. Mathews.*—I am asked whether if I had full power to act I would be inclined to go ahead with developments on the south side of the river, regarding that as ample for fifty years ahead. Personally, I would do so, because it would be much better and far more economical both in the matter of building and of running Canberra as a city if it were concentrated in the one area. On the south side also, there is much more shelter from the winds. As for the division of a city by a wide waterway, such as the lakes at Canberra will provide, I need only call attention to the state of Sydney, divided as it is by the harbor waters. The cutting off of the administrative from the civic side of Canberra, apart altogether from the expense of providing the essential services for each portion, will involve expenses and loss of time in the matter of communication between the two; and, for that and other reasons, I personally favour the development of the city as a whole upon the southern area.

(Taken at Sydney.)

WEDNESDAY, 21st DECEMBER, 1921.

(SECTIONAL COMMITTEE.)

Present:

Mr. GEORGY, Chairman;
Senator Plain, | Mr. Parker Moloney.
Mr. Mathews, |
Herbert Ernest Ross, Architect and Consulting
Engineer, Sydney, sworn and examined.

13. *To the Chairman.*—I am a member of the Advisory Committee which has presented its first general report upon the construction of the Federal Capital. I concur in the particulars contained in that report. The Committee was advised by the Minister that Mr. Griffin's scheme should, as far as possible, be carried out, and it was on that basis that the Committee reported. Upon the question whether, for some initial period, work upon the southern side should be expedited while that to the north is allowed to remain in abeyance, there is always a danger—after there has been formulated any definite scheme of progress—of disturbing the relation of the whole, and possibly, in the end, failing to produce the desired result. The necessary population will always bear a certain relation to the official population of the Capital, no matter what happens, and that necessary population is provided for in Mr. Griffin's scheme—which, altogether, is an excellent idea—to be kept, to a certain extent, separate. That is a principle, whether we like it or not, which has been laid down. I personally accept it willingly, and I repeat that I think the idea is a good one, and if we start providing for the necessary population in what is known as the administrative or official residential neighbourhood, we are liable to start something growing which it may be difficult to retard or in any way interfere with. I am now enunciating the general principle that, having decided on a general plan of progress, it is very wise to follow it out. I do not go further than that. The development of most cities into their ultimate condition has been largely due to the fact that exigencies of the moment have prevailed and prevented growth along such lines as might have been originally designed or desired. I am anxious that some developmental scheme should be strictly adhered to at Canberra. I see the danger of departing from preconceived arrangements. I admire the Griffin scheme. I have considered it carefully; it is, indeed, a magnificent scheme, and with certain minor variations which have become essential, owing either to original lack of accurate knowledge or thought at the time of its origination, or due to some constructive inequity, it should in fairness be adhered to from the moment of its acceptance. I might emphasize my qualification concerning the scheme by saying that we shall have to make certain drastic variations in the course of time; but in the end the Federal Capital will develop along the lines laid down by Mr. Griffin. Since his principle is the segregation of a certain class of the population upon one side of the Moolongie River, and of another type of citizen on the other side, I maintain that that plan ought to be held to. I am aware that there is at present a certain amount of residential settlement near to brick works, and also in the neighbourhood of the power house, and that there is another cottage settlement now being provided on the civic area to the north. All of these points of concentration are some distance apart, necessitating their connexion with the necessary services of water supply, sewerage, electric light, &c. There arises also the question of transport facilities. No doubt, some day tram services will be essential. I have in view the distribution of the population in small units at present, but that is the matter of only a comparatively few years; and, in the

end, the question of concentration and of neglecting the development of a certain portion of the Griffin scheme become a consideration on the one hand of the payment of interest on the money spent over a certain period as against the danger of ultimately tending to destroy the whole conception of development. I emphasize that, although certain additional and comparatively heavy expenditure will be necessitated for some years to come in carrying out the Griffin scheme as a whole, it is still advisable to construct the sewers and the water supply and electric light services to the northern as well as to the southern side of the city. My attention is drawn to the fact that the Sectional Committee has been impressed with the view that, if all these large works are to be carried on at Canberra, a considerable working population will be required to be maintained there, and I am asked whether special provision should be made to house the workers. The class of cottage so far erected at the Capital has been of too high a grade for the ordinary worker to be expected to pay for. On the other hand, as a permanent consideration, one is averse from putting up anything which may reflect on the final development of the city. In the construction stage, however, there should certainly be better living conditions provided than are expected, for example, on temporary railway works, where the employees are housed in tents and are living under conditions of general discomfort. I am asked whether a house cannot be provided for a worker and his family for about £550 to £700. I may say that I have a settled conviction on that point, one which is rather different from that of my colleagues. I have done a lot of work on pre-war concrete houses. I am personally satisfied that that is the only method of attacking the problem. I have had rather considerable experience with concrete, having carried out more work in that direction, probably, than any other man in private practice in Australia. If the Government are prepared to lay down a plant costing not less than £10,000, they will then be able to manufacture concrete houses for about £750. A man can make a door, for example, by hand for about 30s.; while, by machinery, under the method which I am now describing, a door can be turned out for 7s. 6d. Before making that door, however, some thousands of pounds must be spent upon plant. This aspect of cottage construction has never been attempted in any part of the world, with factory plant for the precise manufacture of all the parts necessary to the construction of a building. It would pay the Commonwealth in the most handsome way to undertake this project, especially at the present juncture. The inauguration of such a system to deal with the early development of the Capital city is just the proper time at which the Government should make the experiment. It ought to be done now. At the same time, I put the suggestion before this Sectional Committee with diffidence, for the reason that it is a one-man idea. I refrained from pressing it upon my colleagues on the Advisory Committee, or from putting it before the Government except on the basis of proper investigation. The principles involved are all protected by patents, and may be made available to the Government without requiring the payment of royalties or charges of any description. I insist that one secures not only contentment, but a better class of workmanship, by providing reasonably comfortable homes. I have knowledge of construction of this type in various parts of the world. I have studied the subject very thoroughly and widely. At the present time the construction of cottages is divided into two sections. My proposition introduces a third. The two in general use includes the building up of small units practically of brick, following on that portion of the construction with all the other trades involved. As against this, there is the method of the casting of the building within moulds in an integral form, known as the monolithic

type; where, however, the trades again have to follow upon that work. Both of these two systems have the defect that they call for the same old variety of trades, including the plasterer and the carpenter. The third method does away altogether with plasterers and joiners. The basic principle is that all the things attached to the wall afterwards in the form of wood are cast by an accurate method in the concrete itself, and the parts are assembled together and the whole of the work done in concrete. I repeat that that does away with the trades. As for any fear of monotony by such a moulded system, the variety becomes unlimited, in fact. The actual constructional sections are about 3 feet wide. They represent in one case a door, in another case a window. You have your plain slabs, and, by multiplying the window-pieces and so forth, almost any variety of structure can be reared. Moreover, the roof can be arranged in any form desired, either with gables or upon the bungalow design. It is the character and conformation of the plan which give the house its varied appearance. I emphasize that you can get endless variety by the use of this principle. It applies, however, only to single-story houses. In the case which we are discussing now the question of two-story houses need not be considered.

For every reason, at Canberra, I would consider only one-story houses for workers. I am asked whether, if I were carrying out this work of building a hostel on behalf of private enterprise with a view to encouraging visitors to Canberra, and to give a lead to other builders to erect accommodation there, I would be prepared to spend about £100,000 as is now suggested. With all the elements in this proposition, I would do what is here suggested. There is also the principle that Parliament will be sitting at Canberra within three or four years. That has to be taken into account. I have examined the plans for the hostel, and I generally approve of them. They were subjected to very careful discussion by the Advisory Committee. I understand that it has been suggested that in the first stage only half of the pavilions should be erected, together with a central block, and that those on the other side should await later development. The proposal is a progressive one. The whole plan was designed with a view to development to meet requirements. That is why, among other reasons, it has taken such a form. I would not recommend the whole of the work being carried out at first; but that the main central building and the annex on one side should be put up. The design as a whole appeals to me as being most admirable for all the circumstances. It will provide a certain amount of privacy, where desired, in the various pavilions, and it will give shelter from weather extremes. It will afford a system for convenient and comfortable living which will be a very special consideration. I am aware that it is proposed that the main central block shall be of two stories, and that the female staff shall be located on the upper floor. As for the question whether that would not be taking away the best views and the finest rooms, the building is somewhat on the mission principle, such as may be seen in California and other western parts of the United States of America. I think a great many guests would prefer to pay somewhat more for the privacy of the pavilion suites on the ground floor, connected direct with the gardens and shrubberies, rather than be relegated to upstairs accommodation.

14. *To Mr. Mathews.*—I am asked whether I consider there is sufficient elevation from the architectural point of view. A building of greater elevation is naturally suggested by city experience, but in view of the proposition for making Canberra more of the garden city and of constructing a lower type of building and making greater use of courts and gardens, it is obvious that that has been held in mind as a basic idea in regard to planning the hostel. A hostel of this

size and character will, in years to come, be greatly desirable and, I should think, always completely filled; in fact, this accommodation will not be nearly sufficient eventually. It is a great idea both for comfort and having in mind the garden city scheme.

15. *To Mr. Parker Moloney.*—With regard to placing the female staff on the upper floor of the main block I do not see eye to eye with the members of this Committee as regards the value of those upstairs rooms. I repeat that I think many guests will prefer the ground floor pavilions, with their court and garden outlooks. If I were visiting the hostel I would much prefer accommodation on the ground floor facing one of the courts rather than that I should go upstairs to rooms similar to those to which I am accustomed in city hotels everywhere. I do not consider the upstairs rooms nearly as good as those below. In the garden city of Canberra, with its rural outlook, the great attraction will be the sunk gardens and the lawns and shrubberies generally. The location of the hostel is not one which gives view to any specially attractive scenery. Canberra is a city of axes from which you can get magnificent views which would make an upstairs view from a hostel window comparatively insignificant. I emphasize that I do not think an upstairs room would let in preference to a ground-floor room or suite.

