

1927.



THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA.

*Brought up  
Laid on the table  
Senator Barne*

Pursuant to Statute  
By Command  
In return to Order

PARLIAMENTARY STANDING COMMITTEE  
ON PUBLIC WORKS.

of the Senate.  
MAR 21 1927

REPORT

TOGETHER WITH

MINUTES OF EVIDENCE

RELATING TO THE PROPOSED

ERECTION OF COMMONWEALTH  
OFFICES, SYDNEY.

*Presented pursuant to Statute; ordered to be printed,*

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

# MEMBERS OF THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

(Fifth Committee.)

GEORGE HUGH MACKAY, Esq., Chairman.

1 A.P.

## Senate.

Senator John Barnes.  
Senator Patrick Joseph Lynch.†  
Senator Herbert James Mockford Payne.\*  
Senator Matthew Reid.

## House of Representatives.

Robert Cook, Esq., M.P.  
The Honorable Henry Gregory, M.P.‡  
Andrew William Lacey, Esq., M.P.  
David Charles McGrath, Esq., M.P.  
Alfred Charles Seabrook, Esq., M.P.

\* Appointed 1st July, 1926.

† Resigned 30th June, 1926.

‡ Resigned 2nd March, 1927.

## INDEX.

	Report	Minutes of Evidence	Page
Report .. .. .	1	1	1
Minutes of Evidence .. .. .	1	1	1

## EXTRACT FROM THE VOTES AND PROCEEDINGS OF THE HOUSE OF REPRESENTATIVES.

No. 65, DATED 13TH JULY, 1927.

5. PUBLIC WORKS COMMITTEE—REFERENCE OF WORK—COMMONWEALTH OFFICES, SYDNEY.—Mr. Hill (Minister for Works and Railways) moved, pursuant to notice, That, in accordance with the provisions of the *Commonwealth Public Works Committee Act 1913-1921*, the following proposed work be referred to the Parliamentary Standing Committee on Public Works for investigation and report, viz.:—The erection of Commonwealth Offices, Sydney—Mr. Hill having laid on the Table plans, &c., in connexion with the proposed work—  
Debate ensued.  
Question—put and passed.

## LIST OF WITNESSES.

Banks, John, Acting Collector of Customs, New South Wales .. .. .  
Maher, Thomas Victor, Boarding Officer, Department of Trade and Customs, and President, Commonwealth Public Service Clerical Association of New South Wales .. .. .  
Murdoch, John Smith, Director-General of Works and Chief Commonwealth Architect, Department of Works and Railways .. .. .  
Nicol, William Gordon, Quarry Engineer, Federal Capital Commission, Canberra .. .. .  
Owen, Percy Thomas, Chief Engineer, Federal Capital Commission, Canberra .. .. .  
Todd, Charles Herbert Uttley, Commonwealth Works Director for New South Wales, Department of Works and Railways .. .. .

# PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

## ERECTION OF COMMONWEALTH OFFICES, SYDNEY.

### R E P O R T.

The Parliamentary Standing Committee on Public Works, to which the House of Representatives referred, for investigation and report, the question of the erection of Commonwealth Offices, Sydney, has the honour to report as follows :—

#### INTRODUCTORY.

1. In November, 1920, the House of Representatives referred to the Parliamentary Standing Committee on Public Works for investigation and report the question of the provision of offices for Taxation and other Commonwealth Departments in Sydney.

2. After investigating the proposal, the Committee expressed the opinion that it was advisable that a Commonwealth building of the nature indicated should be erected in Sydney, and recommended that the necessary action should be taken subject to a suitable site being obtained at a reasonable price.

3. As the site contemplated at the time could not be obtained on favourable terms, and as the transfer of tax collection to the State rendered the necessity for a building less urgent, the project was postponed.

4. In May, 1926, representations were made by the Department of Trade and Customs, Sydney, that further office accommodation was required for the purposes of that Department, and it was urged that the Department of Works and Railways should make available for Customs purposes the area of approximately 10,000 square feet occupied by it in the Customs House, and obtain accommodation elsewhere.

5. As inquiries showed that the leasing of this amount of accommodation would involve the Commonwealth in a considerable annual expense, the project was revived of the Commonwealth erecting for its own purpose a building in which could be accommodated the Department of Works and Railways and those other Commonwealth activities in Sydney at present housed in rented premises in various parts of the city.

#### PRESENT PROPOSAL.

6. The proposal submitted for investigation by the Committee aims at the erection, on certain land in Phillip-street, Sydney, acquired for the purpose, of a modern fire-resisting structure having reinforced concrete piers and beams and brick walls the front of the building being faced with axed trachyte from ground level to a height of about 5 feet, and from that point to the top faced with Hawkesbury sandstone.

The building proposed will consist of a basement, a ground floor, and 10 other floors. It is proposed that the basement shall be of a height of 8 ft. 6 in.; the ground floor 16 feet; the first and second floors 12 ft. 9 in.; the third floor 12 ft. 6 in.; the fourth, fifth, sixth, seventh, eighth, and ninth floors 11 ft. 9 in.; and the 10th floor, 11 ft. 6 in.

The floors will be of concrete, covered with wood blocks laid in bitumen; the window frames will be of steel, and there will be a flat roof. Two electrical elevators, 6 feet x 7 feet, and capable of carrying fifteen passengers each will be provided, and there will also be a continuous staircase.

Accommodation will be provided on each floor, and the whole building will be lighted and ventilated with direct fresh air supplied to all parts.

## ESTIMATED COST.

7. The estimated cost of the proposal as submitted to the Committee is set down at £108,817, and the time fixed for completion two years from date of commencement.

## COMMITTEE'S INQUIRIES.

8. The Committee visited Sydney, inspected the site on which it is suggested the proposed building should be erected, and took evidence from the Director-General of Works, the Commonwealth Works Director, New South Wales, the Acting Collector of Customs, Sydney, and others. In addition, an inspection was made of certain premises in Sydney now rented by the Commonwealth for the accommodation of its various activities.

## SITE.

9. The site proposed for the offices under consideration comprises an area of land in Phillip-street, Sydney, one block north from the corner of Hunter-street, which was acquired by the Commonwealth in 1922 for the sum of £25,000. It has a frontage of 157 ft. 1½ in. to Phillip-street, and an average depth of 126 feet, and is an excellent building site.

On one-half of the area are four three-storied brick dwellings let by the Commonwealth on a monthly tenancy, and on the other half a motor garage, from which the Commonwealth receives £260 per annum under a lease which expires in May, 1930, but which is sublet at a rental of £1,000 per annum.

It was explained in evidence that, in order to avoid the payment of compensation which would be involved if the lease of the garage were determined at once, it was proposed to demolish at present only the dwellings, and proceed with the erection of a first section of the building on about half the area, reserving the remainder of the area for a further section of the building when occasion warranted it.

## SPACE AVAILABLE.

10. Under the scheme submitted, the office space which could be provided in the proposed new building, exclusive of essential corridors, staircases, lavatories, and lifts, would comprise:—

In first section.			In second section.		
Basement floor	..	7,646 square feet.	..	7,304 square feet.	
Ground floor	..	7,054	..	6,862	..
First floor	..	6,175	..	6,166	..
Second floor	..	6,175	..	6,166	..
Third floor	..	6,175	..	6,166	..
Fourth floor	..	6,175	..	6,166	..
Fifth floor	..	6,175	..	6,166	..
Sixth floor	..	6,175	..	6,166	..
Seventh floor	..	6,175	..	6,166	..
Eighth floor	..	6,175	..	6,166	..
Ninth floor	..	6,175	..	6,166	..
Tenth floor	..	6,175	..	6,166	..
		76,450			75,826

Total for whole building, 152,276 square feet.

## RENTED PREMISES.

11. During the course of the Committee's inquiry, it was ascertained that certain Commonwealth activities in Sydney are housed in the Commonwealth Bank building, while others are occupying privately-owned premises in various parts of the city; the total space rented being 49,706 square feet, and the rental paid aggregating £12,091 per annum.

Although the rental paid ranges as high as 10s. 1d. per square foot and works out at an average of 4s. 10d. per square foot per annum, some of the accommodation is inadequate and unsuitable, and as the Committee was assured that more suitable office accommodation in its own building could be provided at a reduced cost, it has no hesitation in recommending that that course be followed.

## SIZE OF BUILDING.

12. The Committee carefully considered the question of whether the whole of the site acquired should be utilized at once by the erection of the complete building designed to ultimately occupy it, or whether the Commonwealth should content itself with a section of the building until the growth of existing departments or the expansion of Commonwealth activities in Sydney should make additional office accommodation essential.

On the one hand it was pointed out that to determine the lease of the motor garage which occupies approximately half of the site would involve the Commonwealth in certain claims for compensation, whereas if the lease is allowed to run out in May, 1930, such expense would be avoided.

On the other hand it was urged that the cost of building is increasing, and that to erect the structure in two sections rather than as one transaction would cost more than would be saved by the non-determination of the lease.

Some members were of opinion that it would tend to greater ultimate economy if the whole of the building were erected at the present time, and it was urged that any accommodation in excess of the present Commonwealth requirements could readily be leased to the State Government or others until required by the Commonwealth. As against this, it was contended that it was not the legitimate function of the Commonwealth to provide so largely in excess of its own requirements as to enter into competition with private enterprise, and that if the first section of the building would provide all the accommodation that could be foreseen as being required for the next five years, any further development could be dealt with at that date.

As previously stated, the area available in the first section of the building would be 76,450 square feet of effective office space. The total floor space rented by the Commonwealth in Sydney at present is 49,706 square feet, which, with approximately 10,000 square feet required by the Department of Works and Railways, would still leave 16,744 square feet of space to allow for the accommodation of other Commonwealth activities and expansion of business.

Under these circumstances, the Committee decided by a majority to recommend that the first section only of the building be proceeded with at present, the minority favouring the erection of the complete building.

The decision arrived at by the Committee in connexion with this matter is shown by the following extract from its Minutes of Proceedings, viz. :—

Senator Payne moved, That the Committee recommend that the erection of the first section of the building as suggested by the Department of Works and Railways be proceeded with.

Seconded by Mr. Seabrook.

The Committee divided on the motion—

Ayes, 4.

Senator Payne.

Senator Reid.

Mr. Mackay.

Mr. Seabrook.

Noes, 2.

Mr. Cook.

Mr. Lacey.

And so it was resolved in the affirmative.

## ESCAPE STAIRCASE.

13/ 12a. With the erection of the first section of the building only, the Committee observed that the staircase and elevators would be in close proximity in the north-west corner. As this offers a potential risk in the event of fire, the Committee recommends that an additional staircase be provided at the rear of the building to provide a means of escape for the occupants in case of need.

## LUNCHEON ROOM.

14/ 13. In the course of its investigations, representations were made to the Committee by the President of the New South Wales Branch of the Commonwealth Public Service Clerical Association, that a suitable luncheon room be provided in the building for the use of the occupants.

Attention was directed to the facilities afforded in this respect to the occupants of the Commonwealth Bank building and to officials of the General Post Office, as well as the steps taken by private firms to make similar provision for the comfort and convenience of their employees. As it is expected that at least 530 officials will be working in the proposed building, the Committee is unanimously of opinion that space should be set apart therein for the provision of a luncheon room for the use of the occupants of the building. 14f

## FACING WITH STONE.

15/ 14. In the proposal submitted to the Committee, it was suggested that as this building will occupy an imposing site in the heart of Sydney, its appearance would be improved by having it faced with stone.

Mention was made of sandstone, granite, or the crystalline limestone obtainable from the Commonwealth's property at Fairy Meadow. Evidence placed before the Committee, however, indicated that the cost of granite and Fairy Meadow limestone would be approximately 35 per cent. greater than sandstone, involving an additional cost in this building of £12,000 to £15,000. Under these circumstances, the Committee agreed to recommend the adoption of the departmental proposal that the facing of the building should be in the form of a base of axed trachyte to a height of about 5 feet, and from that point to the top of the building, white Hawkesbury sandstone.

## FINANCIAL ASPECT.

16/ 15. Apart from the gain in efficiency and convenience which might be expected to result from the concentration of Commonwealth activities in the one building, within easy reach of most of the State Government offices, it was pointed out in evidence that there will be considerable financial advantage.

Allowing interest at  $5\frac{1}{2}$  per cent. per annum, sinking fund at  $\frac{1}{2}$  per cent. per annum, and maintenance charges at 1 per cent. per annum =  $6\frac{1}{2}$  per cent. per annum, the annual expenditure on the first section, which is estimated to cost £108,817, plus the cost of the whole of the land (£25,000) would be £9,032 13s. 107

On these figures, it will be seen that instead of paying an average of 4s. 10d. per square foot per annum for accommodation, some of which is very indifferent, the Commonwealth activities could be given first-class modern office accommodation at about 2s. 4d. per square foot per annum.

## SUMMARY OF RECOMMENDATIONS.

17/ 16. Briefly summarized, the recommendations of the Committee are:—

- (a) That urgent necessity exists for the provision of office accommodation for Commonwealth purposes in Sydney.
- (b) That the erection of a building on one-half of the site in Phillip-street, acquired for the purpose, be proceeded with.
- (c) That space be set apart in the building for the provision of a luncheon room for the use of the occupants of the building.
- (d) That the facing of the building consist of a base of axed trachyte, with Hawkesbury sandstone above the base.
- (e) That an additional staircase to afford a means of escape in case of need be provided at the rear of the building.

G. H. Mackay  
G. H. MACKAY,  
Chairman.

Office of the Parliamentary Standing Committee on Public Works,  
Federal Parliament House, Melbourne,  
10th March, 1927.

