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PARLIAMENTARY STANDING COMMITTEE
ON PUBLIC WORKS.

REPORT

TOGETHER WITH

MINUTES OF EVIDENCE

RELATING TO THE PROPOSED ~~CONSTRUCTION~~ OF

Construction

PUBLIC BATHS AT CANBERRA.

By Authority

H. J. GIBBS, GOVERNMENT PRINTER, CANBERRA.

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

ANDREW WILLIAM LACEY, ESQUIRE, M.P., CHAIRMAN.

Senate.

Senator John Braidwood Dooley.
Senator Matthew Reid
Senator Burford Sampson

House of Representatives.

Malcolm Duncan Cameron, Esq., M.P.
John Curtin, Esq., M.P.
Hon. Henry Gregory, M.P.
Edward James Holloway, Esq., M.P.
William John Long, Esq., M.P.

INDEX.

	PAGE
Report	iii
Minutes of Evidence	1

EXTRACT FROM THE VOTES AND PROCEEDINGS OF THE HOUSE OF REPRESENTATIVES, No 11,
DATED 6TH DECEMBER, 1929.

5. PUBLIC WORKS COMMITTEE—REFERENCE OF WORK—CONSTRUCTION OF BATHS, CANBERRA. Mr. Blakeley (Minister for Home Affairs) 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: The construction of Public Baths in Canberra.

Debate ensued.

Question—put and passed.

LIST OF WITNESSES.

	PAGE
Bale, William Henry, Private Secretary to the Prime Minister	23
Christie, Archibald John, Chief Commissioner, Federal Capital Commission	1
Connell, Henry Gustavus, Chief Civil Engineer, Department of Works	6
Crapp, John Samuel, President, Canberra Citizens' League	9
Cumpston, Dr. John Howard Lidgett, Director-General of Health	20
Filshie, Harold John, Head Master, Intermediate High School, Telopea Park	26
Hughes, George Wall Bagot, General Secretary Y.M.C.A., Melbourne	19
Maloney, William, Secretary Fire Brigade Amateur Swimming Club, Canberra	5
Mills, John Hopping, Night-watchman, Federal Capital Commission	14
Mulrooney, John Len, President Canberra Football League	16
Murdoch, John Smith, Second Commissioner, Federal Capital Commission	21.
Notz, Dr. Lewis Windigere, Superintendent Canberra Hospital	11.
Smith, Rupert Clarence, Head-master Ainslie Public School	27.
Weatherston, Joseph Stewart, <i>Hansard</i> Reporter, Canberra	14. 28.

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PUBLIC BATHS, CANBERRA.

REPORT.

The Parliamentary Standing Committee on Public Works to which the House of Representatives referred for investigation and report the question of the construction of Public Baths at Canberra has the honour to report as follows:—

PROPOSAL.

1. The proposal submitted for the consideration of the Committee aims at the provision of a first-class swimming bath designed to conform to the requirements laid down by the American Association for promoting hygiene in Public Baths, and suggested after consultation with Australian swimming and filtration experts.

DESCRIPTION OF THE BATHS PROPOSED.

2. It is suggested that the pool should be rectangular in shape, 104 feet (50 metres) long and 40 feet wide, and having a capacity of approximately 230,000 gallons. The minimum depth of water proposed is three feet, and the maximum nine feet. A combined scum gutter and hand-hold would extend completely round the bath, and the sides and bottom would be covered with white tiles. Steps are to be arranged at the ends of the pool outside the swimming area, and a spring board and slide-chute provided.

3. Around the pool it is proposed to have a concourse thirteen feet wide paved with concrete and finished with a bevelled surface and round edges. Provision is also included for circulating, filtering, and chlorinating the water which is to be obtained from the city mains. A system has been designed to give a complete turn-over of water once in eight hours, i.e., three times per 24 hours; and in addition 250 gallons of make-up water will be provided for per day.

4. The dressing rooms proposed are provided with smooth concrete floors $\frac{1}{4}$ inch to one foot slope, with rounded joints. The walls are to be smooth and impervious, and the lockers will be made vermin-proof. In the ladies' dressing rooms cubicles will be provided for greater privacy.