16. *To Mr. Mathews.*—I like the proposed scheme for entrance to the hostel. The large lounge and assembly accommodation is essential in a considerable hotel. It will be in the nature of a new accommodation, in that it will be cool and roomy. The planning of the kitchen and associated accommodation is right. I have had considerable experience of city hotel designing, including that of Usher's. This plan was discussed in detail and drawn, and the kitchen was enlarged at my suggestion. It is becoming customary in hotels now for employees more generally to live out; but in Canberra it will be desirable to have the accommodation for the staff within the building. Another reason is that the hostel will be near to the administrative centre and will be removed from residential provisions such as employees at the hostel would be able to afford. Seeing that their residences cannot be contiguous to the hostel, they should be given accommodation within the group. As to whether the lawn and garden embellishments should be regarded as a liability upon the general taxpayer, or on the hostel authorities themselves, I should say that everything surrounding the buildings should be within the management and responsibility of the hostel staff. There are very good reasons for that. The principle which we are recommending throughout the city will be the encouragement of residents to grow gardens. Outside the immediate limits of one's own garden it should be for the civic authorities to maintain the streets in regard to planning and general attention. But, in this case of the hostel lawns and gardens, they should be within the direct control of the administrators of the buildings. The work as shown in the plan would probably require not more than four gardeners to keep well in hand. I was trustee of one of the large Sydney parks for some years and gained some experience in this respect, and, in view of the fact that lawns and the like are to be a necessary feature, four gardeners should be able to keep the whole place in perfect condition.

17. *To Mr. Parker Moloney.*—I do not know of any other building in Australia which has been completed on anything like the same lines. The development of the courtyard and annex really arose from the old Mexican Convents, which were built in a style considered to be the most suitable to the climate—a climate which is really not very different from such as will be experienced at Canberra. I hold that every building should be designed in relation to its environment and, therefore, that one should never get one building exactly like another. In order to provide for the working population and for others in the first few years,

some kind of commercial centre should be developed; and, more or less surrounding it, should be the general population. I do not think the commercial population should be developed in the official area because, once established there, it will keep on developing in the wrong place and it will be found very hard to remove it after wards. Business will be attracted to that growing centre, and other portions will thus be deserted. The two parts of the Griffin scheme should be developed concurrently if we are to adopt and maintain that design, of which I approve. I am asked if I can give a comparison of a cottage constructed in Sydney on the same lines as one costing £1,100 and built of brick at Canberra. Going into the figures and taking out quantities of labour and material required for two houses of the same plan but of different construction, I should say that the difference in cost would be 27 per cent. in favour of the pre-cast concrete unit system. I should say that to erect a brick house in Sydney, similar to one in Canberra costing £1,100, would cost only about £850. The difference in price would be accountable by the difference in the rate of wages and the accessibility of labour, together with the question of the non-continuity of work. You cannot appropriate or sectionalize your labour for a dozen cottages at Canberra as you could do in this city. My idea primarily involves, as I have mentioned, an equipment costing at least £10,000 before the first unit could be established. That is why the principle applies only to areas where one is going to establish a considerable building centre. The same plan of construction would, of course, subsequently be available for other building work in different parts of the country, and the same plant could be made use of. The moulds are portable. The cost of the plant would be more than wiped out on the first hundred houses built on this economical system. It is one which has not yet been established in any country, but in saying that I do not infer that its adoption here would be in the nature of an experiment except as regards the question of cost. You certainly would not go wrong in the ultimate product. The house would be more durable than in any other building of the kind. In the moulding of the wall pieces you would make a slab the full height of the wall from floor to ceiling, and the thickness would be about 2½ inches. You can mould anything into the concrete accurately and very smoothly and naturally. We know the cost per cubic yard. Twenty-three different moulds will make every variety of house conceivable, including even mantle-pieces and verandah posts. Every trade, in fact, such as is called upon to complete an ordinary cottage, is represented in the concrete. There would need to be only the floor and the roof added, and everything would be finished. These buildings are not subject to white ants or decay. They do not require so much or such frequent painting.

18. *To Mr. Mathews.*—I am reminded that I said that certain drastic alterations would need to be made in Mr. Griffin's scheme with regard to the site of the capital, and I am asked whether that would cause waste expenditure. It would not do so. My remarks related primarily to the site of the parliamentary building, and of the capital. Owing to some misconception, which is obvious in Mr. Griffin's report, regarding the visibility of those buildings and so on, as set forth in the competition for monumental works, there will have to be serious modifications. The views of the Advisory Committee are, I am sure, that the whole of the parliamentary area will have to be reconsidered in the light of the fact that it is upon the missing of those two halls that the focus of the city will bear. The proposals for roads and cuttings and the general elevation of the buildings will have to be reconsidered. I would support a recommendation that that particular triangle area be thrown open again to another competition for the re-design of the streets, the buildings, and everything. This will not interfere with the temporary

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parliamentary building proposals. I am asked whether, if a plant were made available and work proceeded on the construction of concrete cottages, that would not involve the scrapping of the brick works. There will always be a certain amount of brick work necessary for the monumental and larger buildings generally. I am aware that two types of brick are turned out at Canberra; the dry-process brick is not as suitable for outside work as the semi-plastic. The latter is a better and a denser brick in every way. I understand that the cost of the semi-plastic brick manufactured at Canberra is about £3 17s. 6d. a thousand. I cannot compare that with the cost of the Sydney brick, because, unfortunately, we cannot get it here. We have not a brick half as good. As to whether I would construct houses with semi-plastic rather than the dry-process brick, if it were not a question of cost I would, of course, have the semi-plastic every time. It makes a stronger and a better looking as well as a dryer house. But the dry-process brick will do for the insides of buildings. If I were asked to value two houses exactly alike, except that one had been built of the semi-plastic and the other of the dry brick, I would say that there would be a difference of fully £100 in value. I would base that on the place as a home to live in and as a better looking and a more durable type altogether. One may visit Canberra as a town with a great many trees and shrubs and some open spaces, and having well-kept streets. Personally, I am opposed to the red brick building for Canberra. The more beautiful city would be obtained by a far greater use of pure white. The contrast of the white walls with the green of the lawns and shrubs and with the red tiled roofs secures a beautiful and brilliant offset. To have some of the houses of red might be considered, but I would prefer a distinct prominence of white-walled houses.

19. *To Senator Plain.*—In regard to buildings of concrete, such as I have spoken of, I do not think there would be any greater inconvenience suffered by residents owing to the extreme heat of summer and the cold of winter than in the case of brick houses. In certain conditions in the Old Country, difficulties have arisen owing to moisture, due to the heat of the homes within and the very low temperatures without. In Australia, however, with an absence of fog and due to the low saturation point, this trouble would never occur. My experience of hot climates is that the thinner the wall, the better it is for the occupants of the house, for the reason that it gets down all the more quickly to local temperature in the evening, and becomes beautifully cool at night. Another feature of these concrete houses is the colour. A red brick wall is 15 degrees hotter than a white wall when the external temperature is 90 degrees.

20. *To Mr. Mathews.*—The cheapest brick house which can be constructed in Sydney, of four rooms and of a size ranging about 14 by 13 feet and 14 by 10, with no passageway, but with a back verandah and no embellishments of any sort, would cost about £700. I think that at Canberra we ought to be able to produce such cottages for about £800 to £850.

21. *To the Chairman.*—I understand that it is intended to carry on the scheme of avenues as suggested by Mr. Griffin. I am aware of the nature of the work of extending those avenues. My reference to alteration of the design had to do with that triangular block in the administrative section which will require to be remodelled, and in regard to which it has been suggested that it should be thrown open to fresh competition. Adelaide-avenue is one of the streets on which it is proposed to complete the work. That will not affect subsequent interference with the parliamentary sector. I think that avenue ought to be continued, even though it will represent much expense in widening and grading. As regards the grades, such as were originally

contemplated, they will have to be altered, because they are unamenable to Utopia. One can get very fine aesthetic effects without keeping all to one grade. After the lakes have been constructed, there will be a fairly considerable distance to be traversed between the north and south sides. That, however, need not be seriously considered when there have been provided ample transport arrangements. We shall be actually constructing two towns. That is the deliberate intention of the whole design; and, unless we scrap Mr. Griffin's proposition, we are bound to the development of those towns to the north and the south. Personally, I repeat that I agree with the design.

The witness withdrew.

Andrew MacLachlan, Quantity Surveyor, Department of Works and Railways, Sydney, sworn and examined.

22. *To the Chairman.*—The price for first-class bricks in Sydney is from 103s. 6d., depending on the colouring; 115s. per thousand, while the price of common bricks is 68s., both at the kiln. That is the price at which we purchase bricks for public works in this State on behalf of the Commonwealth; the higher quotations refer to the best quality facing bricks. Those prices have ruled for the past six months at least. My experience has been that costs of building in the country are much about the same as for works in the city. In lots of places we cannot secure a facing brick, and we have to be satisfied to take the local common brick, the average price of which is about 68s. I have not been buying sewer pipes above 12 inches in size; these cost 2s. 3d. delivered on rail in Sydney. Cement costs now 18s. a cask. Red roofing tiles are costing us in Sydney, 217 a 1,000; 215 at the works. That is first quality material. I do not like grey cement tiles. The damp comes through them. We have used some at Lithgow and others at Daceyville, but the tendency of these is to sweat. There is not much difference in the price. About the only advantage to be gained would be in regard to colour, whereas you could get different colours in the same type as the red tile. There is a very dark grey also, and a colour which is much darker than cement.

23. *To Mr. Mathews.*—I have seen a plan of the cottages being constructed at Canberra. There should not be much difference in the prices of cottages built in Sydney compared with those at Canberra. If you have to pay country wage rates the cost will be nearly 20 per cent. more than here. We have built cottages of four rooms and of the general type such as has been constructed at Canberra for about £650. That was at Liverpool. This type had no passage, and it was built by day labour. There were no sewerage facilities; the block was bounded by a wire fence. The outside walls were roughcast. I do not think we could build a cheaper house than that in Sydney. A sponciator, building such a cottage to sell, would probably get about £900; but that price would not include the cost of the land. The cost of cottages in Sydney just now is equivalent to about 10d. or 1s. per cubic foot. I have not had experience of constructing reinforced concrete cottages. I have seen a sample of the Canberra bricks, but I was given to understand that it was not of the very best quality. Even so, it was an excellent brick—as good as the best Sydney facing brick. We often use the common brick entirely in our works. We are carrying out some public work now with that type; and, with the hollow wall construction, it is weatherproof.