## COMMONWEALTH OFFICES, SYDNEY 1

(Take in Sydney.)

TUESDAY, 15TH FEBRUARY, 1927

Present:

Mr. MACKAY, Chairman;

Senator Barnes

Mr. Cook

Senator Payne

Mr. McGrath

Senator Reid

Mr. Seabrook.

Charles Herbert Uttley Todd, Commonwealth Works Director for New South Wales, Sydney, sworn and examined.

1. To the Chairman.—The proposal to construct Commonwealth offices in Sydney, which the committee ~~was~~ now considering, was first inquired into in 1921, but the work was not proceeded with as the land on which the building was to be constructed could not be acquired on favorable terms, and a little later a proposal to merge the Commonwealth and State income tax departments came up for consideration. These two factors led to the suspension of the proposal, but the primary obstacle at the time was the price asked for the land. I am acquainted with the site now under consideration, which is situated in Phillip-street, one block distant from the corner of Hunter-street, which has a frontage of 157 ft. 14 in. to Phillip-street, and an average depth of 126 feet. The land was acquired by the Commonwealth in 1922, and the negotiations were conducted by the Land and Property Branch, which was then associated with the Home and Territories Department, but is now in the Department of Works and Railways. The site and improvements were purchased for £25,000. The tenants at present occupying the buildings on the land are paying rent to the Commonwealth, and have been doing so since June, 1922. On one half of the block four dwellings are situated, which it is proposed to demolish, and on the other half, a motor garage, which is let on lease and which is to be left untouched for the time being. The Commonwealth is receiving £260 per annum in rent for the motor garage, the lease of which terminates in May, 1930. The four dwellings are let on a monthly tenancy. The primary reason which led to a revival of this project was the fact that the Collector of Customs wrote to the Department of Works and Railways in May, 1926, stating that he must have the space at present occupied by the Works and Railways Department in the Customs House with as little delay as possible. As this department occupies approximately 10,000 feet in that building it will readily be seen that it was a serious matter to rent similar accommodation, in view of the rentals asked by proprietors of suitable buildings. I made inquiries as to the office accommodation available in city buildings, and found that the best terms we could get ~~was from~~ Wembley House, which offered accommodation at 7s. 6d. per super. foot per annum.

In the Customs House we are tenants by grace, and pay a portion of the cost of cleaning, lighting, &c., but we do not pay any actual rent. At Kembala House, off George and Margaret streets, the best terms that I could obtain for a large area was 8s. 10d. per foot. In Wall's Building, in Loftus-street, which is a new structure, the rental worked out at 9s. per super. foot. In the Bank of New South Wales' Building, in Macquarie-place, the rent was 8s. per super. foot, and in the Eastern Extension Building, in Spring-street, 7s. 6d. per foot. At Winchcombe House, the property of Winchcombe, Carson and Son, which is a ramshackle building at the corner of Young and Bridge streets, the rental asked was 6s. 6d. in the basement, and 8s. 6d. per foot in the other portions of building. In the Commercial Bank building, known as Barrack House, the rate asked was 10s. per foot. Having made these inquiries, and gone to several other buildings in which I thought there was a reasonable hope of obtaining the

Limited /

## COMMONWEALTH OFFICES, SYDNEY 2

necessary space required, I came to the conclusion that we could not obtain anything at less than 6s. 6d. per super. foot. I made a report to the Director-General of Works as to whether the Government proposal to erect its own building should not be revived and submitted certain figures showing how, in my opinion, it would be a good financial proposal for the Commonwealth to do so. I suggested to him that we should construct one-half of the projected building, on the northern half of the site, so as not to interfere with the lease of the motor garage, and to transfer the departments, which are at present housed in various parts of the city, when the building was completed. The total rentals we are paying in the city for the branches we propose to transfer amount to £7,541 4s. 3d. That does not include all the buildings that are being rented. In addition, there would be the added cost of providing accommodation for the Works and Railways Branch in this State, which, on a conservative basis, would cost at least 6s. a super. foot. Having satisfied myself that we could not get it at less than 6s. 6d. I may say that at a rental of 6s. it would be equivalent to £2,500 a year, which would bring the total amount to a little over £10,041 4s. 3d. Being faced with the necessity of finding accommodation for the Works branch, Mr. Murdoch instructed me to prepare a statement of the expenditure to be incurred on a new building, and to show the saving which would be effected in rentals. The plan of the proposed structure, which will be explained by Mr. Murdoch, was then prepared. The first section it is proposed to construct provides a total available floor space of 76,460 feet, at an estimated cost of £108,817. The second section, which it is not proposed to build at present, and which will provide a floor area of 75,826 feet, is estimated to cost £103,546, making a total estimated cost for the whole building of £212,363. The cost of the site is not, of course, included in that amount. When I prepared my original figures in June of last year the estimate was considerably less, as since then Mr. Murdoch has decided that it is desirable to include a basement for the convenience of storage for all departments to be housed in the building. It has always been found in connexion with Commonwealth offices that there is inadequate space for the storage of records and documents that must be retained for a number of years. It has been found of great convenience to have a basement for such a purpose in the Commonwealth offices in Adelaide. It does not cost as much to provide a basement as ordinary office space. In addition, there have been further increases in wages awards in the plumbing, carpentering and painting trades in New South Wales, which has tended to increase costs. There has also been provision made for workers' insurance, which has added largely to the cost, and a child endowment bill which is now before the State Parliament will, if passed, add further to the cost. In the present estimate I have taken all these factors into consideration, and therefore feel that we are safe in assuming that the work can be carried out at the price estimated. Adding to the cost of the first section, which is £108,817, the actual cost of the whole site, which was £25,000, makes a total of £133,817. The rentals that we shall save by transferring the various Commonwealth offices into the new building, plus the £2,500, which is a conservative estimate for the cost of accommodating the Works and Railways Department, makes a total of £10,041 4s. 3d., which is equivalent to 7½ per cent. return on the whole cost of the land plus the first half of the building, and we shall then have available for occupation 25,000 feet of floor space which, if the Commonwealth Government did not require the whole of it,

it

/cap

b/c.c

/£10,000



# COMMONWEALTH OFFICES, SYDNEY 3

could be let. I have been assured by the land and property officer that it would be, he thought, an easy matter to arrange with the State Government to occupy a portion of the building until such time as we required it. Taking that at a very low rental of 4s. per foot of floor space, as against 6s. 6d., we would obtain another £5,000 per annum, or a total return of over 11 per cent. on the outlay for the first half of the building, plus the full cost of the land. In addition, we would receive the £260 per annum as rental from the motor garage, the lease of which, I understand, at present it is not proposed to interfere with. In the face of these figures, I do not think it necessary to go into further detail concerning the financial aspect of the proposal. For the information of the Committee, I submit the following statement showing the departments at present occupying rented premises, and the amounts paid:—

## COMMONWEALTH BANK BUILDING.

### 5th Floor—

Sub-Treasury.—2,509 sq. feet, £903 9s. 6d. per annum; no lease.  
Auditor-General.—2,063 sq. feet, £715 10s. 6d. per annum; no lease.

### 6th Floor—

Patents and Trade Marks.—895 sq. feet, £393 4s. per annum; no lease.  
Deputy Crown Solicitor.—3,126 sq. feet, £1,235 16s. per annum; no lease.

### 7th Floor—

Prime Minister and Governor-General.—4,580 sq. feet., £1,629 per annum; no lease.

### 8th Floor—

Members' Rooms.—2,244 sq. feet, £872 16s. 11d. per annum; no lease.  
Public Service Inspector, 1,268 sq. feet, £493 4s. 3d. per annum; no lease.  
Governor-General's Typist.—424 sq. feet, £164 18s. 6d. per annum; no lease.  
Dr. Watson's Room.—252 sq. feet, £98 0s. 5d. per annum; no lease.

Taxation Appeal Board, 16 Grosvenor-street (includes Board Room).—About 1,400 sq. feet, £273 per annum; lease expires 18th September, 1929.

Lighthouse Branch, Globe-street, City.—1,680 sq. feet, £260 per annum; lease expires 2nd October, 1929.

Film Censorship Offices, Spring-street, City.—1,600 sq. feet, £300 per annum; five years' lease, from 1st June, 1921.

War Service Houses, Clarence-street, City.—About 9,500 sq. feet, £1,500 per annum; four years' lease, from 1st August, 1926.

Taxation Department, George-street North.—About 12,250 sq. feet, £1,500 per annum; lease expires 30th September, 1927.

Federal Patent and Trades Mark Library, Commonwealth Bank Building, Flinders-street.—About 1,400 sq. feet, £104 per annum; three years' lease.

Commonwealth Peace Office, 5 Macquarie-place.—

500 sq. feet, £113 per annum; month to month

New Guinea Trade Agency, Commonwealth Bank Chambers, Pitt-street.—Approximately 1,580 sq. feet, £372 18s. per annum; monthly.

Australian Commonwealth Shipping Board, Q.N. Bank Chambers.—Approximately 2,275 sq. feet, £1,150 12s. per annum; lease expires 21st November, 1928.

1/10  
Cape

1/2

1/97

1/7

# COMMONWEALTH OFFICES, SYDNEY 4

Pensions Office.—About 3,500 sq. feet. (At present accommodated in Repatriation Building, having recently vacated rented premises in York-street, City.)

Total rentals, £12,000 10s. 1d., per annum, of which £8,516 0s. 1d. per annum is paid to Commonwealth Bank. /89

Total floor space rented, 49,706 sq. feet, which averages 4s. 10d. per sq. foot per annum.

The Commonwealth Bank authorities are of the opinion that the rentals paid for modern office accommodation provided in the Commonwealth Bank building, which is in the heart of the city, are ~~much~~ too low. In the proposed building, provision has been made for 70,000 sq. feet in the first section, which will provide room for the expansion of the departments, if necessary, when they move. I understand that approximately 50,000 feet will be occupied from the outset. Provision has not been made for transferring the whole of the Commonwealth activities into the new building when it is completed. The Electoral Office, for instance, is accommodated in the Customs House, and is occupying between 3,000 and 4,000 feet. The Customs authorities have so far suggested that if only the Department of Works and Railways is removed they will have all the space they require for the time; but ultimately they will also require the space now occupied by the Electoral Branch. We shall use all the space required in the new building for Commonwealth purposes before considering any proposal to lease a portion of the building to others. It is a question of whether it would be desirable to incur the cost of removing the Electoral Branch if the space which it at present occupies is not required by the Customs Department. The Navigation Department and Lighthouse Branch are departments which are closely associated with the Customs Department, and are occupying rented premises, and I am of the opinion that it would be a sound proposition to transfer the Electoral Branch to the proposed new building when it is completed to make room for those departments which are closely associated with the Customs Branch. The Lighthouse Branch is paying £260 per annum for rented premises in George-street and also has storage accommodation which could not be provided at the Customs House. The Shipping Office is paying a rental of £300 per annum for premises in York-street, and I therefore think it would be a practical proposition to move the Electoral Office and allow the space in the Customs Department for such branches if the space is not required for the extension of Customs activities. The Health Department is also housed in the Customs offices, but it is so closely associated with the work of that branch that I have not considered its removal. Dr. Cumpston, the Director-General of Health, has on three occasions asked for additional accommodation. Consideration has not been given to the question of accommodating Federal members in the proposed new building. We could provide similar space in the new building at a reduction of quite 50 per cent. When everything is taken into consideration, the total cost will not work out at more than 3s. 3d., as against the minimum of 7s. 9d. per foot. The Commonwealth Bank is centrally situated, and is served by the Castlereagh and George-streets trams. The accommodation provided in the bank building for Federal members is in close touch with the Governor-General's quarters and the Executive Council room, and when Parliament meets permanently at Canberra there is no doubt that there will be greater activity in the Federal sphere in Sydney. Consideration has not been given, as I have said, to transferring the Federal members' rooms, Ministers' rooms, or the Governor-General's /91

## COMMONWEALTH OFFICES, SYDNEY 5

quarters. After providing for all the departments to be accommodated in the new building, or the Customs House, approximately 15,000 feet will still be available, but some of that space will probably be required in providing a meeting-room for the Public Works Committee, the Public Accounts Committee, the Tariff Board, and the Public Service Arbitrator when meetings are held in Sydney. I am sure that such accommodation will be more frequently required when Parliament meets at Canberra. It will be necessary also to make provision for suitable rooms for hearing appeals and the taking of evidence. I have also been approached concerning accommodation in Sydney for the Development and Migration Commission which was appointed last year. The central office of the Commonwealth Shipping Board is at present paying rent for premises in Hunter-street, and the officers of the Board could also be housed in the proposed building. The New Guinea Trading Agency, which is a governmental activity, have rented offices in the city, and could readily occupy a portion of the new building. The Custodian of Expropriated Property also has an office for which rent is paid. Every Commonwealth activity occupying office space other than that provided at the Commonwealth Bank could be housed in the first half of the building, which will provide all the accommodation we require for the time being. When the existing lease of the motor garage expires the construction of the second portion of the building could be considered, in which other Commonwealth activities, which I have not mentioned, could be housed. The Repatriation Department is at present occupying premises in Chalmers-street, Redfern, the floor space of which is from 25,000 to 30,000 feet, all of which they do not require. When space is available it might be desirable to transfer the Repatriation Department to the completed Commonwealth offices and sell the building in Redfern, which has appreciated in value since it was purchased. The Invalid and Old-age and War Pensions offices are situated in the building occupied by the Repatriation Department. The question of providing luncheon rooms for the occupants of the building has been discussed, but I do not know what decision has been reached by the Director-General. Approximately 530 officers will occupy the first portion of the building when it is completed. In testing the foundations, trial holes have been sunk until solid rock was reached, and the material has been examined by the Director-General of Works and myself. We are both satisfied that the bottom is an excellent one for building. The depth of a solid foundation is about 16 feet below the pavement in the front, and about 20 feet below ground level at the back where some filling has been done. Should the construction of the second portion of the building be proceeded with later it would not interfere with the occupation of the first section, as it is proposed to shield off the first section by a light construction, which can remain in position during the whole process of building, and can be removed later without any discomfort to the occupants. I am satisfied that the proposed site is a suitable one from a public viewpoint, as it is easily accessible by tram-car, and is very conveniently situated as regards the State offices, including the Works, Lands, and Police Departments, and is within easy distance of the General Post Office and the Customs House. I do not think the first half of the building could be economically erected under twenty months. If the Committee view the project favorably, and report upon the matter at a comparatively early date, the excavation would be undertaken in the winter, which would cause delay, and a really good start could not be made on the work until about the beginning of September.

COMMONWEALTH OFFICES, SYDNEY 6

2. *To Senator Reid.*—When inquiring into office accommodation for renting purposes, a slight reduction was made in several cases when it was known that the inquiries were being made on behalf of the Commonwealth Government. The Wireless Branch, which is closely associated with the Postmaster-General's Department, would undoubtedly prefer to have its office in the Post Office building where other activities under the control of that department are handled. I have told Mr. Barkley, of the Customs Department, that if he will be tolerant for a few months the reconstruction of a new building in which the Works and Railways Branch could be accommodated may be commenced. I do not think the Customs Department would consent to my department remaining there for as long as two years. /9

3. *To Mr. Cook.*—The Customs Department requires space for its own work, and it is only by a rearrangement of accommodation that we have been able to carry on until other arrangements can be made. This question has been considered before, but a difficulty arose concerning the land selected as, in the first place, the ownership was hard to determine, and when that point was settled the price asked was prohibitive. Whilst the matter was under consideration a proposal was submitted under which the State Income-tax Department should collect Federal income tax, and at that time the taxation authorities were most insistent that a new building should be erected. The Customs Department is now pressed for space, and therefore the project has been revived. The proposed alteration of the financial arrangements between the Commonwealth and the States, if adopted, would not affect this proposition at all. The site in Phillip-street has appreciated in value since it was bought by perhaps 50 per cent. /e

4. *To Mr. McGrath.*—I think the Commonwealth Bank authorities would be glad if Federal members were accommodated in a new Commonwealth building, as the space which they at present occupy could be let at higher rentals. /the

5. *To Senator Payne.*—The purchase price of the land in Phillip-street works out at about £160 a foot, and to-day I do not think there would be any difficulty in getting £200 a foot for it. The original site had a slightly shorter frontage, and about £50,000 was asked when it was known that the Commonwealth Government were the probable purchasers. The site was a little further down Phillip-street, on the same side, in the direction of the Public Works Department. /27

*The witness withdrew.*

*The Committee adjourned.*

COMMONWEALTH OFFICES, SYDNEY 7  
(Taken in Sydney.)

WEDNESDAY, 16TH FEBRUARY, 1927.

Present:

Mr. MACKAY, Chairman;

Senator Barnes,	Mr. Cook,
Senator Payne,	Mr. McGrath
Senator Reid,	Mr. Seabrook.

John Smith Murdoch, Director-General of Works and Chief Architect, Melbourne, sworn and examined.

6. To the Chairman.—In 1920 the advisability or otherwise of erecting a central office building in Sydney for branches of the Commonwealth Departments was referred by Parliament to the Public Works Committee, and in 1921 the Committee reported on the project in several alternative forms. The form most favoured was that a building should be erected on a site in Phillip-street adjoining the Government Printing Office. The site measured 120 ft. 9 in. by 100 ft. 8 in., but it had not been purchased pending a report from the Committee. The calculations placed before the Committee, however, were based on the probability of obtaining the site for about £20,000. Included in the alternative proposals, the Committee advocated the erection of a building on the site provided the land could be obtained at the figure mentioned, and also providing that further consideration might be given by the Department to certain other sites which had been mentioned, and that the Committee should be informed of the further investigations. Negotiations were commenced in respect of the site, but it was found, probably due to the publicity given to the matter, that it could not be obtained for £20,000, as the proprietors no doubt thought that the Government had made up its mind to have the land, and consequently took advantage of the position and increased the price to such an extent that it was not considered an economical proposition to go on with the project. However, the Department received the offer of another and larger site in Phillip-street, one block from Hunter-street, and nearer to the centre of the city by probably 150 yards, and which was purchased for £25,000. The new site is larger both in frontage and in depth than the first site which was under consideration, is in a better situation, and has improvements on it of such a nature that nothing has been lost by any delay which may occur in constructing the building, as the rents received from improvements provides good interest on the capital expenditure. Unfortunately, about one-half, on the southern end of the block, is held under a building lease which cannot be determined for several years and on which a motor garage is situated. The lease of this expires in about three years. As the case, however, is returning good interest, and it may not be an economical proposition to determine it at considerable cost, the Department thinks it might be better to build on the northern half of the site and complete the structure when the lease expires. At the time the negotiations for a termination of the lease occurred I think that the lessees wanted £8,000 to £10,000, but I could not say what they would ask to-day. Personally, I am rather indifferent about it, as I would not care to suggest the payment of a large sum for that purpose or to dislocate the business which is now being carried on there. As far as can be seen at present it would meet the convenience of the Government if one-half of the building were proceeded with, but that is a point, however, which the Committee can consider. If both portions of the building were proceeded with the whole of the accommodation could not be occupied by Government Departments, and we would have to rely to some extent upon leasing a portion of it. So long as our

1# =

# COMMONWEALTH OFFICES, SYDNEY 8

tenants comprise State Departments or other public bodies there might be no objection; but if others were accommodated in a Government building the capitalists in Sydney might object to the Government competing with them in their field of enterprise. The proposal is to accommodate nearly all the Government Departments in Sydney in one-half of the building. There are probably some tenants in the Commonwealth Bank building who might not wish to be transferred. I do not know if the present tenants of the Commonwealth Bank could be more suitably housed in the new building, because the present intention is not to provide a luncheon room, and it is generally admitted that it is very convenient for members of Parliament and others to have their meals in the building. I understand the Government is at present paying £872 10s. 11d. a year for accommodating Federal members, which cost could be considerably reduced if rooms were provided in the new building. The site is not on the direct tram route from the Central Station as is the Commonwealth Bank, but the Castlereagh-street tram passes at no distance from the site, and perhaps it would be regarded almost as central. It would, no doubt, be more convenient for the Governor-General to attend Executive Council meetings there. As far as we can see at present, I do not think we could fill the whole building, but doubtless the time is coming when it will be an easy matter to do so. I venture the opinion that private capitalists would not construct a building in two sections as we propose, but they are not handicapped in the way we are. The Government is not expected to compete with private capital, and in offering to lease office accommodation in that building at a comparatively low figure we would be competing with other interests. I think we shall be able to have accommodation there at less than one-half the cost we are paying for similar offices elsewhere. The Customs authorities are anxious to obtain possession of the portion of the Customs House occupied by the Works and Railways Department and the Electoral Department when it is vacated. Even assuming that these two Departments were taken to the Phillip-street offices, the whole building would not be fully occupied. If it were convenient for the Government to make available the capital, I should like to see the whole structure completed, as the few thousands necessary to determine the lease of the motor garage would hardly count in the transaction. I do not think it would mean an expenditure of more than \$4,000 or £5,000 to determine the lease, which is hardly worth considering. I have a strong idea that the State Government would be pleased to take any surplus accommodation off our hands if they could get in at the same cost as we shall be occupying the offices ourselves, in which case nothing could be said against building the whole structure. Whether the State Government would be in a position to promise to occupy a certain area I cannot say. I regard the site as a good one, and its only disability is that a solid foundation is about 14 feet below the level, which has been determined by tests. Beyond that disability the site is an excellent one. It should be mentioned, however, that unlike the original site selected there is no right-of-way at the back, but for this particular purpose it will not be necessary, as it is not proposed to take in any coal for heating purposes or heavy merchandise. Apart from these two factors, the site has no objectionable features. I do not know of any scheme which the Sydney City Council has in mind for the improvement of that part of Sydney and which would interfere with the eastern side of Phillip-street. On the opposite

/a

1/2 an

1/2

1/ground

## COMMONWEALTH OFFICES, CYDNEY 9

side, however, a proposal has been mentioned of straightening Elizabeth-street, which would have the effect of providing a small square in front of the building, which we think would considerably add to its value. I have heard lately that there is another scheme in view, and by which Elizabeth-street is likely to be straightened without interfering with Phillip-street at that point. Therefore, it is just probable that it will not affect either side. I have been keeping watch of what is going on without making any direct inquiries, but the municipal authorities might be asked as to what effect, if any, contemplated street alterations would have on the site. One scheme it has in mind which will cost a lot of money, ~~and~~ it entails the resumption of the Union Club. The development of the traffic in Sydney is of such an extent that something will have to be done to relieve the congestion. For the information of the Committee, I submit the following list of Departments which are renting premises, and which it is proposed should be located in the first section of a new building:—

Department.	Where accommodated.	Rental.
		£ s. d.
Auditor-General .. ..	Commonwealth Bank	725 0 0
Public Service Inspector ..	Commonwealth Bank	493 4 3
Sub-Treasury .. ..	Commonwealth Bank	903 9 6
Deputy Crown Solicitor and Patents and Trade Marks Peace Office .. ..	Commonwealth Bank	1,829 0 0
Library, Patents and Trade Marks .. ..	Masquarie-place ..	113 0 0
Film Censorship Offices ..	Flinders-street ..	104 0 0
Taxation Appeal Board ..	Spring-street ..	300 0 0
Taxation Dept. (Federal Land Tax, Entertainments and Estate Duties) ..	Grosvenor-street ..	273 0 0
War Service Homes ..	George-street ..	1,500 0 0
	Clarence-street ..	1,500 0 0
		7,541 4 3

Also Works Branch from Customs House.

I also submit the following statement showing the proposed accommodation, exclusive of essential corridors, staircases, lavatories, and lifts:—

	First Section.	Second Section.
	Square feet.	Square feet.
Basement floor .. ..	7,646	7,304
Ground floor .. ..	7,054	6,882
First floor .. ..	6,175	6,166
Second floor .. ..	6,175	6,166
Third floor .. ..	6,175	6,166
Fourth floor .. ..	6,175	6,166
Fifth floor .. ..	6,175	6,166
Sixth floor .. ..	6,175	6,166
Seventh floor .. ..	6,175	6,166
Eighth floor .. ..	6,175	6,166
Ninth floor .. ..	6,175	6,166
Tenth floor .. ..	6,175	6,166
	76,450	76,836
Total for whole Building ..	152,276 square feet.	

## COMMONWEALTH OFFICES, SYDNEY 10

The following table shows the estimated cost for the first and second sections of the building:—

First Section.		Second section.	
1,192,872 cub. feet, including basement, at 1s. 8d. ..	£99,406	1,133,087 cubic feet, including basement, at 1s. 8d. ..	94,498
Cost of excavation for basement, 2,425 cub. yards at 12s. = £1,455 .. ..	..	Cost of excavation for basement, 2,738 cub. yards at 12s. = £1,643 .. ..	..
Excavation below basement, 403 cub. yards at 15s. ..	302	Excavation below basement, 312 cub. yards at 15s. ..	234
Concrete in piers to rock below basement, 403 cub. yards at 65s. .. ..	1,309	Concrete in piers to rock below basement, 312 cub. yards at 65s. .. ..	1,014
	£101,017		£98,746
Total cost of Building .. ..	£101,017	Total cost of Building .. ..	£104,763
LIFTS.			
First Section .. ..	£7,800	Second Section .. ..	£7,800
Cost of First Section, including Lifts .. ..	108,817	Cost of Second Section, including Lifts .. ..	104,546
Total for Building and Lifts .. ..	£116,624	Total for Building and Lifts .. ..	£112,353

Another satisfactory feature of the site is that suitable light areas can be introduced while still leaving space of a form that can be very conveniently used for official purposes. I produce a plan of the ground floor of the building at street level, and a plan of all the floors above the ground floor, from which the Committee will see the expedients resorted to to obtain light for the building. On the ground floor very little in the shape of a light area will have to be taken away from the plan. On the eastern boundary the site is very irregular, and it appeared to us that it would not be economical to follow the boundary line with the building, and it would be far better to erect a square structure leaving the ~~area~~ on the boundary beyond the square to be used for lighting purposes. ~~I do not stress the point that on the lower floor of the building we may have anything in the way of sufficient light in the distant future.~~ At present the buildings on the eastern side of the proposed structure are low, and we shall get ample light for many years; but we have to realize the probability that higher buildings will be constructed at the rear, and by retaining this irregular portion a light area will be provided. Probably in 50

years other buildings will be the same height, when this area will be ~~more~~ valuable for ventilation purposes by giving ~~a~~ through draught. On the top floor we shall get a good deal of light, but on the bottom floors we shall have to make up our minds that we shall not get too much. There is always another possibility that neighbouring proprietors will provide us with an equivalent area that will become a permanent light court. At the southern end of the building we are leaving a space of 48 feet long by an average of 10 feet wide which, with a twelve-story building would not amount to very much, but if the proprietors of future buildings on the eastern side allow a similar area it will be excellent. The space at the northern end is hardly worth considering. It is 46 feet long by an average of 4 feet wide; it is triangular in form and very useful for ventilation purposes. Practically the whole of the site will be devoted to working purposes. A temporary wall will be constructed in the centre in the event of the building being constructed in two sections, the northern portion being that which we propose to build at the outset. If the whole building were constructed the temporary wall would not be