24. *To Mr. Parker Moloney.*—Bricks similar to the Canberra specimen would be much dearer in Sydney. The cottage to which I referred just now as having been built at Liverpool for about £650 was constructed of the common brick, roughcast on the outside.

25. *To Senator Plain.*—The Sydney facing brick is probably a better shaped brick, and that may account

for the difference in cost. The State Brick Works sell at 65s. per thousand; but the supply is so small that it is not to be depended on by ourselves or by outside contractors. I would not say that it is as good as the 68s. brick.

26. *To the Chairman.*—We built some houses at Lithgow recently. They were of a type which had a verandah in the front, but had no passage, and there were four or five rooms and a kitchen. Tenders were called for the construction of all these. They averaged from £450 up to about £700. The buildings cost us more in the end than we had anticipated, however. Some of them were built of concrete blocks, made at the site. They were a little cheaper than those of brick.

(Taken at Sydney.)

THURSDAY, 22ND DECEMBER, 1921.

(SECTIONAL COMMITTEE.)

Present:

Mr. GARDNER, Chairman;

Senator Plain,

Mr. Parker Moloney.

Mr. Mathews,

Leslie Wilkinson, Professor of Architecture, University of Sydney, sworn and examined.

27. *To the Chairman.*—I am asked whether, in the early stages of construction, the Committee would be justified in advising that expenditure on the northern side of the city should be abandoned for the time being so that, in the interests of economy, attention might be concentrated upon the administrative side. I am familiar with Mr. Griffin's design. I am aware that the desire of the Government is that it shall be adhered to, and that that involves the development of Canberra simultaneously on the north and on the south side of the Molonglo. I should be sorry to see Mr. Griffin's scheme interfered with. It should be definitely worked to, but I have been struck with the vastness of the whole scheme. It might be much wiser to concentrate the little that is to be done at a time, rather than that it should be separated by great distances. That suggests great economy with respect to providing services on the civic side. That is to say, it might be well to concentrate upon the administrative section. I would not advise anything, however, which would have the effect of destroying the Griffin scheme. If there is any danger of the projected civic portion never becoming the actual civic centre I would say, by a means, go on with the necessary services which will establish it. One would not be justified in doing anything in the order of carrying out the work which might tend to alter the Griffin scheme. I would not take any risk about failing to secure the completion of the Griffin plan in regard to the northern, civic, centre; but I admit that it would certainly produce a more livable centre if concentration could be proceeded with without danger to the scheme as a whole. Respecting the proposed hostel buildings, it is very difficult to give an opinion upon a colleague's design without first being acquainted with the data on which he has worked. Indeed, one should have his explanation of the design. I make that preliminary comment, therefore, before turning attention to the plan of the hostel. I think that the garden-like lay-out, with the covered ways, will prove excellent for the conditions existing at Canberra. The scheme appears to be reasonably economical. One is struck with the fact that there are rooms having every aspect, so that they cannot all of them be ideal. I am not prepared, without data, to say that the scheme is the best that could have been devised. It quite falls in with my idea of the economical country building for that part of the State,

and it is apparently well planned. Naturally, with the pavilions, there will be a little more carrying and fetching for the staff compared with the ordinary type of hotel. Banned against that, however, is the saving in regard to stairs and lifts. As for this plan itself, no doubt it is the final result of many such schemes. I am rather accustomed in school work to seeing many attempted solutions of all such problems; and, before giving a final decided opinion whether or no this is the best which could have been produced, I would like to know all the details of how this plan was arrived at. I have never seen a group of buildings of this staggered description look well. It is common in hospitals, prisons, and the like, and such groups seldom compose well. I can imagine these buildings, grouped among the trees and surrounded by the courts and lawns, running in from the avenue, and making quite a delightful group; but I do not feel quite certain about this somewhat ragged and spidery block. I should think it would be well worth while having a small rough model of the group made in order to give an idea how it will ultimately look. The plan does not, and cannot, convey the same impression. The scheme is economical; but if the site is rectangular I would prefer to see the group more or less so also. I understand that the idea of the semi-isolated grouping is in order to provide privacy, if desired, for visiting functionaries. That, no doubt, could be arranged in any one of the pavilions. I would like to know whether there is anything in the site which suggested the grouping. The type of building is right, being generally low; but, at present, I do not like this variety of angle and the ragged and broken outline of the block. I would prefer to see the two-story angle blocks carried out separately, and at right angles, still providing a garden view. Thus you would get a frontage to the avenue which you do not get at present. It is an excellent, sensible, business-like, and workable arrangement; but it produces, I repeat, this unfortunate collection. I agree that it would not be more effective if the whole of the buildings were of the one height. It is much better to get a variety as is here proposed. So far as I can see from hasty examination, it is based on certain types which have been adopted by architects in Sydney for small domestic work. It is somewhat similar to the American colonial work. I like the idea of the white walls with tiled roof. But I do not like the light red tiles, such as are likely to be made use of. There are certain beautiful browns, which can be secured. It is the red tiles which have ruined Sydney Harbour; it is their uniformity to which one objects. A few here and there are all right. In my opinion, the brick wall, whitened, with tiled roof, would look very well. There should not be any red brick showing. I would have every house in Canberra built of the same material, roofed of the same material, and every wall finished in the same material, except Parliament House and the Capitol and other public buildings. You get plenty of variety with the different designs on the different sites. The important public buildings, of course, should stand out by themselves. All the houses and shops and ordinary buildings in the community should be governed by building regulations to provide for one sort of roofing material and one sort of wall finish. The reason why we like the old cities of the world is because they were built right through of a local stone, and after the same pattern from century to century. I am asked whether I do not prefer that some of the roofs should be of slate and others of tiles of varying colours. Certainly not! If it is to be so, Canberra will not be a success. There will be no monotony about the city if designed as I have just outlined. If some of the buildings were of brick and some of stone that might be all right; the tones could

be varied, but the general scheme should consist of uniform wall treatment. There should not be some of brick and some with some face and brick above. The variety would be gained by the different accommodation on the different sites; but, for the ordinary four or five roomed cottage, I would say that they should certainly all be built of the same material. It is the plan of the house itself which produces the variety. When regulations are being considered it is most important to specify the materials for outside walls and roofs. That is done, by the way, on estates in England, and the only estate, containing garden villages and the like which have been successful are those in respect of which uniform building regulations have ruled. It is a recognised principle in town planning. Town planning would be entirely spoiled if all sorts of different materials were used. I would not have anything but tiles in the city of Canberra for the ordinary buildings. I am asked whether, if I were starting work at Canberra, knowing that in the course of the next few years a large amount of construction work would be done, I would first build groups of houses for workmen. I would put them in huts, and have them all young, unmarried men; and I would place them under camp life conditions. I would let the married men—having their homes and families in the cities—remain and do the work in the cities. I would prefer that the workmen should live under the splendid conditions which can be obtained in camp life. Their games and sports should be organized for them; and for the great number of workmen that will be required there I would strongly suggest something of the sort. At the end of their job they will have undergone a very fit time and will have a large sum of money saved. For such married men as may have to be provided for, proper cottages should be built. They should be built to the official specification as regards standard of construction and material. They should set the pace, or be regarded as the key, to the whole building project for such work. The only way to get the cost of buildings down is to give up the idea of detached single-story cottages for workmen. You must build them in groups of fours or sixes, and you should not be afraid of the two-story design, so long as you keep the stories down to less than 10 feet in height. I am strongly of opinion that this produces more pleasant buildings to live in. There is nothing wrong with a group building where only a few rooms are required. The more I see of the country, and of the conditions, the more I am certain that an attached building is cooler, and that the two-story buildings are cooler. For economy's sake, and to produce a better architectural effect, they must be in groups. The units might be built in groups of four, requiring one central passage if you want to get to the rear. They can be built so as to form courts, allotments, gardens, and so on; and, instead of an innumerable collection of these little shanties dumped down all over the place, you get a few sense of unity. However big the lots are, you will see them better if you group the buildings and leave more freedom for gardens and children's grounds. I would not hesitate to build two-story buildings with 11-in. walls; but the minimum height must be less than 10 feet, in order to reduce the fatigue of climbing stairs. The minimum height of the walls of a worker's home, having regard to health and comfort generally, should be 9 feet to the ceiling. It is much more valuable to have a little extra floor space than a few inches extra ceiling height. In England the minimum height is about 7 ft. 6 in. I do not think 8 ft. 6 in. would be too low here. We recently recommended, for the new building regulations for the suburbs of Sydney, that 8 feet should be adopted. The responsible Minister did not adopt the suggestion, but kept to the 10 feet. The objection to two-story houses is not only that there

is the 11 feet to be climbed, and often more, but that the stairs are badly designed and are too steep. An easy stair can be designed to reach a 10-ft. upper floor without any undue fatigue. I believe that a group of at least four attached two-story buildings would be the cheapest—cheapest because of the saving in walls, altogether apart from the other attractive considerations. There is no need to strive after variety in this instance. Each individual resident will provide his own individuality in his garden—the creepers which he plants against his walls, and so on.