## COMMONWEALTH OFFICES, SYDNEY 11

required. The ~~outline of the~~ plan provides that the building shall have an entrance at each end. Coming in at the entrance a vestibule 14 feet wide is approached straight ahead from the staircase. Inquiry offices, accommodation for messengers, and two elevators will be provided in that vestibule, from which the working space proper is entered, which might conceivably be in one large room or subdivided to suit departmental arrangements. The less subdivision the better, but the building is of a form that it can be very readily subdivided without loss of room. The probabilities are that when it is occupied the front portion of the building may consist of some rooms for departmental heads and the back portion will be ~~one~~ large room. The lighting will be very good indeed, as at each side we propose to indent into the plan a light area 27 feet by 25 feet from the top to the bottom on all floors but the ground floor, which, of course, will be lighted from above. We propose to keep within the building regulations of the city of Sydney, although we are not compelled to do so. We do not, however, wish to evade the local building regulations, and in this case propose to go the limit of the height allowed, which enables us to get eleven full floors and the use of a flat roof that can be used for recreation purposes. Originally, when we commenced to consider this problem, we thought that we would avoid the expense of a basement, particularly as it would be rather difficult to light, and I had in mind that the site was on solid sandstone which it would not be profitable to excavate. We discovered, however, the actual nature of the bottom, and knowing how useful a basement is to a great group of offices for storage purposes, it seemed reasonable to make provision for a basement. That is why the estimates now before the Committee are slightly higher than those submitted to Parliament. We propose, therefore, to include a basement 8 ft. 6 in. high. Records are stored in presses, and it is rather inconvenient to go higher than 8 ft. 6 in. A portion could be allotted to each Department, and the cost of the excavation, considering the convenience to be provided, is not great. The height we propose for the floors are as follows:-- Basement, 8 ft. 6 in.; ground floor, 16 feet; first floor, 12 ft. 0 in.; second floor, 12 ft. 0 in.; third floor, 12 ft. 6 in.; fourth, fifth, sixth, seventh, eighth, and ninth, 11 ft. 0 in.; and the tenth floor, 11 ft. 6 in. For modern well-ventilated and well-lighted buildings these are good average heights to employ. The principle we propose to use in this building is that of concrete construction with which the Committee is familiar, and to have flat ceilings by omitting all the beams. Several modern buildings in Sydney have ceilings of similar type without beams. It is a form of construction the Commonwealth Works Department adopted before any others, and I am glad to say that a good many other architects are following our lead. It may not be suitable in warehouses, where loads of 200 lb. to the square foot have to be carried, but it should be in this instance, where the load would be only about 80 lb. per square foot. We propose to keep the supports about 25 feet apart, but that will be governed largely by the space available. The average spacing is only 18 feet by 19 feet, which is excellent for this class of construction. The columns will vary in dimensions, those at the bottom being about 20 inches square, whilst those at the top will be about 12 inches square. The thickness of the floors vary in accordance with the distance to be spanned, and for 25 feet they would be

107

15  
15/107/15

107

12

perhaps

9½ inches thick, but for a span of 10 feet the floor will be 7½ inches, or not more than 7½ inches, of reinforced concrete. When the beams are omitted, there is said to be an excessive weight at the junction of the floor slab and the stanchions, but that is met by introducing a mass of concrete at that point, which is treated in a manner that makes it look architecturally attractive. Discussing the matter with the engineer who advised us about the concrete, we proposed introducing a system of reinforced columns which so far is new to Australia, but the value of which is fully realized in America. Instead of rod reinforcements, we propose to use angle-iron reinforcements with latticed bars connecting the angles, and by that means take up some very heavy loads on the columns in the lower part of the building. ~~The beams at the bottom would be 2 ft. 4 in. or 2 ft. 6 in., but will be reduced to 20 inches.~~ Very advanced concrete work has been undertaken in Sydney during the last twelve months. The working floor space in the first section will, on account of the light area taken out, be reduced on each floor above the ground floor from 7,054 feet to 6,175 feet, leaving 76,450 feet, and in the second section on each floor above the ground floor from 6,862 feet to 6,166 feet, leaving 75,826 feet, or a total working space for the whole building of 152,276 square feet, the difference between the area of the first and second section being caused by the frontage to Phillip-street being on a taper. The estimate is based on the base of the building being of axed trachyte. A comparison may be made between the offices of the *Sydney Morning Herald*, which is of axed trachyte, and the Commonwealth Bank building, which is of polished trachyte. The average height of the trachyte base will be about 5 feet, from which point to the top we propose to use sandstone. We had under consideration for some time using sandstone on the ground and the first floor of the building, and then completing the building to the ninth floor in brick, and from the ninth floor to the top in sandstone, but after considering the price of first-class bricks in Sydney we concluded that for all the difference that it would make in the cost we might as well have a stone building. The stone we favour is a white stone from the Hawkesbury River. I understand the Sydney sandstone is being worked out, and a good white stone from the Hawkesbury River is now being used. The new warehouses of David Jones Limited, and also the new building for Farmers', is being built of this material. Mr. Todd and I had a conversation with Mr. Grant, of John Grant and Sons, the contractors who are doing the remodelling work of the General Post Office, and from the information we obtained concerning prices we thought it advisable to omit bricks. Suitable stone could be landed at Sydney for about 6s. per cubic foot in blocks of any size desired. The stone is regarded very favorably, and is being sent to Melbourne and to New Zealand as well as being extensively used in this city. Another interesting consideration was the ~~possibility of the~~ possibility of using Fairy Meadow limestone. Since the members of the Committee were last at Canberra an expert quarryman has been engaged in conducting investigations, and although I have not seen the quarry I have had a talk with this officer, as well as with Colonel Owen and Mr. Mahony, the Geologist, and from what I have seen of samples of the stone its use is worthy of consideration. Assuming it could be landed in Sydney at 10s. or 12s. a cubic foot, as against 6s. 6d. or 6s. for stone of a comparatively hard nature, the cost of preparing Fairy Meadow stone might be anything from 20 to 30 per cent. more than using sand-

/ about

/ 107

/ 107

/ 107

/ the price of sandstone

stone, which would probably increase our costs by £10,000 or ~~£12,000~~. On the other hand, it would be a means of introducing to Sydney for the first time a marble building stone. Other countries, such as America, that have not to consider the financial aspect too closely, favour marble construction, but apart from Parliament House in Adelaide this work has not been undertaken in Australia. No other stone expresses itself in the same way as does marble. The additional expense incurred would alter our calculations concerning the cost of the whole building. The object of investigating that deposit is that it is the property of the Commonwealth, which at present represents unproductive capital. If the administrative building will not be sufficiently advanced to enable this stone to be tested, perhaps consideration could be given to the question of using it on the new Commonwealth offices in Sydney, and thus provide a practical test. If the Commonwealth used it on this building it would stimulate investigation concerning the possibility of the quarry. From what I know of the deposit, I would risk my reputation by giving it a trial in Sydney, if the Committee favoured the extra expense. Terra cotta facing is more expensive than sandstone facing, but I admire it exceedingly ~~and consider it beautiful~~. The outside walls are to be of 9-in. brickwork, the front walls being a little thicker in order to provide sufficient depth for the windows. If we used concrete instead of brick for the walls the thickness would be 6 inches. Our estimate is based on brick, which is a little cheaper, although by using concrete we would gain 3 inches. The windows will be of steel, and the covering on the concrete floors will be of wood blocks laid in bitumen. This provides a warm and silent floor of satisfactory appearance, and ~~consisting~~ of Australian materials. The use of carpets and linoleums is also dispensed with. Personally, I like jarrah, but Victorian mountain ash is being largely used. There is no objection to Tasmanian oak. Provision has been made for large strongrooms, 8 ft. 6 in. by 8 ft. 6 in., on every floor, which is a liberal size, and could, if necessary, be subdivided. The number should be ample, as a ~~number of~~ Departments do not require strongrooms. I regard the whole structure as a strongroom, because, if a fire occurred in it, it would be almost certain to be confined to the floor on which it started. The basement could also be regarded as a strongroom. The fire brigade authorities have not been consulted, but doubtless Mr. Lee would express his opinion concerning its fire-resisting qualities as he has done on other occasions. The whole building is of fire-proof construction. Two electrical elevators, each 6 feet by 7 feet, would be provided in each section, each capable of carrying fifteen passengers. There is also a continuous staircase. Mr. Lee ~~would probably~~ say that a fire escape should be provided at the back of the first section, for which provision could easily be made if necessary.

7. To Mr. McGrath.—If the whole building were constructed the staircases would be in the same position as shown on the plan. One set of stairs and lifts in the centre would not be sufficient.

8. To the Chairman.—Lavatory accommodation is to be provided on each floor in each section, and each lavatory is to contain six W.C.'s, two urinals, five basins, and a sink. On the mezzanine floor another set of lavatories is to be provided, thus making 24 for the two sections. The building will be ~~beautifully~~ lighted and ventilated, and fresh air supplied direct to all the

/ more

/ I think

/ 187

/ 187

/ all

/ might

/ well

# COMMONWEALTH OFFICES, SYDNEY 14

offices. The water supply should be ample, but provision for storage on the roof has been made should the usual supply be temporarily cut off. No heating appliances are to be installed, as they are not considered necessary in Sydney. If the whole building were proceeded with, the estimated cost could be reduced by £4,000 or £5,000, which may be equal to the cost of determining the lease of the garage. I think there is every prospect of building costs increasing, as there is a possibility of working hours being reduced and industry carrying a charge ~~on~~ on the wages paid in order to finance a child endowment scheme now proposed by the New South Wales Parliament. If the second section were not proceeded with for say, five years, it would be difficult to estimate what the cost would then be. The question of providing luncheon rooms for the occupants of the building is one which might be considered by the Committee. Ample room will be available for luncheon and retiring rooms for the comfort of the staff, but if a cafe were made available a precedent would be established, and possibly demands made for similar conveniences in other Government buildings. If the Films Censor's office were transferred to the new building it could be made sufficiently fire-proof to prevent any risk of fire. If the Government had not ~~no~~ furniture available, I would suggest the use of steel furniture throughout the building such as is found in modern offices in America. Non-inflammable materials are now being made, so that the danger of fire is being largely reduced. The roof would be of concrete laid with bitumen. We have also to consider what the building will afford in comparison with the rents we are paying for relatively indifferent accommodation. The Works Director for New South Wales has gone into certain calculations concerning what the Government may expect to ~~pay~~ <sup>pay for</sup> the accommodation provided, and estimate that the rate will be approximately 2s. 6d. per working foot of space per annum as against 4s. 10d. If the cost of the basement floor is added, which is not working space and which is not included, it would increase the cost to about 2s. 9d. He proceeds in his calculation on a basis of charging 8 per cent. interest on the capital cost of the building, which is exceedingly liberal. He informs me he worked on the 8 per cent. figure when this project was under consideration, and when money was costing  $6\frac{1}{2}$  per cent, whereas to-day it is only  $5\frac{1}{2}$  per cent. I should say, therefore, that if we calculate on a basis of  $5\frac{1}{2}$  per cent., plus  $1\frac{1}{2}$  per cent. for maintenance and  $\frac{1}{2}$  per cent. for a sinking fund for a period of say 60 or 70 years, it would bring it within 7 per cent. Mr. Todd's figures can be accepted with safety. If we had any surplus accommodation, it could be let at about 5s. a foot. The Repatriation Department, in Chalmers-street, Redfern, is occupying 30,000 feet in an indifferent building, and if that Department was accommodated in the second section that would go a long way towards filling it. The Government would then be able to dispose of the Chalmers-street premises for about £30,000, which is a strong factor in favour of incurring the heavier expenditure. The Works Department is occupying approximately 10,000 feet, and is not actually paying rent. By the time the first section of the building was completed it would be found that it could easily be filled. Commonwealth activities are extending, and the Development and Migration Commission will soon require office accommodation in Sydney. The whole building could be more economically constructed in one section than in two, but the two sections will be necessary for the accommodation

107

107

1/2 pay for  
15

of Commonwealth officers at no distant date. The Public Works Committee, the Public Accounts Committee, as well as the Tariff Board, would have to be provided with rooms, and the Commonwealth Shipping Board, whose lease is expiring, has been asked not to enter into any long lease until some decision has been reached in this matter.

9. *To Mr. Seabrook.*—The lessee of the motor garage was approached some time ago, but I do not think he has been consulted recently. Perhaps it would be advantageous to open up preliminary negotiations. The temporary dividing wall would consist of 4-in. studs covered with iron on the outside and fibrous plaster inside. There is a possibility of £5,000 to £10,000 being saved if the whole work were undertaken at the one time. The material in the temporary dividing wall would pay for the cost of taking it down. The Sydney City Council may be opposed to a temporary dividing wall, but it could not prevent us from erecting one, as its regulations do not apply to the Commonwealth Government. Since I have been associated with governmental activity I have always endeavoured to please the civic authorities. The City Council has not been approached, but even if it does not agree to a temporary wall it is not material, because a brick wall could be built. The foundations will be of concrete on a sandstone bottom, and 9-in. brickwork would be quite satisfactory for that height; as it only has to carry ~~the~~ ~~weight~~ from floor to floor. I think we should have to install fans for ventilating the basement. There is sufficient space for mechanical ventilation and light, and the introduction of, say, four small extract fans would keep the air sufficiently dry to preserve the papers stored there. There would be no likelihood of any moisture getting in. The building is to be faced with stone, and the supporting stanchions and floor slabs to be of concrete; the panels filled in with brick and the whole surface plastered. Any development in connexion with the underground railway is not likely to affect the proposed building, ~~as the route is not~~ ~~indicated in the present plan.~~ The plan is capable of various convenient subdivisions, and if the two sections of the building were completed a fire escape at the rear would not be necessary. I prefer windows with sliding sashes rather than those opening outward. The interior doors will be of wood, but I hope there will not be too many. Personally, I prefer wide open office space to a number of comparatively small rooms.