28. *To Mr. Mathews.*—I am asked whether I would consider a cost of £100,000, exclusive of the cost of the ground, a high figure for the accommodation of 200 guests. The amount seems to be heavy, but I do not think the cost of running the hostel would be materially greater than running it in an ordinary hotel block. The cost of lifts, for example, is a very considerable item. This is the class of building that must be built. There is nothing extravagant about it. In type, it is wholly economical. I do not think that, if I had to build an hotel in the city to accommodate 200 guests, it could be done adequately for £100,000. I have seen the Canberra bricks. For workmen's homes I would use the cheapest brick that could be got, and it would have to be of the quality that cheap brick turned out at Canberra should be good enough for all the residential work. Providing that the brick is not unduly porous, and is sufficiently hard, it should be useable for any purpose. With regard to the tiles, the French pattern which we use here is technically a very good roof covering; it is waterproof and very light. The Spanish, or Italian, tile is not really very weatherproof, but it is the type which I should prefer to use throughout the architecture of Australia. We have at times very severe rains, however, and when the use of Italian tiles is suggested in this country the objection raised is that they do not keep the water out. They are the most beautiful tiles that we could use, however. If we could get the effect of the tile with the same waterproofing qualities as is possessed by the French tile, I would prefer the other—the Mediterranean, as it is known—very fine. It would be an excellent idea to experiment with the manufacture of these at Canberra; I am given to understand that they can be made there. I am of opinion that to drive these straight, level avenues through hilly topography, such as is to be found at Canberra, is wrong. A view of a building from a mile away is not aesthetically worth much. So long as the grades are good and reasonably undulating, that should be sufficient. By such undulations you are able to come suddenly upon a view of a monumental building, and the unexpected appearance, which you can never hope to get on perfectly straight levels, arouses greater admiration.

29. *To Mr. Parker Moloney.*—As to whether I am of opinion that the preservation of the Griffin plan is of more importance than any good that might come of the concentration of work upon the south side of the river, I can only comment that it is most important to secure the execution of the plan. If there were any risk of injuring the Griffin scheme of development by postponing work on the north side and concentrating upon the south for a brief period, I would not take that risk. I have had some experience of building in pre-cast concrete blocks. On the whole I do not think that such a system makes for saving. Seeing that excellent bricks are being turned out at Canberra, and that there is no need to make or to use any facing bricks there at all, I would not consider the concrete proposition. If bricks can be got for £3 8s a 1,000, I would use them as liberally as possible. This class of hostel, as designed, could be made quite comfortable for a cold climate. It will need some heating. On the whole,

I think that the scheme of the hostel will suit both summer and winter conditions in Canberra.

30. *To Senator Plain.*—I do not see the necessity for keeping all the workers at one point. They will not all be working on the one spot. The permanent houses for workmen should be built in a settled residential district, so that, subsequently, they would be let to a permanent population in the populated part of the city.

31. *To the Chairman.*—As for the northern area being a suitable residential neighbourhood, I think that proper planting of trees will do everything. It should be possible to continue the development of the northern area without incurring full expenditure on sewerage for some years. On the other hand, if any modifications were to risk the carrying out of the Griffin plan, and there were a danger of the south site becoming more valuable, the whole project should be put in hand as proposed. It must be possible to build accommodation for Parliament to meet in which would be in the nature of a permanent building; but it should be built of cheap bricks on the basis of the design of what would be the permanent monumental Parliament Buildings. It could be constructed of crude brick inside and outside; and then, as the country grows, the desired enrichment could be added. Rather than go into a more or less temporary building, or into one subsequently to be used for other purposes, I would prefer the design to be obtained by public competition, and then for just the crude shell to be built. It should be possible to do that at the same price as a more or less complete building of a less monumental type to be used for some other ultimate purpose. This building should be constructed to form part of the permanent scheme upon the site selected by Mr. Griffin. I emphasize that the competition in connexion with this matter should be swiftly proceeded with. Many fine schemes are in hand among architects, but the whole business continues to be hung up. In the architectural profession, all over the Empire, we are being looked to now to announce the competition for designs. I should say that the competition could be got going again by cable announcement within a few days, thus saving months. But if a new competition is announced to give opportunities to returned men who had not had the chance or the practical experience, perhaps, prior to the war, it would probably be a matter of twelve months. I am of opinion that the hostel scheme should have been thrown open to public competition, seeing that it is to be one of the permanent public buildings. I say that not only for the benefit of the profession, but in the best interests of the Commonwealth. Probably if you saw twenty or thirty designs based upon the same data, you would still select this one; but there are other solutions. Not one penny of the money to be spent upon the temporary Parliament House should be disbursed until the design for the finished permanent building has been selected.

(Taken at Melbourne.)

WEDNESDAY, 4TH JANUARY, 1922.

(SECTIONAL COMMITTEE.)

Present:

Mr. GRIBBOY, Chairman;

Senator Plain, Mr. Mathews,
Mr. Bamford, Mr. Parker Moloney.

David Cooper Webb, Architectural Branch of the State Savings Bank, Victoria, working under the Housing and Reclamation Act, sworn and examined.

32. *To the Chairman.*—I have been concerned in the erection of what may be called a good class of workmen's homes. The Bank has eight types of these

houses, four of these containing four rooms and conveniences, and the others five rooms and conveniences. In the four-roomed houses, as in all the other houses, the largest room is 14 feet by 12 feet. The height of the rooms is 10 feet; and out of about 300 I have only known two applicants who suggested that they would like 11-ft. ceilings. If the suggestion has been made that in a warm climate the height of the rooms might be 9 feet as sufficient, I can only reply that in my opinion it should not be less than 10 feet. All these houses have the usual conveniences—sink, double fire-places (gas stove and fuel stove), troughs and copper, and so forth. In one type of house all these are in 'one combined kitchen, scullery, and washhouse. In another type there is a self-contained separate wash-house, but still under the main roof. There is a bathroom in every house, and we try to place it between the bedrooms. We never place the W.C. in the bathroom. The majority of the houses are not sewerer, but where the sewerage is available the houses are always connected. The electric light is provided in every case. All the houses are timber-framed; in this regard there is no opinion. The Housing and Reclamation Act fixes a limit of £800 to cover the cost of land and buildings and all necessary charges. We find it practically impossible to get anything like a decent brick building for that money. The value of the land varies. We have received practically 900 applications, and very often the blocks were bought from eight to ten years ago. Naturally, in the majority of cases, the value of such land has increased considerably, and of this the applicant gets the advantage. If he paid, say, £50 for a block eight years ago, that will leave £720 for the building. On the adjoining block, which may have been purchased more recently at £140, there is, of course, only £660 left for the building; the people who bought land only get the chief benefit under the Act. On a basis of tendering over a period of five months, the approximate cost of erection on the superficial area will be, per square, from £60 to £65. The average cost of the land is about £100. The cost per square varies according to the size, contour, and other conditions of each particular block of land. We can naturally build cheaper on a level block than on a block with an excessive fall; in the latter case there is necessitated more cost for foundations, brickwork for chimneys, and so forth.

32a. *To Mr. Mathews.*—The figures are based on about 200 houses which we have erected in the metropolitan area. We have not as yet erected any houses in the country, but we have acquired land at Geelong, and we propose to commence operations there in February or March next. We anticipate that the houses in the country will be dearer than in the city, owing to certain conditions which cannot be so easily overcome as in town. I should say that it is impossible to build brick and cement cottages at the price to which we are confined; in such cottages we should, for £500, probably get only three rooms. All the work is done by contract, and the applicant practically knows the price within £5 at the time of the acceptance of the tender. The repayments are an administrative matter, but I think they approximately amount to £9 per £100 per year, embracing principal and interest. Personally, I am averse to semi-detached two-storied houses, or rows of four two-storied houses, for the purpose of securing cheaper houses and lower rental. Such houses would have to be built in brick, and you would get a cheaper building, compared with detached dwellings, which, of course, cannot be built so cheaply as a series of four combined dwellings. Probably such houses have been erected in isolated cases by individuals as a money-making proposition, and recently there has been a lot of such work in England. If buildings of the kind were designed in the latest type

for Canberra, I have no reason to believe they would not be fairly effective. This, however, is practically a matter of town-planning, and certain areas would have to be set aside for certain purposes. First-class bricks are at present £3 per 1,000 at the kiln. The best brick is a "picked" brick, in so far as the bricks are roughly sorted into three grades. This, however, is a matter affected by the general condition of affairs. If things are very busy, and there is a large demand, all the bricks you get are "firsts," which means that there are many clinkers amongst the first-class bricks—beggars cannot be choosers. At the present time, I should say that the first-class brick is of fair average quality. To the price I have mentioned there has to be added cartage. A "special" brick is made, but is never used for ordinary work, and is sold at about £8 10s. per 1,000. The faced brick is only used for chimneys and work of that kind. However, we do not have anything to do with the purchase of bricks; the matter ends, as far as we are concerned, when the contractor puts in his tender. These special or faced bricks are used only for special purposes, say, in the case of public buildings. Our dwellings are all roofed with terra cotta tiles, except in isolated places. When there is no water supply, and tanks have to be used, the roofs are of corrugated iron; 95 per cent. of our roofs are tiled. These tiles are not sold in the same way as are bricks. There are companies who not only sell, but fix tiles at a price according to measurement. Very few contractors buy tiles by the 1,000; they buy by the square. I believe that recently tiles have been sold at about £13 per 1,000, and the present price is £2 15s. per square, tilers' measurement, which is different from ground floor measurement. I may say that different merchants have different prices. As we build under the contract system, all the officials we have are the chief architect, draughtsmen, clerks, clerks of works. I cannot say anything with authority about the award rates in the case of bricklayers, plasterers, labourers, and other trades associated with building. I believe, however, there is at present under consideration a carpenter's award, according to a circular received by the Bank. We are constructing these dwellings in timber, owing to the limitation imposed by the Act. A brick cottage of four rooms, 10-ft. ceilings, the main room say 12 feet by 14 feet, and the others 10 feet by 12 feet, with bathroom, front verandah, and other accessories, in Malvern or North Fitzroy, would cost from £850 to £900 for the house alone, though a speculative builder might do it for less. The same house could be built in wood for £650 to £675. All our houses have double frontages, and the passages and halls vary. They have oregon laths and plaster, with hardwood frames and roofing. Any cracking that occurs depends largely on the time of year at which the house is built. If the hardwood is put in at the beginning of the winter, it may be two months before the lathing and plastering is done. In the winter time, of course, there is no drying of the timber, so that when the summer comes certain cracks will show. This is not so likely to occur if the work be done in the summer time. We have not had time really to receive any complaints on this score, seeing that the Act was passed out in December, 1920, and the first contract was entered into in the following June.