10. *To Mr. Cook.*—It is obvious that if office accommodation can be provided in a first-class fire-proof building for 2s. 9d. a foot, when we are paying more than 5s. a foot, that the proposal is a sound one from a financial viewpoint. It provides more space than the Commonwealth will require for ten years, whereas one-half of the building hardly provides all we require in two years. If we could lease a portion of the whole building to the State Government for ~~five years~~, it would be an excellent arrangement. The cost of building has increased considerably. To-day we are occupying less space than we were five years ago owing to the fact that certain work which was previously under the control of the Commonwealth Government is now under State authority. The interest to be paid on the capital cost of this structure would amount to about £10,000 a year. When the seat of government is transferred to Canberra more office accommodation will be required in Sydney. The State Government is occupying rented premises all over the city, and would doubtless be willing to concentrate its activities in the one place. I am very much interested in the stone obtained from the Fairy Meadow deposit, and think that its

/s. I believe

107

107

115.

/s. a number of years

117  
1 and 1/2  
1/12.500

beauty transcends anything else obtainable at a reasonable price. The deposit is the property of the Commonwealth Government, and the quantity of stone available is unlimited. ~~The cost of limestone from Fairy Meadow would be from 30 per cent. to 50 per cent. less than for marble.~~ The cost of granite would be ~~about the same as that of limestone.~~ *177 more than*

11. *To Senator Barnes.*—We have never thought of facing the building with granite. I am told that the granite market is over-taxed owing to the heavy demand being made upon supplies by the Sydney Harbour Bridge authorities. ~~The cost of granite would be about the same as that of Fairy Meadow stone.~~ *177* I consider it a good proposition to undertake the whole work at the outset, as it would reduce the cost.

12. *To Mr. McGrath.*—The estimates submitted include the cost of facing the building with white Hawkesbury River stone which is about 35 per cent. cheaper than granite which, of course, would be more durable.

I would not advocate the use of Fairy Meadow stone before it has been ~~properly~~ *sufficiently* tested. I do not know of any building in Sydney that has been faced with marble as all the buildings here are erected with the ~~sole~~ object of showing a profit on the capital cost, and by using marble, which is more costly, the profits would be reduced. Marble is extensively used in America. *main*

13. *To Senator Payne.*—I think it fair to base our calculations on a rate of 7 per cent. when the present rate is 5½ per cent. as 1½ per cent. has been included to cover maintenance and ½ per cent. for a sinking fund. In a building of this character provision should be made for maintenance, and any prudent investor in property would provide a sinking fund before estimating what the income should be. Even if I could borrow money at 5½ per cent I do not think a charge of 6½ per cent. would be sufficient. Even if it were found necessary to approach the State Government to lease some of the office accommodation there would be sufficient space available to place the Commonwealth in a better position than it is to-day in the matter of rented properties. Red myrtle would make splendid flooring blocks or boards, and if sufficient were available and the price satisfactory, I would have no objection to using it. *177*

14. *To Senator Reid.*—The light court at the back of the building could not be used as a right-of-way. As there will not be more than 70 officers on each floor, the lavatory accommodation proposed to be provided should be quite sufficient. The difference between the cost of white Hawkesbury stone and the Fairy Meadow stone, which would be used in the whole of the building, would amount to £12,000 to £15,000 in favour of the former, but if the Fairy Meadow stone were used we would have a more beautiful, and I think ~~a~~ durable material. In saying whether the extra cost was justified, I would have to consider the extent to which the development of Canberra would be affected if we gave an impetus to quarry development there. If the stone proved to be good for public buildings the extra cost in this instance would be justified. I should like to use terra cotta but it is too costly. *177 perhaps*

15. *To the Chairman.*—If one section only were authorized the building would take perhaps two years to complete, and, perhaps, it would take two and a half years to finish the whole structure. Twelve months after we commence the first section the accommodation at the Customs House could be relieved. No profit would be derived from the material obtained from the cottages to be demolished, and we would probably have to pay to have it removed. *177*

~~The witness withdrew.~~

COMMONWEALTH OFFICES, SYDNEY 17

Charles Herbert Uttley Todd, Commonwealth Works Director for New South Wales, Sydney, recalled and further examined.

15. *To the Chairman.*—When the plans of the proposed building were under consideration earlier this year my staff surveyor informed me that the Sydney City Council had some idea of extending Elizabeth-street so I instructed him to make inquiries at the Town Hall as to how any proposed extension might affect the Phillip-street site. He assured me that the site would not be interfered with by the civic authorities, and we could proceed with our proposal on the distinct understanding that it would not be touched. I regard the information I received from the staff surveyor as official.

~~The witness withdrew.~~  
~~The Committee adjourned.~~

151

(Taken at Sydney).

THURSDAY, 17TH FEBRUARY, 1927.

Present:

Mr. MACKAY, Chairman;

Senator Barnes	Mr. Cook
Senator Payne	Mr. McGrath
Senator Reid	Mr. Scabrook.

Thomas Victor Maher, Boarding Officer, Department of Trade and Customs, and President Commonwealth Public Service Association of New South Wales, Sydney, sworn and examined.

17. *To the Chairman.*—As the Committee ~~was~~ investigating a proposal to construct Commonwealth offices in Phillip-street, Sydney, I was instructed at a special meeting of the executive of my association to bring under your notice the desirableness, in its opinion, of the Committee giving consideration to the question of providing a suitable luncheon room for the use of officers who will be working in the building. I understand that, when completed, the offices will accommodate from 300 to 400 clerical officers. The whole question of the accommodation and personal comfort of these officers has been considered by my executive, which feels that Commonwealth public servants are not treated in anything like the same way as are the employees of many private firms. Quite a number of large progressive firms operating in Sydney have established welfare departments and have given valuable assistance to their employees in the matter of providing luncheon rooms and other services. Amongst others I may mention, Farmers' Limited, David Jones and Company, the Vacuum Oil Company, and the Bank of New South Wales. The Commonwealth Bank has also made similar provision for the convenience of its employees and other occupants of the building where, as members know, an excellent meal can be obtained at a very reasonable cost. A scheme is also in operation in connexion with the Postmaster-General's Department which, however, is under the control of the Postal Institute. Considering the matter from a psychological view-point, it is easy to realize that officers who are well housed and are able to take their luncheon in reasonable comfort are likely to be more contented and enjoy better health than those who are compelled ~~to~~ surreptitiously and hurriedly consume a cold meal in an obscure corner of the office. Taking meals under such conditions does not tend to improve the health of an officer, and when one's health is impaired, from whatever may be the cause, his efficiency is seriously affected. When an officer is able to take his luncheon in company with fellow officers in reasonable comfort an opportunity is provided for social intercourse, an interchange of ideas on departmental matters, and for an officer to feel that he can possess a certain amount of dignity. In the proposed new building practically all the Commonwealth public servants employed in Sydney, with the exception of those in the Postmaster-General's Department and the Customs House, will be accommodated, and the time seems opportune for the Committee to carefully consider the necessity of making adequate arrangements for their comfort. If the old conditions are to prevail, many officers will be compelled to go outside for their midday meal and be exploited by private interests, or to have their lunch, which has been brought from home, in the office. In most of the important departments the eating of lunch in the office is forbidden, but, notwithstanding the regulations, a number of officers persist in surreptitiously consuming their midday meal at their desks. The officers of the Sydney City Council have recently



been waging a war upon rats, upon the success of which the Chief Inspector of the Council is very well satisfied. But if the practice of eating lunches in the offices is condoned the vermin which must naturally accumulate will encourage this very dangerous pest. In an important building, such as the proposed structure will be, I think it only reasonable to suggest that a certain space should be set aside for a luncheon room for the use of officers of all grades and for members of Parliament, who may, perhaps, be accommodated in the building. In the cases I have mentioned certain trusts and combines have cafés on their premises, the case of which is regarded as a legitimate charge upon their general funds, as are the charges for cleaning, lighting, &c. In connexion with the Commonwealth Bank Refreshment Department, particulars of which I have not been able to obtain in the limited time at my disposal, the Governor of the Bank considers that any loss incurred in that department is a legitimate charge upon the general revenue of the bank. If the Committee should favorably consider the establishment of a luncheon room in the proposed building, I would suggest that the tariff should be similar to that now in operation at the Commonwealth Bank. I believe that in the instances I have mentioned the schemes are practically self-supporting. That in operation in the Post and Telegraph Department has been functioning for about twelve months, during which time, I understand, it has shown a loss of about £300, which, however, has been met by the profits derived from other branches of the Postal Institute's activities. It must be remembered, however, that the officers of the Postal Department are the most poorly paid of any section of the Commonwealth Public Service, and, therefore, many of the clerical employees find it impossible to pay 1s. 3d. daily for a meal. Under a scheme such as I suggest the loss would not be as great. A cafeteria is also in operation in the Postal Department from which employees can purchase a roll and ten for 5d. or 6d., but even that department is not patronized to the extent it should be, mainly owing to the cause I have mentioned. From the statistics available, it would appear that the total number of officers who could partake of a midday meal in the luncheon room at the Post Office is from 90 to 100, whereas possibly 200 of the officers to be accommodated in the new Commonwealth offices would be able to purchase their lunch in the building if suitable accommodation and services were provided. The treasurer of the Postal Institute has assured me that if a similar number of its officers were able to patronize the café, it would become self-supporting. Without having an opportunity to give the matter very careful consideration, I think a conservative estimate of the cost of the necessary furniture and equipment for a luncheon room would be about £1,000. I could not say definitely what space would be necessary, but I should think 25 tables, each capable of accommodating four persons, would be ample at the outset, and possibly a room 40 feet by 80 feet, thus providing 3,200 square feet, would be sufficient. Our contention is that when private firms, realizing the advantage of considering the personal comfort of their employees, which reacts in favour of the organization in which they are employed, are able to study the interests of their workers in this way, it should be the duty of the Commonwealth Government to extend similar consideration to its employees. All the officers have regular meal hours, but there are times when

some, owing to the pressure of important duties, find it impossible to take the full time they are allowed, which compels them to partake of a hurried meal in the office. I am not, however, suggesting that that is a general practice. The firm of Sargents, which is the largest catering house in Sydney, charge 1s. for a pie, roll, and tea, which is excessive, but which perhaps may be justified to some extent owing to the heavy rentals they pay. Nevertheless, such a charge leaves a substantial margin of profit. I would suggest that, in addition to supplying a three-course meal at a rate similar to that charged at the Commonwealth Bank, provision should be made for supplying, say, a pie, roll, and tea for 9d., on which rate, I believe, a profit could be made. My executive suggest that the Government should provide the space, supply the furniture and equipment, and conduct the undertaking, retaining any profit that might be made or carrying any loss incurred. In the event of such a proposition meeting with favorable consideration, there are several alternative proposals which might be considered. For instance, it might be conducted as a branch activity of the Public Service Association, or controlled by private enterprise. If the building is, as I presume it will be, under the control of the Prime Minister's Department, officers employed in the building could be empowered to exercise general supervision over its operations. I think it should be strictly a Government concern. My association has discussed the proposal in abstract form at different periods, and has been committed to the principle for some time, and had we known earlier that this investigation was being conducted we might have been able to give further information on the whole project. As it is, I am now able to give only the opinion of the executive. If the principle is adopted, the question of management could be considered later. I do not think my organization would abandon the whole project even if the Government could not see its way clear to run it as a business concern. I am prepared to say that the members of my organization are willing to take some responsibility in an undertaking which is for their own benefit, but the exact nature of which I could not give without further deliberation. Careful consideration would, I think, be given to a proposal such as you suggest, that the Government might provide sufficient space free of rent, supply the furnishings and equipment, and hand it over to the association, which would take the full responsibility for its control. Other similar establishments have to employ not less than six waitresses from 11 a.m. to 3 p.m., who receive 25s. a week, which amounts to £65 or £70 a year. If the Government were to provide floor space, furniture, and equipment, lighting, and the services of six waitresses, the cost would be approximately £700 a year, against which there might possibly be a profit of £200 on the cafe itself, thus showing a deficit of several hundred pounds, which, considering the conveniences provided and the benefits generally to members of Parliament and others, the loss could be regarded as insignificant and a legitimate charge upon Consolidated Revenue. If the department were under the control of the representatives of my organization, the profit, if any, derived, should not be credited to revenue, but should be held against possible losses in the future. In the event of there being a loss of, say, £200 on the first year's operation, we could not claim upon the general funds of the association,

but would have to raise the amount by means of a levy. We are prepared to take some risk, but I regard any loss as a fair charge upon the revenue.

18. *To Mr. McGrath.*—Possibly 60 per cent. of the clerical officers of the Commonwealth Public Service engaged in Sydney take their lunch with them, and I think a similar percentage would patronize the luncheon rooms in the building. I am representing the whole of the clerical officers in the State. If the control and financial responsibility was placed in the hands of our association it would impose a heavy burden upon the executive officers, when I think the responsibility should be shouldered by the Government. Our officers would have to devote a lot of their time to the control of the catering department without any direct advantage. The Railway Refreshment Rooms in New South Wales, which are all under Government control, are so efficiently managed that a good meal, which would cost, say, 3s. 6d. in Sydney, can be obtained at the Central Railway Station for 2s. 6d.

19. *To Senator Payne.*—An area of 3,200 feet should be sufficient to accommodate 100 diners and also leave sufficient room for a kitchen and servery. If 300 officers are employed in the building, I think we can safely assume that 200 of that number would patronize the luncheon room daily. I have not had an opportunity to consider the rental value of the space which may be considered necessary, but even assuming that the rental value of the area was £450 per annum, I believe that a substantial meal could be supplied at, say, 1s. 6d., and still a profit could be shown. Ordinary restaurants make their profits largely owing to the fact that they provide more than one meal a day, and what is left over from lunch is frequently served up for dinner in a different form, thus avoiding waste. In a luncheon room such as that suggested, where only one meal is provided, the waste must be greater. If the overhead expenses and the wages of six waitresses were paid, a three-course meal could be supplied at 1s. 3d.

20. *To Senator Reid.*—Fully 99 per cent. of the officers to be employed in the new building are members of the organization which I represent. There are about 1,100 members of the association, which is a federated one, in New South Wales, and when the seat of government is transferred to Canberra, there will possibly be from 1,500 to 1,600. I am aware that by doing as I suggest a precedent would be established, but there is no reason why similar provision could not be made in other States where a large number of public officers are working in the same building. Provision will, I presume, be made for ordinary retiring rooms for female clerks, and it would be necessary to provide seating accommodation in the luncheon room in the form of a plainly furnished lounge rather than patrons should be compelled to wait in a queue. The other portion of the floor on which the dining room is to be situated could be used for caretaker's quarters and by cleaners, who always have to have space for changing rooms and the storage of their equipment. Private firms conduct similar departments, which are controlled by committees with delegated but not arbitrary power. We could place ourselves in the position of employees of a private concern, and elect a committee of management which would be responsible to the Department as the committees of private firms are responsible to the management. We have no desire to be spoon-fed, and our whole contention is that it would be a sound investment for the Government to incur a little expense by providing accommodation for their officers to have their midday meal in comfort and thus set a standard for others.

# COMMONWEALTH OFFICES, SYDNEY 22

21. *To Mr. Seabrook.*—It is true that any loss incurred by private firms has to be borne by the firms, and that in connexion with a Government undertaking the loss has to be borne by the people; but it would be an easy matter to me to cite many instances where financial benefit has been conferred upon a section of the taxpayers the cost of which has been met by the whole of the people. Moreover, company directors are handling not only their own money, but the money of the shareholders, and the relation between a company director and the shareholders is the same as that between the Government and the taxpayers. We do not, of course, suggest anything as ornate as is provided in the upstairs dining room at the Central Railway Station, but merely the provision of comfortable, clean surroundings in which a meal can be taken at reasonable cost. We are prepared to take some responsibility, and would be willing to elect a committee to control the concern, because we cannot by virtue of our registration wholly conduct an undertaking of such a kind. My recommendations are—

- (1) That a luncheon room should be provided, furnished, and equipped, and placed under Government control; or
- (2) That our organization participates in the management of the concern on terms to be considered; or
- (3) That it should be controlled by private enterprise.

In the event of the first proposal being rejected, which I earnestly hope will not be the case, my association would be willing to give serious consideration to the other two alternatives.

*The witness withdrew.*

John Banks, Acting Collector of Customs, Sydney, sworn and examined.

22. *To the Chairman.*—I understand the Committee are considering a proposal to erect Commonwealth offices in Sydney, and in this connexion I submit a statement showing the space occupied by the departments other than the Customs Department in the Customs House, Circular Quay, Sydney. It is as follows:—

	Super. Feet.
2nd Floor—	
State Navigation Department ..	4,404
Audit Department .. ..	371
Dairy Inspection Branch .. ..	875
2nd, 3rd, and 4th Floors—	
Commonwealth Navigation Department	2,925
3rd Floor—	
Health Department .. ..	1,749
Attorney-General's Department ..	652
Meat Export Branch .. ..	818
4th Floor—	
Electoral Department .. ..	3,624
4th and 5th Floors—	
Works and Railways Department ..	9,221
The Customs Department is anxious to avail itself of further space in its own building, and in this connexion I submit the following letter, dated 14th September, 1926, from the Collector of Customs, Sydney, to the Comptroller-General of Customs.	

# COMMONWEALTH OFFICES, SYDNEY 23

Structural alterations in Customs House to provide increased accommodation.

The Comptroller-General.—

The expansion of the business of the Department in this State renders necessary certain structural alterations in order to provide increased accommodation for officers and the public.

2. The three branches most urgently affected are—

- (a) Laboratory.
- (b) Invoice room.
- (c) Investigation branch.

## Laboratory.

3. As regards the Laboratory, attention is invited to the attached copy of report of 21st April, 1926, by the Chief Analyst, from which it will be observed that in 1917, when the existing Laboratory accommodation was allotted, the number of analysts employed was four, and the number of samples examined during the twelve months was 7,247.

4. During the twelve months ended 30th April, 1926, the number of analysts employed was eight, and the samples tested numbered 12,637.

5. There is, moreover, every reason to anticipate that as the activities of the Department are increasing, there will be a corresponding expansion of the work of the Laboratory.

6. It was at first proposed that to provide for Laboratory extension the Works and Railways Department should vacate that portion of the Customs House on the fifth floor at present used as a drawing office, but on negotiation with that Department it was found that it would not be practicable to disassociate the drawing office from the remainder of the Department, and that to rent accommodation elsewhere for the whole of the Works and Railways Department would involve an expenditure of £2,400 per year until such time as the new Federal offices in Phillip-street are erected.

7. As a temporary expedient, therefore, it was arranged that the Works and Railways Department should forthwith make available the room used as a luncheon room by the officers of that Department for temporary extension of the Laboratory.

8. The proposal is that the fittings supplied for the purpose would be of such a nature as would permit of their ready removal to the room at present used as a drawing office when that room becomes available for Laboratory purposes.

9. The estimated cost of this particular work is £300.

## Ground Floor—Invoice Room and Investigation Branch.

10. In 1917, when the Customs House was reconstructed, the provision made for invoice and investigation officers and the cashier was considered to be ample for many years to come, but since then the business of the department has expanded far beyond what was then considered probable.

11. The expansion of business in the invoice room and investigation branch is best demonstrated by the following figures:—

	Financial year 1916-1917.	Financial year 1925-1926.
Number of officers in—		
Invoice room .. ..	32	52
Investigation section ..	12	21
Long room (Cashier's branch)	9	10
	53	83

Number of entries checked	120,837	278,680
Customs Revenue collected (exclusive of Excise) ..	£6,004,731	£12,024,503

12. It will be observed that the actual number of entries checked, and the Customs revenue collected, was more than 100 per cent. greater during the last financial year than for the financial year 1916-1917.

13. Moreover, as the Comptroller-General is aware, the work of the invoice room and investigation branch has, since 1917, been rendered much more difficult and complicated by reason of the inception of the Industries Preservation Act, the alteration of the conditions governing preference with Great Britain, the adoption of reciprocal tariff arrangements with Canada and New Zealand, and the operations of the Tariff Board.

14. On several occasions deputations representing importers and agents have interviewed me, urging that increased accommodation be provided for the public in the invoice room, more particularly in connexion with the declaration of entries and receipt of cash.

15. The proposed alterations on the ground floor, which provide the required additional accommodation for invoice examining officers and investigation officers, and involve the re-arrangement of the whole of the existing counters, are estimated to cost £3,400.

COMMONWEALTH OFFICES, SYDNEY 24

Accounts Branch.

16. The proposal now submitted involves the removal of the accounts branch from the ground floor to the western end of the correspondence room, where it will be temporarily accommodated until such time as the Works and Railways Department vacates the rooms at present occupied in the Customs House. This work is estimated to cost £60.

17. It will be seen that the estimate of the total cost of the alterations proposed is £3,760. The amount is substantial, but, as pointed out in this report, the increase in the work of the Department, as reflected in the figures quoted in paragraph 11, fully justifies the proposed expenditure.

Conclusion.

18. The following plans, showing the proposed alterations, are attached:—

"A"—Plan Misc. 7170, indicating re-arrangements on ground floor.

"B"—Plan Misc. 7103, modifying Plan Misc. 7170, so far as relates to Investigation Branch No. 1.

"C"—Plan Misc. 7168, showing proposed accommodation in present correspondence room for accounts branch.

"D"—Plan Misc. 7107, proposed conversion of luncheon room on sixth floor into additional laboratory accommodation.

19. Approval is sought for the necessary expenditure.

(Sgd.) W. H. BARKLEY,  
Collector of Customs, N.S.W.

14th September, 1926.

I now submit copy of a letter dated 30th April, 1926, from the Collector of Customs, Sydney, to the Works and Railways Department, Melbourne:—  
Accommodation at Customs House, Sydney.—Extension of Laboratory.

/ Secretary

Dear Sir,—

Owing to the large increase of work in the laboratory at the Customs House, it has been found necessary to provide further accommodation, so as to prevent as far as possible any delay in the analysis of samples required in connexion with the control of imports and exports.

It is necessary that the increased accommodation should be well lighted, and it is desired further to take over that portion of the fifth floor of the Customs House (the same floor on which the laboratory is situated) at present occupied by the drawing office of your Department.

I would be glad, therefore, if you would kindly arrange to make that portion of the fifth floor available to this Department at the earliest possible moment.

In addition, I desire to point out that the expansion of business in the invoice room renders necessary the re-arrangement of the branches at present accommodated on the ground floor of this office, and with that end in view I should be glad if you would also kindly make early arrangements for the vacation by the Works and Railways Department of the rooms at present occupied by that Department on the fourth floor.

Yours faithfully,  
(Sgd.) W. H. BARKLEY,  
Collector of Customs, N.S.W.

The Customs House consists of five floors, all of which are at present occupied, and the Department considers that it requires approximately 8,240 feet additional space at the earliest possible date. In order to do this

~~it is suggested~~ that the Works and Railways Department, which is occupying 9,221 feet, should be accommodated elsewhere. If that space were available, there would be no urgency in moving any of the other Departments at present in the Customs House.

Temporary arrangements have been made so that the laboratory can have increased accommodation ~~on the~~ <sup>the</sup> ground floor is being altered ~~for that purpose~~.

If the Works and Railways Department could be accommodated elsewhere within two years it would suit ~~the~~ <sup>the</sup> convenience. If other Departments were transferred, the vacant space could be utilized at no distant date.

Looking ahead fifteen or twenty years ~~we~~ <sup>you</sup> could not find room for other Departments ~~that~~ <sup>that</sup> in the Works and Railways Department in the Customs House. I do not think the expansion of Customs work would be

/ The Department has

/ Cof

/ to provide increased accommodation.

/ of the Customs Department.

/ except at a

/ in the Customs Department

/ in the space now occupied by

also

not

## COMMONWEALTH OFFICES, SYDNEY 25

so great in ten years as to render it necessary that we should require all the space in the building, but we would need a ~~good deal~~ of it. In the financial year 1916-17, 120,867 entries were checked, whereas in 1925-26 the number had increased to 278,080. If the space now occupied by the Works and Railways Department, namely, 3,221 square feet, were vacated, it would be allotted as under:—

	Sq. feet.
Space now occupied by the Works and Railways Department .. ..	3,221

Space that is required at once by the Customs Department is as follows:—

For laboratory .. ..	2,544
For investigation branch .. ..	2,000
For meat branch and dairy branch ..	1,000
For records .. ..	1,000
For accounts .. ..	1,000
For jerquer .. ..	700
Total .. ..	8,244

The Navigation Department, Health Department, dairy branch and meat branch, are intimately associated with Customs work, and their offices should not be removed from the building. These Departments are not actively under the control of ~~our offices~~, but they work in conjunction with the Department of Trade and Customs. The meat export and dairy export branches are now under the control of the Minister for Markets and Migration, but the Departments of Navigation and ~~Health are~~ under the direction of the Minister for Trade and Customs. The lighthouse branch is under the control of the Minister for Trade and Customs, and if room were available in the Customs House that Department could be housed there. ~~We collect~~ the light duties, but apart from that it would not matter where the Department was accommodated.

*The witness withdrew.*  
*The Committee adjourned.*

*the Department  
the Department.  
great proportion*

*/ the Collector*

*/ is*

*/ the Department collects*

*/ 107*

*does /*

COMMONWEALTH OFFICES, SYDNEY 26

(Taken at Fairy Meadow.)

TUESDAY, 22ND FEBRUARY, 1927.

*Present:*

Mr. MACKAY, Chairman;

Senator Barnes	Mr. Gregory
Senator Payne	Mr. McGrath.
Senator Reid	Mr. Seabrook.
Mr. Cook	

Percy Thomas Owen, Chief Engineer, Federal Capital Commission, Canberra, sworn and examined.