33. *To Mr. Parker Moloney.*—The £850 I gave as the price, is the contractor's price, and allows for his profit. It is rather a hard question, what I could build for myself with day labour an ordinary four-roomed house with conveniences; I happen to know that the best return from day labour largely depends on who is "on the job." I would not like to say that there would be much difference as between the result under contract and under day labour. It is not fair to ask me what I could build a house myself for; the figure given

could not be used for comparative purposes, to any one else must be added supervision, administration, and so forth. It would not give either a fair test of building on a large scale. As I say, the £550 includes the contractor's profit, and I do not know what that profit is; it is a doubtful quantity, very hard to arrive at.

34. *To Mr. Mathews.*—The cheapest house we have contains a living room 14 feet by 12 feet, bedroom 12 ft 6 in. by 12 feet, bedroom 10 feet by 10 feet, kitchen 12 feet by 11 feet, self-contained laundry 8 feet by 5 feet, no passage, bathroom 6 feet by 5 feet, short front verandah 5 feet by 9 feet, roughly, and a porch at the back. The contract price is £550, over an average of about five months. That includes the contractor's profit. In brick such a house would cost £725 to £750, including the contractor's profit. Another type of cottage of four rooms contains living room 14 feet by 12 feet, bedroom 12 feet by 12 feet, bedroom 12 feet by 10 feet, kitchen 12 feet by 10 feet, bathroom 8 feet by 5 feet, front porch, back verandah, 14 feet by 4 feet, and self-contained laundry. The cost of this is also £550, though it affords slightly more room than the other. In brick this house would cost £725 to £750. The price varies with the conditions, but I think we may say that it would be approximately £725, including the contractor's profit, if any.

35. *To Mr. Bamford.*—The cottages are built on 4 inch by 4 inch stumps, with 9 inch by 6 inch by 1½ inch redgum sleepers.

36. *To Mr. Mathews.*—A most popular type of cottage is one containing four rooms. The living room is 14 feet by 12 feet, bedroom 14 feet by 12 feet, bedroom 12 feet by 10 feet, kitchen 10 feet by 10 feet, kitchen 10 feet by 8 feet, bathroom 6 feet by 5 feet, hall 5 feet wide, front verandah 7 feet wide, and back porch. The cost in wood is £650, while in brick it would easily be nearly £900. This cottage has a very nice appearance and, as I say, is popular. Sometimes, however, people prefer appearance to be sacrificed to accommodation, and in this way secure a six-roomed house.

37. *To Senator Plain.*—In wood construction the contract system is cheaper than day labour. A number of the builders tendering are young men without much capital, who are working contractors with, perhaps, one mate. Under such circumstances there can be no loafing, and probably the best results are got.

38. *To Mr. Parker Moloney.*—If my Department exercised the same supervision as that exercised by the working contractor, I would not like to say we could build at a price less the contractor's profit. I know of three cases in which contractors, owing to fluctuations and other causes have not made a profit. The same argument does not apply in the case of brickwork, for which a contractor requires more capital. He has to pay weekly, or, at most, fortnightly, for his bricks, whereas, in the case of timber the contractor, if he is known, is not compelled to pay until the end of the next month, in which time a lot of work can be done.

39. *To Senator Plain.*—In the case of brickwork, I do not think that, with proper supervision, the work could be done cheaper by day labour. Results seem to prove that the contract system is the cheaper. In 1919, when conditions were rather abnormal, contractors sent in estimated prices, which they declared to be not contract prices. Under such circumstances, the work was invariably carried out on commission; that means that the builder simply did the job, according to plans and specifications, at cost, and charged 10 per cent. for his services. I do not know of one such job in which the estimated cost was not fairly heavily exceeded. That is practically carrying out a job on the day labour system, but I admit there is a big difference in regard to the supervision. With all due

respect to the conscience of the average builder, I would not like to say, in a case I have in mind, that he pressed the job as he would if it had been a contract; he was not working against his own pocket.

40. *To Mr. Mathews.*—One has to be careful in speaking, but it is a fact that where the expedition was not so great, the product was a better house, but it did not follow that the value was greater than in the house expeditiously finished. One house may be so carried out on commission, and twelve months later another, next door, may be erected on the contract system for £150 to £200 less on a £1,200 job; cost does not at ways represent value. I am inclined to admit that day labour is a better proposition from the point of view of construction than is contract, though one has to be careful in saying these things, in the light of experience in the War Service Homes.

41. *To Mr. Parker Moloney.*—I am inclined to agree that in this matter supervision is a great factor. I have had no experience of pre-cast concrete work. More than one proposition has been placed before us, but there is the same objection that there is to brick—that of cost. The cost is said to be between that of wood and brick, but it is still too high for us. This concrete cannot approach wood for cheapness, when we consider the heavy cartage cost and so forth. The only hope for pre-cast concrete is when eight or ten houses can be built at a time. The systems vary, and while some are doubtful, in one or two cases they are good. We were prepared to look at them from the point of view of quality, but not of cost. One inventor claimed in a prospectus that by adopting his method he could dispense with an inferior coat of rendering plaster; but that has yet to be proved. This inventor claimed that he could save £87 on a 900 sq. ft. by eliminating the one coat of plaster, but, as a matter of fact, the whole plaster on the job would not reach that amount.

42. *To Mr. Bamford.*—As between facing brick at £8 or £8 10s. per 1,000 and ordinary brick at £3 per 1,000, but covered with compo. outside, the latter would be the cheaper.

THURSDAY, 5th JANUARY, 1922.

(SECTIONAL COMMITTEE.)

Present:

Mr. MATHEWS, in the Chair;

Senator Plain,

Mr. Parker Moloney.

Mr. Bamford,

Robert Casboulte, Architect in Charge, Victorian Branch, War Service Homes, sworn and examined.

43. *To Mr. Mathews.*—I have been associated with the preparation of plans for the construction of Soldiers' Homes for about eighteen months. These homes have been built of brick and timber. Taking them all through, the difference in cost of houses of a similar size in brick and timber is in the proportion of £80 to £100. That would represent 20 per cent. in favour of timber houses. About half the homes built by the War Service Homes Commission have been built of timber. Soldiers have preferred brick houses where the cost has been within their reach. I have brought with me a couple of type plans which the Commission has used for brick and timber houses, with two bedrooms, a living room, a kitchen with a cooking recess off it for the purpose of removing the sink and stove from the portion of the kitchen where meals are taken, a bathroom, a verandah, and laundry accommodation. The average cost of such a house, built in brick, and not including the land, is £800.

44. *To Mr. Bamford.*—The question of whether I would recommend building this type of house in brick or timber is governed by circumstances, one of which

is the length of time allowed to the applicant to pay off. A timber house would not represent an asset over about twenty years. The matter of insurance also enters into the question to a certain extent, and wage-earning capacity of the occupant in the matter of repayments and of upkeep. All things being equal, I would recommend building in brick instead of timber, even at the difference in price. In ten or twelve years time a brick house would be more satisfactory as an asset than a timber house would be. It would probably be found, in case of timber, that occupants of houses who may be small wage-earners, with not a large amount of money at their command, would not be financially enabled of looking after the upkeep of their home, and would probably require a lot of pressure to keep them up to the mark in regard to painting, &c., of their dwellings. I do not think it is possible to build a brick house with all the conveniences I show on these plans at less than £780, that figure is exclusive of the price of the land. I do not think land in any suitable locality in the metropolitan area of Melbourne can be bought at under £3 per foot, unless the purchase of large areas is undertaken. I call a suitable locality land which has tram or a train within a mile. Quite recently land has been sold on a tram line at Preston for £5 per foot, and that is a long distance out in an artisan area. The Commission has bought land at Brighton Beach and West Coburg, but that was bought in advance of requirements, and it is not expected that this land will be built on under three years. The furthest land out on which we are building at present is about a mile from the Hampton station. We have also built at Box Hill, within five minutes of the Box Hill station. That land was bought at considerably under £3 per foot. When I speak of £3 as the minimum price at which land can be bought at present, I am assuming that the applicant for a home buys a single allotment. Of course, if land is bought for group houses, as the Commission has done, it can be obtained at considerably under £3 per foot. For small units the contract system of building is the best. During the last twelve months or so the War Service Homes Commission has had considerable experience in building in day labour in all its phases, and I cannot say that it has been a success for the small units we were dealing with. Better results were obtained for group buildings, but a lot of things enter into consideration, for instance, the purchase, access to, and supply of material, and the appointment of proper foremen and working gangs. Where a good system was adopted in the matter of the supply of material, day labour has justified itself in those instances, but where the supply of material has broken down and where there have been unsatisfactory foremen and labour gangs, the system has not been a satisfactory method of building small houses. The War Service Homes Commission has two depôts in Victoria, one in the city, and one at Camberwell. The city depôt has proved to be convenient to certain areas, particularly for one side of the Yarra, but it was found to be too far away from Camberwell or Carnegie. The position was helped considerably by the establishment of the second depôt at Camberwell. Material for houses at Coburg was delivered from the city depôt. Bricks were delivered direct from the kiln or to the consigning station or site.