23. *To the Chairman.*—The Fairy Meadow crystalline limestone deposit is situated about 2 miles from the Mount Fairy railway siding, which is about 26 miles from Queanbeyan, and 36 miles from Canberra. The deposit is on an area of about 1,500 acres, which was acquired by the Commonwealth Government some time ago. The deposit was investigated about 1916 or 1917 in relation to the possible manufacture of Portland cement for use in construction work at Canberra. The idea of manufacturing Portland cement locally was to provide the commodity at a comparatively low cost for some very large engineering works then contemplated. For instance, dams and sewer construction was under consideration, and it was thought that a product from this source could be obtained at a reasonable rate. The manufacture of Portland cement, however, was not proceeded with, because the demand under a modified scheme for the development of Canberra was not so great, and it was doubtful whether the outlay involved would, in the circumstances, be justified. Some months ago, it was suggested that probably the crystalline limestone might be suitable for facing buildings of a monumental character, such as the administrative block, and following upon that, the Commission has made certain investigations and carried out some developmental work. When the question of the stone to be used for monumental buildings at Canberra arose, one or two factors of importance were considered, including the use of the limestone at Fairy Meadow. It had been ascertained, when driving trial tunnels in connexion with the manufacture of Portland cement, that a vast quantity of crystalline limestone was available. Assuming it would be satisfactory in all respects for building construction, it was found that stone practically uniform in colour could be obtained for the whole of monumental buildings in the Governmental area, the construction of which will continue for many years. Accordingly, the Commission concurred in further investigations being made to determine, if possible, the suitability of the stone, and incidentally the cost of procuring and delivering it at Canberra. One factor was the durability of the stone, having in view the fact that it would be used in buildings which would be expected to last for centuries. The Commission approved of the appointment of an engineer to carry out the investigations at Fairy Meadow, and this officer began work on the 27th April, 1926. Prior to the appointment of the engineer, the Commission communicated with Mr. David Mahony, of the Department of Mines, of Victoria, who visited the deposit and tendered certain advice as to the direction in which the investigations should be made. Mr. Mahony has since been in touch with the work done, but has not inspected the face last developed. The quarry engineer's investigation involved the sinking of trial holes, from which by means of explosives, portions of the rock forming the face were detached. His investigations led to the

187



adoption of two faces, shown on the plan as No. 2 face and No. 5 face, from which sample blocks were obtained and sent to the Melbourne University, and some to the firm of Anslum Odling and Sons, of Sydney, who are stone workers. The only method by which the stone could be obtained in the present circumstances was to shoot it with gunpowder, although it was realized that that was not a method which could be employed in winning dimension stone, because of the shattering effect of explosives. If blocks were required for building purposes, it would be necessary to use a channelling machine and other plant. The samples sent to the Melbourne University were put under test, and failed at a pressure of, I believe, 4,500 lb. The blocks sent to Sydney were treated in various ways, including sawing with a shop saw, a diamond saw, rubbing, sanding, polishing, and working up with a pneumatic chisel. Some of the specimens treated at Anslum Odling and Sons' works were, I understand, inspected by the Committee. Some blocks of stone were also treated in the machine shops at Canberra, with the object of ascertaining whether, in the drastic planing, the stone would pluck up, but it was found that such did not occur. One of the questions to be answered was whether the stone could be obtained in large dimensions suitable for sawing for building construction, and the conclusion I have formed is that such can be anticipated, although in the estimate of cost of delivery of dimension stone at Canberra, the quarry engineer has allowed a large percentage for wasting in order to be on the conservative side. The question of durability is also of great importance. The only indications one can get are the natural surfaces, which have probably been exposed to atmospheric conditions for centuries, and a recent indication in fragments of stone won from the tunnels in connexion with the manufacture of Portland cement. These fragments give no indication of weathering, although they have been exposed to the atmosphere and rain for over twelve years. It might be mentioned that the use of crystalline limestone for building has increased considerably in the United States of America within the last few years, and personally I have no doubt as to the durability of the stone now under consideration. The quantity available has been estimated up to 9,000,000 tons, after making allowance for caves. That quantity, however, is available on both sides of the creek, whereas only the formation to the south-west of the creek has been the subject of investigation. In that portion, it would appear that there are some millions of tons. As to the mass of limestone on the south-western side, a tunnel was driven some years ago for a distance of 170 feet, which traverse a solid mass, with the interposition of fissures common to all limestone at distances varying from 20 to 30 feet. The quarry engineer will be able to state how these fissures will affect the quarrying of limestone with channelling machines. The winning of dimension stone would naturally be attended by fragmentary waste, which would accumulate to such an extent that in the course of time it would form an item of cost in winning dimension stone. Attention was directed to the possibility of using this fragmentary waste in the manufacture of lime, as there is no doubt that from the limestone in this deposit an excellent 80 per cent. lime can be produced, as the stone has been burnt in the immediate locality with very satisfactory results. The quarry engineer has prepared estimates of the cost of—(a) dimension stone; (b) dimension stone coupled with lime-burning; and (c) lime-burning. Broadly, he estimates that the price at which dimension

15,000  
/t

stone could be won from the deposit at 6s. 0½d. per cubic foot in the rough, and that it could be delivered at Canberra at 6s. 6½d. per cubic foot. I understand that the freight from Queanbeyan to Canberra, a distance of approximately 6 miles, is 4s. 2½d. per ton, and from Mount Fairy to Queanbeyan, a distance of 26 miles, 3s. 6d. per ton. The engineer estimates that the rate from Queanbeyan to Canberra may possibly be reduced from 1s. 6d. to 3d. per mile. ~~The cost of carrying the stone from the deposit to Mount Fairy would be additional.~~ The quantity of dimension stone required for the administrative block would entail stone being delivered at Canberra at the rate of about 60 tons per week, which quantity, even after allowing for 30 tons of lime, would not, I consider, warrant the capital outlay required to construct a spur railway line. The proposal is to improve the existing track without spending too much money, because the load to be carried per day would be comparatively small. It is proposed that the transport should be by means of motor lorry.

24. *To Mr. McGrath.*—The only building in Australia faced with marble is Parliament House in Adelaide, but I do not know that the stone used there is similar to this. From what I know of South Australian marble I do not think it is so tight. Concerning the limestone deposits in New South Wales, I may say that I have only seen samples obtained from some of the formations in the vicinity of Orange. I have seen other samples of Australian marble, but I have no definite knowledge as to the deposits from which they came. I do not know of any buildings in Sydney faced with stone similar to that obtained at Fairy Meadow. I understand that Anslem Odling and Sons have not seen stone similar to that obtained here, although they showed me samples of building marble obtained at Bathurst, which I regard as very inferior. There was a law suit in connexion with this area, and the vendors who claimed a very large amount because of the deposit of stone on the property, which was bought originally as pastoral land, lost the case.

25. *To Senator Reid.*—I do not know of any similar stone suitable for facing purposes which can be obtained at a reasonable distance from Canberra. There is a ~~quarry~~ deposit at Tharwa which was opened up some years ago, but which did not seem satisfactory. The Commission asked Mr. Pope, who was accompanied by Mr. Nicoll, the quarry engineer, to report upon the Tharwa deposit, and also to obtain the opinion of Mr. David Mahony, and, I believe, their reports were against its use. There is a granite deposit near Bungendore, but the wisdom of using granite in a building to last hundreds of years is open to doubt. It is well known that some basic granites deteriorate and weather by kaolinization comparatively quickly, whereas acid granite, such as that of which Cleopatra's Needle is composed, lasts for centuries. Before the adoption of granite for building of a monumental character it will have to be a matter of close study as to whether it would weather properly. I do not know of any other similar stone in the locality which would be suitable for building purposes. The Tharwa stone would, I think, cost more to work into actual veneer blocks than limestone. There are no examples of such work in Australia, but, on the other hand, some of the finest buildings in London are constructed of Portland stone, which, however, is not so compact or dense as the Fairy Meadow limestone. I understand that some classes of limestone have been used in South Australia, but I have no personal knowledge of the matter. It has been suggested that the waste stone

17/10  
12

1w

1/2  
1w

1 gneiss granite

could be used for road making, and I have no doubt that it would suit admirably for that purpose. That, however, would entail the construction of a railway to the quarry. I have not gone into the matter as to what would be the demand for such road-making stone by the New South Wales Main Roads Board or other similar authorities. No experiments have been made in the use of material for road-making purposes, but considering its tightness and generally good results obtained from hard limestone, the Fairy Meadow stone laid with bitumen should provide a first class road. I could not say what quantity Canberra would absorb in this direction, but we are obtaining quantities from Mugga Mugga and from other quarries for ballasting from which it could be more cheaply delivered than from Fairy Meadow. The quarries at Canberra will supply the demand for the next few years. If, on the other hand, there should be a heavy demand for road making stone and a railway were constructed to the quarry, it is possible that an economic undertaking might be established. I favour the Fairy Meadow stone in preference to other similar stones.

26. *To Mr. Cook.*—In comparing the cost of the Fairy Meadow products with similar stone, one has to consider what stone is available for work which is supposed to last for centuries. No one can anticipate that sandstone, which consists of sedimentary particles with various cementing media, will last for many years at Canberra, with its high sun temperature in the summer and many degrees of frost in the winter. I have not made any investigation as to comparative costs, but I understand that trachyte would cost more, and that granite would also cost more, unless the Tharwa stone could be won and put into buildings cheaper than can be anticipated at present. It is difficult to find any one who has had actual experience in limestone construction, and, further, the experiments conducted do not give any indication of the durability of the Fairy Meadow product. I believe the stone is worthy of a proper test. I cannot, of course, state definitely that it will prove as good as I anticipate, but if suitable machinery were installed this stone might be used in the development of Canberra for the next 100 years. A light railway would cost £20,000 a mile. I have had a report from the road maintenance officer, who estimates a suitable road could be constructed for a few hundred pounds, having in view the natural road-making qualities of the country.

27. *To Senator Barnes.*—I was not aware that Mr. Sidney Jones said that the Fairy Meadow stone would not bear comparison with granite. The quality of granite depends upon the <sup>quantity of</sup> ~~quantity of~~ known in the stone. A Queensland geologist said that the granite in some parts of that state had kaolinized down to a depth of ~~100~~ feet. If we were only requiring a small quantity of dimension stone each week, the construction of a railway would not be justified. A road constructed at comparatively low cost would serve the purpose.

28. *To Mr. Gregory.*—I could not state whether in estimating the quantity of limestone available it was averaged from the surface or from a specific depth from the surface, but that information could be obtained from Mr. Mahony's report. Caves would be encountered, but there are no indications, as far as our investigations have gone, that we are at the bottom. The depth of the marble deposits in Italy are very great. The Tharwa deposit has not been altogether condemned as unsuitable, but the quarry engineer, who accompanied Mr. Pope to Tharwa, would be able to give you more definite information on that point. The stone is not being used at Canberra. I understand

*kind of felspar*

*1/100th of*

that the Fairy Meadow stone is more freely sawn than granite, and I have been told that after passing through the process of rubbing and sanding it would be suitable for the veneer blocks. If I were recommending this stone for use on monumental buildings I would suggest surfacing and light sand blasting. There would be advantages in having the stone prepared for a building close to the job rather than doing that work at the quarry site. I understand that £500 has been allowed for constructing a road capable of carrying the traffic. I believe that negotiations have been conducted between the Commission and the Commonwealth Railways Commissioner on the freight question generally; it has not been confined solely to the quarry proposition. The rate charged from Queanbeyan to Canberra is 4s. 2d. per ton, or at the rate of 4d. per cubic foot, and from Mount Fairy to Queanbeyan 3s. 6d. per ton for 26 miles, as against 4s. 2d. from Queanbeyan to Canberra, a distance of 6 miles. It is estimated that 13 cubic feet could be obtained from a ton of rough material, but there would, of course, be a certain amount of waste in finishing the stone. I would not agree to any experiments being carried out with the stone on buildings even on first-class cottages, unless the stone had been obtained with the use of a channelling plant, which would cost on an extensive scale about £5,200, inclusive of the cost of making the road. Instead of installing five or six channellers, we could work with two or three in order to obtain sufficient for a small building; but, in addition to the channellers, a compressing air plant and other equipment would be necessary. The expense, therefore, even to obtain sufficient to build a small structure, would be fairly heavy. On the other hand, if the investigation proves satisfactory, I consider it would be desirable to lay down a plant and erect a building which would indicate how the stone would serve, and from that might be deducted the cost of working in a bigger way.

29. To Senator Payne.—In estimating the price at which the stone could be produced and delivered at Canberra, the figures were based on the expenditure of £5,000 on plant. I believe this stone could be delivered in trucks at Darling Harbour at 8s. 4d. per cubic foot, but if the manufacture of lime were coupled with it, the cost would be 8s. 2½d. Approximately 20 per cent. of the stone could be used for facing purposes. If we could find a customer for the waste portion the price could be reduced only to the same extent as when lime-burning was undertaken. If stone were being won for road-making purposes only, it would be a straight-out quarrying proposition, but at present it looks as if stone could not be supplied from Fairy Meadow as cheaply as from Mugga Mugga. On the other hand, when one considers the condition of the roads on the Southern Tableland and roads generally towards Goulburn, it appears that there might be a fairly heavy demand for stone for road-making purposes. I do not, however, know the requirements of the Main Roads Board. Mr. Hill said the stone would make an excellent road-making material. I suggested sand blasting to give the stone a lighter colour. There are such slight variations in the greyness of the stone that even with sand blasting there will be slightly varying shades in all the stone.

30. To Mr. Seabrook.—The use of any explosives in limestone has most unsatisfactory results, as they fracture it for several feet. The proposal is to quarry the stone, despatch it to Canberra, and work it into building blocks. The machinery would be driven by com-

Quarry bar  
or

6

pressed air, and the saws by oil or steam engines. I do not think it desirable to undertake the preparation of the stone on the quarry site, particularly as the necessary power can be obtained in Canberra in bulk and the saving in the generating energy is likely to be greater than that which would be effected by doing the work on the spot and transporting the finished product to the site where it is required. Considering the whole of the circumstances and seeing that building operations are being conducted at the one spot, I think it better for the cutting and finishing to be done on the job. If we were proposing to supply veneer blocks to 20 different places, the cutting up would be done at the quarry site. Although there is a good deal of dry timber in this locality, its calorific value is so low that it is unsuitable for steaming purposes. I believe that when the face is opened up we shall be able to obtain a stone which would be in every way suitable for use in connexion with monumental buildings in the Federal Capital Territory.

*The witness withdrew.*

William Gordon Nicholl, Quarry Engineer, Federal Capital Commission, Canberra, sworn and examined.