45. *To Mr. Parker Moloney.*—In our plans we have endeavoured to do away with the necessity for passages in the houses. In the designs I have submitted provision is made for a small entrance hall 6 feet by 6 feet, from which the bedrooms and living room are approached. The largest bedroom and the living room are 14 feet by 12 feet. The kitchen is 10 feet by 12 feet. I base my figures of the cost of these houses on actual tenders received during the last few months, since the War Service Homes Commission

has ceased to build by day labour. The actual cost of the material in one of these houses would be £400. The cost of labour would be £250. For cartage £30 could be added, and £10 or £50 for the contractor's profit. The same type of house built in weatherboard would cost £700. There is very little difference between the cost of material in brick houses and timber houses at the present time. The great difference is in the cost of labour, which is not as heavy in the case of a timber house as it is in the case of a brick house. It is certainly true that timber houses are being constructed in Melbourne for £250, but they are not of the type shown on the plans I have submitted. Houses of this type, including sewerage and every service, would cost about £700 built in timber. I have seen, and obtained, tenders for timber houses at prices below £600, but these tenders have been submitted for a smaller type of house than I have shown on the plans. The tenders received for the type of houses now shown on the plans have ranged between £675 and £700 for wooden houses. The State Savings Bank does not build in brick, because it is recognised that a house in this material and land cannot be provided for £800. I do not think that a four-roomed brick house of the cheapest type of construction could be built for less than £750 at the present time, that is allowing a certain amount of profit for the contractor. Certain items might be eliminated from the plans I have submitted which might reduce the cost, but I think that the minimum tender would be £750. Men like myself in touch with the building trade might possibly build such a house for £700 by eliminating all profit, but I would not like to say that a number of houses could be built at that price, because in such circumstances there would be every possibility of loss of control in the matter of supply of material and labour, which, of course, would tend to increase the cost. The difference between the cost of brick houses and wooden houses is mostly made up by the extra cost of labour in the case of brick houses. The War Service Homes Commission has not built any houses in concrete. It has been approached by two or three concrete firms, who have supplied various particulars, and I arranged with one firm to build a sample house on the design I have submitted. The final figures submitted brought the cost out at a shade under £800. An examination of the figures showed that there was little or no difference between building in brick and concrete. I took out bills of quantities for the material and the cost of the material very carefully. The difference was practically only in the saving on labour. The cost of the material was just about the same. We obtained tenders from this concrete company to put in the foundations of a house, and erect the shell, the Commission to do the balance of the work—carpentering and plastering and so on. The tenders on the average were between £60 and £70 more than the house could be built for in brick. The method to be employed was a pre-cast unit system of concrete building. There are two or three systems of building in concrete with a pre-cast unit. One is to have the unit the full height of the building, from the floor to the ceiling. Another system is to use blocks or slabs and pour liquid concrete into the joints of the slabs and angles. The Commission has not had any experience in building in the pre-cast unit system.

46. *To Mr. Bamford.*—The Commission has had gangs of bricklayers working under the day-labour system who have laid 600 to 700 bricks a day, but many have laid as low as 300 bricks a day. The prices we have had for doing brickwork by piecework, if the men employed were to make any profit they must have laid between 600 and 700 bricks per day. Of course that would be on plain straightforward work. It is considered a fair day's work at the present time

to lay 600 or 700 bricks. A bricklayer of the old school would probably say that in his time the number laid per day was 800, and I have not the slightest doubt that it was done, but it would be too much to expect such an average to be maintained on the class of work the Commission is undertaking. If bricks are laid at the rate of 600 or 700 per day, it reduces the cost of building considerably. The award rate for a bricklayer is 2s. 6d. per hour, or £1 per day, plus farns. A normal gang consists of three bricklayers and two labourers, so that every extra day they are working on the job adds approximately £5 to the cost of the house. The Commission is using cement only for foundation work, and alkamadis lime for brick work. The footings are all in concrete with brick foundations up to the floor-plate level. The hardwood scantlings for ceiling joist, rafters and flooring joists has all been standardized at 4 inch by 2 inch. Oregon has been used where there has been a shortage of hardwood. The price of hardwood at the present time for 6 feet to 20 feet lengths is £1 6s. 6d. I believe that the cost price of oregon for the same lengths is £2 4s. or £2 5s. If the price of oregon were equal to the price of hardwood I would prefer to use it, as, apart from the question of using seasoned timber, by using oregon, a saving can be reckoned on in the cost of labour. We have had a certain percentage of warping in hardwood. In our early building operations a percentage of hardwood had to be rejected.

47. To Mr. Mathews.—First-class bricks can be bought in Melbourne at £2 19s. or £2 per 1,000 at the kiln; and second-class bricks at £2 16s. per 1,000. The difference between the two is really only in colour and shape. The second-class do not require dressing to prevent the damp from getting through them. Tiles cost £17 per 1,000 at the kiln. Cartage on tiles averages about £1 10s. per 1,000. Cartage on bricks varies according to the locality of the job—from 4s. per 1,000 to £1 per 1,000, the average being about 38s. per 1,000. A house containing a living room 15 feet by 12 feet, one bedroom 12 feet by 12 feet, a second bedroom 10 feet by 10 feet, a kitchen 12 feet by 10 feet, a bathroom 5 feet by 7 feet, a verandah 10 feet by 6 feet, a laundry 6 feet by 6 feet, with walls 10 feet high, terracotta tiled roof, electric lighting, water services, hardwood timber and fittings inside of the plainest character, simply a bath, a fire stove, washing troughs and copper, could be built by day labour under Government supervision in brick at £575, not including fencing or sewerage, assuming the most favorable conditions of supply of material, labour, and cartage, and providing the absolute maximum is obtained from the men employed. The figure would not include interest or overhead charges. I am certain that a contractor could not build a place in brick for the amount I have named. A timber house of the same dimensions could be built for £550 or £575, assuming that the same conditions applied. Assuming that I had 500 houses to build in close proximity on fairly level ground, I could not take one penny off the price I have named. Two attached houses of this type could be built for £1,200. I do not intend the price I have given to represent the cost of building a house of the type I have submitted, it would represent a house with the absolute minimum accommodation and design. Of course, it would have plaster walls with lath and plaster ceiling. To meet the wishes of individual applicants for houses possibly adds 5 per cent. to the cost. In the timber houses the War Service Homes Commission has been building, three-ply has been used on the walls up to a certain height and fibro plaster on the ceiling and on the frieze above the three-ply. This system has been adopted until the last three months. There have been no complaints against the use of this material, but the complaints will come in five or six years' time, because three-ply

is so liable to damage. The heat of the rooms will cause movement, and children will bang chairs through it. It will have a tendency to come off the studs. The Commission found it too costly to use battens to fix the three-ply and the fibro plaster to the joists.

(Taken at Melbourne.)

FRIDAY, 6TH JANUARY, 1922.

(SECTIONAL COMMITTEE.)

Present;

Mr. MATHEWS, in the Chair;

Senator Plain,
Mr. Bamford,

Mr. Parker Moloney.

Henry Maitland Rolland, Acting Works Director,
Canberra, sworn and examined.

48. To Mr. Mathews.—Up to recently I have been Supervising Architect, Works Branch, Victoria, but I have been detailed to take up a position of Acting Works Director at Canberra. I was in touch with the cottages erected at Canberra some years ago, but I know nothing of the new cottages beyond what I have gained from the papers in the office. I had nothing to do with the preparation of the plans of these latter cottages, and I can give no information from personal observation. I left Canberra in June, 1916, after I had been there for three and a half years. When I was up there the question of housing accommodation for workmen was raised on several occasions. At that time the married workmen were housed in temporary buildings put up by themselves, and for the single men the Department put up huts. I have examined the plans of the new cottages, and have carefully gone into the question of costing, both as to quantities and labour. I took out what I considered to be the present price of a similar cottage erected in Melbourne, and I think that in Melbourne the price would be about £730. That is for the bare building; the outside services, such as drainage, fencing, and electric light would bring the price up to £840. At Canberra the total cost would come out at about £960. As to whether, with the four-roomed cottages, we have got down to the lowest possible limit for a working man, it is very difficult to say what is really a "working man." There are working men and working men, and it is difficult to define an absolute standard of accommodation for a "working man." The amount of accommodation required is governed a good deal by the class of trade or work. A labourer probably would not look for the same class of cottage in Melbourne as would a bricklayer or a carpenter; the lowest paid men pick out the cheapest houses in the cheapest suburbs. I am afraid I cannot say whether that phase of the question to which you now refer has been considered. I understand that at the present time labour is easily obtainable in Canberra, especially unskilled labour. Not so very long ago all skilled labour had to be brought from Sydney, and this involved paying fares, and travelling time to and from the job. On the other hand, most of the labourers came on the job and asked for work. I understand that the great trouble is to get the skilled tradesmen to leave the city, and even those who did go to Canberra were not the highest skilled. I should say we would probably get at Canberra skilled men at the same rate of wages as in town, but we would not get work of the same quality, just as we do not get the same quality tradesmen in country towns like Ballarat and Bendigo as in Melbourne. In the country there is not the same scope for selection because the better class workmen prefer the cities. I think that proper housing accommodation would go a long way towards reducing costs; the provision of schools, amusements, and other facilities and con-

veniences would tend in that direction. From experience we find that although single men are more or less easily obtained they are not nearly so satisfactory as married men. You never know when the single men may leave the job, whereas the married men have their family responsibilities, and are, therefore, more reliable. Bricklayers, carpenters, and plasterers at Canberra receive about 2s. a day extra as compared with the wages in town. In a brick cottage, masonry should mean about two-thirds of the cost, and labour one-third, but the cost of labour in Canberra is higher than in the city. I cannot say offhand how much the extra 2s. a day adds to the cost of the cottage, but I take it that, roughly, the difference in the cost as between, say, Melbourne and Canberra is about 15 per cent. Once proper housing accommodation is provided, and Canberra becomes an industrial centre, the extra allowance will not be paid. I built the kiln at Canberra, and I have used the bricks made there. I consider that 75 per cent. of the Canberra bricks are equal to the five best bricks made in the cities, the latter costing about £5 per 1,000. I cannot say whether a dry-pressed brick is as good as the bricks sold in Melbourne at £3 per 1,000; the dry-pressed brick has been made since I was at Canberra.