31. *To the Chairman.*—After devoting some time to mechanical engineering I engaged in the work of quarry engineering in conjunction with Mr. Pope at the trachyte quarries at Bowral, where I was engaged for two and a half years in connexion with certain investigation work in relation to the granite deposits in ~~that~~ district. Later I commenced investigation on behalf of the Federal Capital Commission at the Fairy Meadow quarry near Mount Fairy, concerning which I have submitted a report to the Commission. During the six months I had been conducting investigations at that quarry, five different places were opened up and three actual faces exposed. The first was not satisfactory owing to the cavernous nature of that section of the deposit, whilst two apparently showed a solid face. Other faces were condemned owing to the unsuitable nature of the formation at those spots. The tests at faces No. 2 and No. 5 were taken to a height of approximately 25 or 30 feet by a width of 23 feet. The No. 5 face was the second one tested. The No. 2 face has been cut in four benches, ultimately reaching a height of 25 feet, and each bench indicated good solid stone. That has been cut to a width of approximately 18 feet, which can easily be extended and is stripped ready for extension to 43 feet. The No. 5 face is cut back to a straight face, and is also of a width of 23 feet by a height of 25 feet. The stone first encountered at the No. 5 face was full of fissures containing clay. The first cuts indicated good solid stone, which extended for a distance of about 10 to 15 feet, when it broke into small caves of stallactite formation. When the cave was crossed good solid stone was again encountered, but it was not quite equal to that met with in the first 10 to 15 feet. The formation was then cut into for a distance of approximately 25 feet, which gave a height of 25 feet. Several fissures were met with in that cutting, none of which was large, the largest being approximately 12 inches at the top and decreasing gradually to 2 inches or 3 inches in width at the bottom. These fissures were running parallel to the face. Fissures were also met with running at right angles to the face and back, and were much the same as those which were running parallel to the face. These started at about 18 inches wide at the top, and gradually closed down to a few inches. Tests were made in the drives which had been cut to prove the suitability of the stone for Portland cement making. The stone encountered

1/2

1/4 and later

1/4 surrounding 1/5

1/4

6 feet from the mouth of the drive was of a good light-grey colour, and the second one, taken at 25 feet from the mouth—this was closest to one of the largest fissures running at right angles to the drive—contained slight traces of clay, which was apparently due to its proximity to the fissures. The next was taken as 37 feet from the mouth, and another at 60 feet, all proving practically the same in both texture and colour as that taken from the opening of the face. A cross drive was put in at approximately 140 feet from the mouth of the drive for a distance of 10 feet, where slight traces of clay fissures were still discovered, proving that fissures would be met without throughout the deposit. These fissures appear to run irregularly; they had no definite direction. Throughout the deposit, so far as it has been tested, it is of an extremely hard and compact nature for limestone. At first we attempted to cut it out slowly with plugs and feathers after the rough boulders had been stripped from the surface, but this method was found unsuitable, so that a small gunpowder blast was used. Plugs and feathers were used for taking out samples for testing purposes after the tight portions had been relieved with gunpowder. The stone itself is of bluish-grey colour, traversed with white and light-yellow veins. The finer of the yellow veins do not seem to be detrimental to the solidity of the stone, as in the majority of cases in striking it with a hammer the cleavage, instead of following the yellow vein, which it would do if the stone were faulty, followed the matrix. The samples taken out for testing purposes were cut from a distance of 3 to 4 feet from where the blasting had actually occurred, and one piece which was sent to Melbourne in order to ascertain its crushing strength, was taken from within 2 feet of the blasting. The samples submitted showed a crushing strength of ~~4,700~~ lb. I have made an inspection of several of the deposits in the Bathurst district, and, if anything, they contain more overburden than that at Fairy Meadow. The fissures occur to a greater extent, and on the whole the stone is more broken even after reaching a depth of 15 to 20 feet. I inspected one quarry where they were taking out ~~dimension~~ stone which was being broken and used for synthetic purposes. In comparing the stone of that district with that obtained at Fairy Meadow, I think the latter would be a more favorable proposition for cutting dimension stone. The samples submitted for testing purposes measured 2 feet by 20 inches by 20 inches and 2 feet by 18 inches by 7 inches, and Anslens, Odling and Sons, who were conducting the tests, were asked to ascertain as soon as possible the suitability of the stone for facing blocks. On visiting the works of the firm, I saw the sawing operations both with the diamond and ordinary ~~power~~ saw. The diamond saw was cutting very quickly, and went through a large block in 17 minutes. The samples were left with the firm for experimental purposes so that the most suitable finish for this particular class of stone could be ascertained. I have not seen the result of their experiments, but I understand that the most suitable is that treated by a light sand-blasting process after facing. I have not seen the effect of that process on Fairy Meadow stone, but on trachyte, it would have the effect of lightening its colour. Owing to the fractures which occurred in this deposit it could not be satisfactorily won other than by channelling. Channelling is done chiefly by a jack-hammer, fitted up to work as a channeller on a quarry bar. The channeller is mounted on a bar above the piece of stone

/15,000

/87

shd

selected, and is then back-channelled. It would be channelled possibly to a depth of 6 or 8 feet, and then channelled right through to the back. It would then be possible to cut the bed with plugs and feathers, and after the block was free it could be lifted out bodily. I have not had actual experience of this process—very little of it is done in Australia—but I have seen it done at different times. We should have no difficulty in obtaining stone by this process from 6 feet to 8 feet long by possibly 4 feet by 3 feet, and if veneer blocks were required they would have to be cut with a saw. I consider it would be more economical to cut the blocks where building was proceeding. To quarry 885 cubic feet of rough stone per week at the quarry would necessitate the purchase of a plant costing £4,600, including channellers, jack-hammers, air compressor, semi-Diesel type of engine, crane, receiver, ~~engine room~~, transport, and the erection of an engine-room. The estimate also includes the cost of transporting the whole of the plant from Mount Fairy siding to the quarry face. I have allowed 15 per cent. for depreciation, as the cost of the upkeep would be small. To enable the stone to be transported to the railway siding, a number of creek crossings would have to be paved, as that method is considered more satisfactory than ~~creating~~ culverts. In close proximity to two of the creeks stone can be obtained for paving purposes. In wet weather parts of the road would be practically impassable. The road between Mount Fairy siding and the quarry could be slightly shortened, and the estimate of an officer of the Commission for putting the road in order is £500, but that is only for constructing a road capable of carrying, say, 50 tons a week. A good deal of the road would consist of the natural surface, although the first half would have to be graded, drained, and covered with gravel that is available near the road. It is proposed to use one five-ton motor truck for carrying the stone from the quarry to the siding, which would be capable of handling 50 tons a week, the cost of which would work out at 7s. 7d. a ton. The estimated cost of a suitable lorry would be £1,000. On an estimated output of 885 cubic feet, the most economical side of the stone would be roughly 6 feet by 4 feet by 3 feet, which would weigh approximately 5½ tons. The cost of quarrying in the rough would be about 6s. 0½d. per cubic foot at the quarry face, and the cost delivered at Canberra 7s. Road carriage is estimated at 7d. per cubic foot, or 7s. 7d. per ton. The railway freight on the New South Wales railway from Mount Fairy siding to Queanbeyan, a distance of 26 miles, is 3s. 6d. per ton, and from Queanbeyan to Canberra, a distance of approximately six miles, 4s. 2d. per ton. We are assuming that the freight will be reduced to 3d. per ton per mile, making a total of 11½d. for freight. As compared with granite, Fairy Meadow limestone would be comparatively easy to work. An important difference between the two is that when once work is commenced upon granite there is very little likelihood of encountering a flaw, but so far as is known at present no one can say how limestone is likely to turn out. This is the experience with most limestones. As Australian limestone has not been used to any extent for external work on buildings, I could not pass any opinion as to its suitability for that purpose. Judging from the way it has stood exposure to the weather, it should do all that is required of it, but, speaking quite candidly, with the information at my disposal I would not be willing to invest my own capital in any limestone deposit in the Commonwealth with the intention of using the material for facing buildings, because up to

*The ends would be*

*5*

*107*

*Building*

*16*

*16*

*87  
1st*

the present it has not been tested. For such work, I should prefer granite merely because more is known about it. Limestone is worthy of a trial, and there is every possibility of its proving to be a suitable stone, but as to its durability in a monumental building over a period of years I am unable to express a definite opinion. There may be a difference between a natural and a wrought face.

32. *To Mr. Gregory.*—I have stated that I consider it would be desirable to send the blocks to be treated where the building in which they were to be used, was being erected. I am guided in arriving at this decision by the fact that we have no electrical power at the quarry for cutting up, which is essential in running an economic machine-shop. Moreover, stone masons are an independent class of tradesmen, and it would be exceedingly difficult to keep them at the quarry. Dorman, Long and Co. have had that experience in connexion with the construction of the Sydney Harbour Bridge. If stone masons were operating at the Fairy Meadow quarry we would have to pay them a camp allowance. Another point is that fitting could be done more effectively on the job, and alterations more easily carried out. The work would also be done under the supervision of the architect and builder. Ordinary labour would not be sufficient for cutting out blocks, and a certain number of skilled artisans would be required for selecting and cutting the stone. Another factor in favour of doing the cutting adjacent to where the stone is to be used is that in the event of engine trouble being experienced repairs could not be effected at the quarry as readily as at Canberra, where there are organized machine shops. I am satisfied that a road capable of carrying the estimated traffic could be provided on an expenditure of £500. In estimating the cost, I have allowed interest on the plant and for depreciation, as well as various overhead charges, but I had not included interest on the purchase price of the property. Granite would cost more than Fairy Meadow limestone, but the freight from the quarry would be an important factor. The Marulan granite would cost approximately 8s. a cubic foot in the rough, and on an extensive work such as the construction of a prominent building at Canberra, I think the limestone would work out at 7s per cent. cheaper in sawing into veneer blocks. Trachyte, I think, would cost 6s. 9d. in the rough delivered at Canberra. I could not really say whether I would prefer limestone or granite in a public building, as the former has not been used in any public building in Australia apart from the Parliament House in Adelaide, and I have not seen the deposit from which that stone came. I have found that limestone works more freely, and is very much easier than granite. Although limestone is light in colour, I believe in the course of time it would revert to its natural colour, which is of a bluish grey. The stone in the spot first inspected, adjacent to the camp, is more of a dolomite or ~~magnesian~~ limestone than that in the mass. I experimented to the right and to the left of that formation, which seems to be merely a turtle back. The stone at that point seems to be of a superior quality, but the quantity is small.

33. *To Mr. Cook.*—If development should definitely prove that the stone is suitable for the purpose suggested, the deposit would be a tremendous asset to the Commonwealth and the expenditure on plant, which I have mentioned, would be fully justified. If stone were found to be suitable, doubtless a market could be found for it in some of the capitals, provided the freight did not make the price excessive. The stone can be



proved only by a test of time, which might take 30 years or longer. If it were considered desirable to test the durability of the stone in a small way, it would not be necessary to incur the expenditure I have suggested on plant. Probably many blocks would be encountered in which there were no cracks, yet we would have to expect them as they are natural in all limestone which carries a high percentage of waste, even in the famous Canara stone. I was associated with the investigation work at Tharwa, where the stone was, I think, rightly condemned. There is more granite in the Bungendore district, through which a copper belt runs, and when granite is found in a copper belt it is likely to contain copper pyrites, which are apt to stain stone used in the face of a building. In many granite buildings, brown streaks are noticed on the face, which is chiefly due to the iron or copper pyrites in the granite. I have not conducted any actual investigation work in connexion with the granite in that district, but I have seen samples of it. Granite is also obtained in the Gunning district, but it is so hard that it is almost impossible to work. For the expenditure of £1,000 we could obtain sufficient limestone to face a cottage, or, say, an office, but I am not in a position to advise the committee to use it in facing the proposed Commonwealth offices in Sydney, because it is impossible for me to say that it would last for a long period of years.

34. *To Mr. Seabrook.*—The distance from the quarry to the Mount Fairy railway siding is, approximately, 2 miles, and an officer of the Federal Capital Commission has estimated that a road, capable of carrying a 4-ton lorry, which would transport, approximately, 79 tons a week, could be constructed for, approximately, £500. The weight of the lorry and the load would be, approximately, 10 tons. Less than one-half of the distance between the quarry and the railway siding would not require any attention, and I consider that the estimated amount would be sufficient to put the road in fair order. The track would have to be graded and drained, and, in most cases, the material required could be obtained within a couple of hundred yards of the road. The estimated cost of doing this work has been provided by the roads engineer. It would be necessary to keep a man on the road to carry out necessary repairs, the cost of which has been provided for.

35. *To Senator Barnes.*—I consider that, in the event of a stone being in position in a building for 100 years, the colour would be practically the same as it is in the rough to-day, although it would not have the crusty appearance which that on the surface now has.

36. *To Mr. McGrath.*—The indications are that the fissures become finer further in. The approximate price of granite is 8s., and that of Fairy Meadow 7s. per cubic foot. Uralla granite costs from 10s. to 12s., and Marulan stone 4s. a cubic foot; whereas the Fairy Meadow stone is estimated to cost 6s. 0½d. at the quarry, or, approximately, 8s. 6d. in Sydney.

37. *To Senator Payne.*—I am not in favour of this stone being used in what may be regarded as one of our premier buildings, because it has never been used for exterior work. I think it would be better to experiment on some less pretentious structure. Most of the stones used for such purposes have been in use for many years, and we have the actual result of the effect which time has had upon them. The only stone used for this purpose, which has not been tested to any great extent, is trachyte.

*The witness withdrew.  
The committee adjourned.*

18

107