49. To Mr. Parker Moloney.—The difference in cost between the brick house in Melbourne and in Canberra is about £120. At Canberra we usually estimate the cost of a building as made up half of the cost of material and half of the cost of labour. There is about £60 difference in the amounts paid for labour as between Canberra and, say, Sydney. In that £60 is included the cost of the fares from Sydney; but the extra allowance of 2s. per day is the biggest factor. The prices of material are coming down, and bricklayers have latterly been paid 2s. 6d. as against 2s., owing to the large amount of labour available. It is possible there may be a decrease in the construction cost, mostly in regard to timber. I shall have to do with the sewerage work, but so far I have not been in touch with it. I consider that placing the concrete in situ is much cheaper than building in separate sections, and much cheaper than putting in, say, brick. We find that in nearly all cases that this is much cheaper than pre-cast work. The cost of the fencing for these cottages at Canberra is very high as compared with that necessary for the ordinary working man's cottage elsewhere; the blocks are much bigger than a workman in the city would, perhaps, be able to pay for. The cost of the fencing is £50 or £60, and the drainage about £30.

50. To Senator Plain.—I do not know what the Government policy is in regard to the payment of rental on this £960 cottage; but carpenters, bricklayers, and plumbers are now earning very good wages. I cannot say whether these £960 cottages are in demand for all classes of labourers. An ordinary labourer in the city would probably take a wooden house, which, of the same dimensions as the brick house at Canberra, would cost between £600 and £700; but, as to this, I have not taken out the details. As to whether a labourer would be able to pay for even a weatherboard house at that price, much depends, of course, upon what wage he is earning; at present labourers are paid 17s. 8d., which is high. It depends on the policy of the Government whether constant employment is provided at Canberra. There is no doubt that continuity in employment makes a difference in costs, and in this connection there has always been trouble at Canberra. It is very hard to keep men at the highest pitch of work if they know or think they are going to be put out of employment. I understand that Mr. Mirdoon has considered the question of reducing the accommodation, and, consequently, the cost of these houses, and I do not know whether he would be prepared to go any further. A man could not be offered much fewer

F.100.—3

than four rooms, and small rooms at that. In the matter of the drainage, if there were an open cut I think it would be cheaper to place the concrete in situ; in similar work we have found it cheaper to do so. The result is equal to reinforced pipes; indeed, this plan is even more reliable, because there are not so many joints. Where the concrete is exposed, we put an expansion joint, and in the case of an open cut we would have to put in joints at intervals to allow for contraction. There is no need for reinforcement under the plan I am speaking of. Pipes are reinforced for transport purposes.

51. To Mr. Bamford.—When I left Canberra in 1916 there were no workmen's cottages built by the Government. I think the average size of the allotments is 70 feet x 120 or 130 feet. I have never gone into the question of the values of the allotments, because that is a matter for the Home and Territories Department. The cost of the land has to be added to the lowest possible cost of the cottage, and the value of the land all depends on the location. In addition to the cost of the house and the land, the occupier will have to pay rates, and if he be charged 6 per cent as rent it will mean about £1 per week. I do not think that the Department has made any estimate as to the cost of wooden houses with rough-cast walls on a steel lattice. I do not think that such a house would last very long. Altogether there are 37 cottages, about six of which are not yet completed, though nearly so, there remaining only the fencing and outside services to provide. I believe there is a demand for these cottages. The fixing of the rents is a matter for the Home and Territories Department.

52. To Mr. Mathews.—We have built a cottage at Seymour recently in connexion with the mobilization store, similar to the cottages now being constructed at Canberra. The cost of the cottage at Seymour was about £768. We put in the Kaustine system of drainage, which costs about £45 completed. This cottage is not exactly the same as that at Canberra, varying in regard to the material used for the verandah and roofing.

53. To Mr. Parker Moloney.—The fencing of the Seymour cottage cost £60.

54. To Senator Plain.—The £768 does not include electric light.

55. To Mr. Mathews.—We have not had a long experience of the Kaustine system, but it has been installed in a good many country post-offices, and we cannot see that anything should go wrong with it. We have not yet had any experience of the emptying of the effluent, but there should be no difficulty. Everything is liquefied, and it is simply a matter of pumping; it depends on the soil. We do the fixing ourselves, and the chemical is supplied with the setting, one charge is supposed to last about six months. We have had no difficulty so far in obtaining a supply of the fluid, which, I understand, is simply a strong solution of caustic soda. I think we may feel assured of a continuous supply, for it is not a special chemical to manufacture. If the company were to go out of business, I think we could get the necessary material. The cost, as compared with that of ordinary sewerage, depends on circumstances—on how far you have to run your drain. With the Kaustine system there is no drain at all, but only a pumping outfit, and no water is necessary. It is the laying of a sewerage drain that is the expense in sewerage work. I certainly think that we get better results from workmen if they feel that they have a fairly continuous job; at any rate, that is our experience at Canberra. I think that we get a fairly large percentage of better results under such circumstances.

(Taken at Melbourne.)

FRIDAY, 7TH APRIL, 1922.

Present:

Mr. GREGORY, Chairman;

Senator Newland	Mr. Mathews
Senator Plain	Mr. Parker Moloney.
Mr. Jackson	

Percy Thomas Owen, Director-General of Works, Department of Works and Railways, recalled and further examined.

56. *To the Chairman*.—Taking the cost of the whole hotel at £98,745, I have estimated that it would cost approximately £69,000 to erect the central administrative block, and one half of the number of pavilions—two two-story ones, and three one-story pavilions. I have not the details of this expenditure with me; but the figure quoted includes the cost of the building and the engineering and other services. If details are required, I can supply them later. If only portion of the Central Administrative block were undertaken, the result would not be so good architecturally, and it would be rather difficult to reduce the structure and then add to it at a later date. I do not think it would be economical to reduce that part of the accommodation with the intention of completing it later, because when building was recommenced it would cost more to re-start construction. It would cost more than the interest which would accrue on the portion of the building which may not be required. There would be some reduction in the cost of the water supply and sewerage services. The main engineering services, the main sewer, and the water and storm-water drains for the sunken gardens would remain the same for the part scheme as for the whole; but, on the other hand, there would be a reduction for the actual sewerage reticulation and the water services of the five pavilions. If one half of the building were constructed, say, four or five years hence, assuming prices remain the same, it would cost a little more to recommence construction instead of carrying out the scheme as a whole in the first place. For instance, if the construction of the pavilions were to be continuous, the men would have repetition work, and on that account a reduction in cost should be looked for. And further, if the work is stopped and then recommenced in three or five years, the organization would have to be got together, and workmen may have to be sent to the spot. Unoubtedly, the cost would be greater if the work were done in that way. The additional expenditure would not be very great; but, of course, it is possible that beneficial experience may be gained by delaying a portion of the construction for a few years. Assuming the cost of construction would be the same in four or five years' time, I believe that the advantages to be gained would not be sufficiently great to justify the delay. The estimate of £98,750 includes the buildings and services, including lighting and water supply, but not furnishings. We have not included a fire-sprinkling installation, although one may be necessary. I have been asked whether I can supply an estimate of the cost of the silverware, glassware, cutlery, and napery likely to be required; but, in the short time at my disposal, I have been unable to get details, although the Chief Architect, on my behalf, had an interview with an expert who has conducted several leading establishments in Melbourne, and this gentleman has put it down at £15,000 for 200 guests, and £20,000 for 100 guests. In the report to the Advisory Committee, I suggested £20,000, and I think an estimate of £15,000 for 200 guests is cutting it rather fine. By adding £5,000, it would not add materially to the tariff to be charged to the guests. We have allowed 5 per cent. on the land,

and 7 per cent. on the buildings. That gives interest on the capital at 5 per cent., and the 7 per cent. would cover also a sinking fund. One, and a quarter per cent. would be sufficient for depreciation on such a building, and 2 per cent. would be adequate for a sinking fund. We have allowed 15 per cent. for replacements and interest on furniture, some of which is likely to be damaged. Mr. Murdoch had a conversation with a leading Melbourne hotel proprietor, who suggested that a staff of fifty should be sufficient to meet the requirements of 200 guests, and included in that number would be men whose work would be to keep the garden in good order. Of course, it is only a rough estimate; but it could not be anything else at the present juncture. I have been asked whether I am of the opinion that the hotel should be conducted by the Government, or whether it would be desirable to lease it to a private individual, and my personal opinion is that I think a private individual should conduct it. If it were under the control of other than Government officials, those in authority would have greater power in dealing with the shortcomings of the members of the staff than a representative of the Government would have. Instances may arise in which servants would have to be discharged because of the unsatisfactory way in which their duties have been performed, and it might be much easier for a private individual to dismiss them than it would be for a representative of the Government. Of course, if the hotel were leased to a private individual, the charges to the guests would possibly be higher, because he would, suppose, expect a profit of at least £1,000 a year. I do not wish to infer that the hotel could not be well managed by experienced men appointed by the Government. Apart from members of Parliament and other dignitaries of the Crown, many people will be accommodated in the building. I believe that the hotel will be fairly well patronized throughout the whole of the year; and when Canberra is looming large in the public eye, it will be a place of great interest, and in time a place of great beauty. It is, of course, a conservative estimate to allow for only one half of the building to be occupied, but when Parliament is sitting, there will naturally be a larger influx of visitors. On the basis of the figures supplied to me by the Chief Architect, and which I have gone through with him, the guest charge per day for rent, calculated on land, buildings, and furnishings, of the complete scheme for about 200 guests, would work out at about 5s. 1d. per day. For the information of the Committee, I hand in the following table:—

COMPLETE SCHEME FOR ABOUT 200 GUESTS.	
Estimated Annual Charges, on Basis of Half-occupation.	
	Per annum.
Land—£2,000, at 5 per cent.	£100
Buildings, &c.—£100,000, at 7 per cent.	7,000
Furnishings—£15,000, at 15 per cent.	2,250
Staff—50, at 70s. per week (not including food)	9,100
Food—100, at 3s. per day	5,475
Consumable Stores—150 persons, at 6d. per day	1,350
Fuel	750
Water—150 persons, 80 gallons per day, at 1s. 3d. per 1,000 gallons	270
Lighting—150 persons, at 3d. per day	750
Municipal rates	250
Contingencies	500
Total	£27,743
Revenue.	
100 guests, at 15s. per day	£27,375
Profits—Drinks, tobacco, and sundries	300
Total	£27,675

The actual guest charge of 5s. 1d. per diem above mentioned would be on the basis of the whole hotel half full on an average throughout the year. On the other hand, with accommodation for only 100 guests, and only half

full, the rent per guest per day, calculated on capital expenditure on land, buildings, and furnishings, would be 6s. 9d., which amount is made up from the following table:—

HALF-REDUCTION OF SCHEME FOR ABOUT 100 GUESTS.	
Estimated Annual Charges on Basis of Half-occupation.	
	Per annum.
Land—£2,000, at 5 per cent.	£100
Buildings, &c.—£50,000, at 7 per cent.	3,500
Furnishings—£7,500, at 15 per cent.	1,125
Staff—30, at 80s. per week (not including food)	2,240
Food—50, at 3s. per day	2,737
Consumable Stores—50 persons, at 6d. per day	675
Fuel	375
Water—50 persons, 100 gallons per day, at 1s. 3d. per 1,000 gallons	157
Lighting—50 persons, at 3d. per day	305
Municipal rates	250
Contingencies	300
Total	£16,669
Revenue.	
50 guests, at 17s. per day	£16,512
Profits—Drinks, tobacco, and sundries	150
Total	£16,662

We have not assumed that if only a portion of the building were constructed that it would be more fully occupied than if the whole scheme were undertaken. The capital cost of the structure is not so likely to increase the charges to the guests as the scale of catering and contingencies. The figures I have given to the Committee are based on the assumption that a moderate bill of fare and contingencies will be provided. We have assumed that a four-course dinner would be supplied instead of one consisting of six or seven courses. In these circumstances, I think the figures we have taken out show that the expenses of the establishment could be met with 100 guests. The revenue from 100 guests at 15s. per day, if accommodation were provided for about 200 guests, would be £27,375, plus £300 for profits on drink, tobacco, and sundries, making a total of £27,675. The expenditure, which amounts to £27,743 on the complete scheme, is set out in the table first submitted. We have allowed for a staff of fifty, at an average weekly wage of £3 10s., which, of course, includes the remuneration of the lowest and highest paid officials. The cost of food for 100 guests has been set down at 3s. per day, which will, of course, only provide edibles on a modest scale. The estimate of 3s. per day is cutting it rather fine, and if a more elaborate scale is to be provided, the cost will have to be increased. If the figure were increased to 4s. per day, it would bring the price per guest to 16s. per day. We have allowed £1,368 (150 persons, at 6d. per day) for consumable stores, which include polishes, soap, dusters, &c. An amount of £100 per annum has been set down for land, which is 5 per cent. on £2,000. I have not consulted the Surveyor-General as to the present and prospective value of the land; and, although it has been put down at £2,000, it has not cost the Government anything like that amount. At the rates I have given, it could not be expected that a bill of fare such as that provided at the Hotel Australia and Usher's, in Sydney, or Carlyon's, in Melbourne, would be afforded. A good deal of the food required would be procurable locally; but fish, and other delicacies, which are not obtainable in the district, could only be made available to guests at a higher rate.

57. *To Mr. Parker Moloney*.—The guests at the hotel who require more than a modest bill of fare could, I suppose, have their requirements met; but I have given the absolute minimum. The figures quoted include the cost of food and accommodation, and if the hotel were under the control of a private lessee, the rates would probably be higher, because he would want

a profit in the vicinity of the amount I have already mentioned.

58. *To the Chairman*.—I believe it is the practice to charge guests staying only a day or two a higher rate than those who are remaining for a longer period, and probably that would be done in this instance. I would prefer to provide accommodation for 100 guests at the outset, although it would mean charging a little more per day.

59. *To Mr. Jackson*.—I have said that additional cost might be involved in sending men to Canberra if part of the building were to be deferred for three to five years, because it must be remembered that in, say, five years' time, the great pressure of work will have been relieved. It is true that a certain number of suitable men should be available on the spot; but it is always more costly to recommence a job than to continue it to completion after operations have once commenced. The artisans become acquainted with the nature of the work, and are likely to go from one section to another to undertake similar construction. It is possible that in five years' time building firms will be operating at Canberra, and will have plant available; but, apart from scaffolding, drays, and barrows, very little plant is required in constructing a building such as that proposed. No cranes or heavy mechanical appliances are necessary. I believe that 20s. a day would return interest on a capital cost, without showing a profit; but I think it could be done for less.

60. *To Mr. Mathews*.—The question of constructing low pretentious establishments, where accommodation could be secured at from 10s. to 12s. a day, was contemplated by the Advisory Committee. The Committee proposed a building programme for hotels to accommodate married officers, including dining, smoking, and ladies' rooms, and suggested that the expenditure in the first year from Government funds should be £10,000, in the second year, £25,000; and in the third year, £25,000; a total of £60,000. For unmarried officers, nothing was provided for the first year, but £40,000 was mentioned for the second year, and £52,000 for the third year, making £92,000, or a grand total of £152,000 for hotels that would be required by the time Parliament under review is to attract people to Canberra, and to popularize the capital by having a place where people could stay during the early stages. The other hotels I have just mentioned would be to provide the accommodation required for the administrative staff at Canberra. If the hotel under consideration is to be erected at all, the Advisory Committee was of the opinion that it should be erected at an early stage, for one reason I have given. It is anticipated that Government officials and their families will reside at the hotel. We expect the Government to erect 310 cottages, and we anticipate that private enterprise will erect another 360 to accommodate married people. We consider that a certain number of young married couples will be quite content to live in hostels, as it is probable that it will be more economical for them to live in that way than to occupy a cottage for which they would have to pay rent. We have assumed that 456 families will live in cottages, and 177 in hostels. This proposition has the advantage that a large sum has not to be paid for the site, such as is the case in connection with a city hotel. The view of the Advisory Committee was that the hotel would popularize Canberra and assist in its early development. The other hostels would be for a different purpose, and would accommodate the administrative staff, and those officials who are going to Canberra. If there is no advantage in popularizing the Federal Capital, I should say postpone the hotel, but we should not confuse the objects of the respective schemes. We believe that by the time Parliament meets there will be other hostels in which people can be

accommodated. I do not think anything has been decided by the Government as to the policy to be adopted in regard to the leasing of land; and, in this connexion, I may quote paragraph 86 of the Advisory Committee's report, which reads—

(e) *Inauguration of Administrative and Civic Functions and Services.*

(e) *Inauguration of Administrative and Civic Lands.*—Before city lands could be leased, it would be necessary that building regulations be promulgated. These would require to be specially drafted to suit the peculiar conditions under which the Federal Capital would develop, and which would be quite different to those affecting ordinary cities or towns. The leasing of lands is, however, a step which the Committee advises should be deferred until the construction of the first stage is well advanced, the exception being sites for ecclesiastical buildings. It is thought that, under such circumstances, there would be a more definite prospect of inducing the public to lease land at good rentals than if leases were granted whilst there might remain in the public mind any uncertainty as to how and when the city would be occupied by the Government.

At present, a good deal of the land has not any water or sewerage reticulation, the roads have only been commenced, and, in fact, a lot of it can be only regarded as sheep paddocks. I believe the Government could deal more advantageously with leases when these services are established and not in prospect.

61. *To Mr. Parker Moloney.*—It is estimated that if one half of the construction work were to be undertaken that the building would be completed and ready for occupation in about eighteen months. Probably the time could be somewhat reduced, but I think that is a reasonable estimate. The work is of such a character that there are many points which could be attacked at the same time, and therefore facilitate progress. Working on the most economical basis, I believe one half of the structure could be completed in eighteen months.

62. *To the Chairman.*—If a charge of 10 per cent. of salary is made to some officers occupying Government quarters, I do not think that it would apply to the proposed hostel. The enactment or regulation which governs such a point would have to be modified to suit the altered circumstances. It is proposed that most of the domestic buildings will be of brick, rough-casted, with red-tiled roofs, and I favour a majority of the buildings being constructed in that way. I would not favour grey or ordinary cement tiles, but slates could be used to break

the monotony. By varying the type of tile, a pleasing effect can be obtained. Instead of using all tiles of the Marseilles pattern, we could use Roman, or shingle tiles in some cases. The tiles manufactured at Canberra will not be of a light colour, but of a rich red; the plant is well in hand for tile-making. In the past we have made them by hand, but those produced in future will be machine-made.

63. *To Mr. Jackson.*—Bricks cost more to manufacture at Canberra than at some other centres, because of the cost of coal and the higher rates of wages. I understand that bricks in Sydney have increased 5s. per 1,000 during the last fortnight. The bricks at Canberra should be of a better quality, partly owing to the nature of the mudstone we use, and the plant by which they are turned out. The extra expense of oil is a heavy item, and the additional grinding which is necessary in handling the stiff plastic also adds to the cost. An extra cost of 10s. per 1,000 on 30,000 bricks in a cottage would be only £15, and I would not hesitate to pay the extra amount to secure a better brick.

64. *To the Chairman.*—Although it may be said that, with an expenditure of £50,000 on a plant, and with facilities for obtaining the raw material, we should be able to produce at a lower cost, I have already mentioned two factors which have to be considered, namely, the cost of the oil and the grinding of the stiff plastic. We have been paying higher wages, and also granting an allowance to some of the workmen, and that allowance must be continued until Canberra is created a centre by the Crown or by the Arbitration Court. It is estimated that the tiles will cost £12 per 1,000; and, although I would be prepared to allow the tilemaker £13, he says he can do it for the lower figure. It is proposed to supply bricks to contractors at cost price, which, of course, will include all overhead charges. I have been asked my opinion as to whether the building, if erected, would be a better paying proposition if conducted as a hotel with a licence, and my personal opinion is that it would. I do not think there is any doubt that if those conducting it were licensed to sell alcoholic liquors it would pay better, and would certainly make it a financial concern. Quite apart from the profits which undoubtedly accrue from the sale of alcoholic liquors, by conducting the premises as a licensed hotel, it would obviate the necessity of some travellers taking liquor with them. Some guests prefer liquor with their meals, and it would be an inconvenience if obliged to do so. If the building were conducted as a licensed hotel, it would tend to make it more popular.