5. Power and light points are proposed to be provided, and, in addition, it is proposed to illuminate the pool by a method of submarine lighting. It was also suggested that, as an adjunct to the baths a wading pool should be provided for the recreation of the smaller children.

ALTERNATIVE DESIGNS.

6. Two designs were submitted, one providing for an open pool; the second for roofed baths, with galleries for spectators, and the provision for heating the water, dressing rooms, and galleries.

In each case the buildings would be of brick and concrete. In the first case the baths would be surrounded by a low brick wall, and in the second, have a tiled roof.

ESTIMATED COST.

7. The estimated cost of the two proposals as submitted to the Committee were:—

	£	s.	d.
(1).—Earthworks—4,800 cubic yards at 8s.	1,920	0	0
Concrete in pool, including manholes for submarine lighting—287 cubic yards at £5 10s.	1,578	10	0
Concrete paving of concourse, swimming pool—780 square yards, three inches thick at 9s.	351	0	0
Wading pool 123½ square yards, 3 inches thick at 9s.	55	10	0
Tiling of pool—1,000 square yards at 30s.	1,500	0	0
Curved tiles for angles	100	0	0
Concrete floor to dressing rooms, &c., 400 square yards at 12s. 6d.	250	0	0
Wading pool—40 cubic yards, concrete, at £5 10s.	220	0	0
Scour drains—			
Swimming pool	120	0	0
Wading pool	40	0	0
Drainage—Concourse	140	0	0
Plant—Filters, pumps, &c.	2,000	0	0

ESTIMATED COST—*continued.*

Brought forward		£	s.	d.
Fittings (Works Department estimate)	1,000	0	0
Sewer	715	0	0
Water Supply	160	0	0
Electric light and power	900	0	0
Superstructure and enclosure to pool and wading pool	10,600	0	0
Foundations for wall around wading pool	250	0	0
Access road and parking area	100	0	0
Contingencies	1,000	0	0
Total	23,000	0	0

The upkeep figures are as follows:—

		£	s.	d.
Attendants—One full time, four months	100	0	0
Laundry	50	0	0
Water—Two removals of water per year—sewers, showers, and make up water—600,000 gallons at 1s. 3d. per 1,000	37	10	0
Wading pool—six renewals—60,000 gallons at 1s. 3d. per 1,000	3	15	0
Electric light and power	130	0	0
Depreciation—building—1½ per cent on £10,600	159	0	0
Maintenance—Concrete work—1 per cent. on £5,484	55	0	0
Plant—5 per cent. on £3,000	150	0	0
Electrical fittings—14 per cent. on £900	126	0	0
Roadway	10	0	0
Interest <i>5½ per cent on total cost</i>	1,265	0	0
Total	2,086	5	0

It will be noticed that interest accounts for more than half the total.

(2.)—An enclosed pool, roofed over, water heated and heated in the dressing rooms, offices and spectators' gallery, would cost £30,300, made up as follows:—

		£	s.	d.
Estimate previously given	23,000	0	0
Provision for spectators over entrance block	1,400	0	0
Glazing, and roof over pools	2,900	0	0
Heating	2,500	0	0
Contingencies	500	0	0
Total	30,300	0	0

With these additions the pool will be available during both summer and winter as well as for night swimming.

The annual charges for upkeep would be as follow:—

		£	s.	d.
Attendants—				
One full time	300	0	0
One full time three months and half time nine months	187	10	0
Laundry	75	0	0
Water, four renewals; sewer, showers, and make-up water, 1,200,000 gallons at 1s. 3d. per 1,000	75	0	0
Electric light and power	260	0	0
Heating	1,300	0	0
Depreciation—Maintenance—				
Buildings, 1½ per cent. on £14,900	223	10	0
Concrete work—1 per cent. on £8,485	65	0	0
Machinery and fittings—5 per cent on £5,500	275	0	0
Electric fittings—14 per cent. on £900	126	0	0
Roadway	10	0	0
Interest 5½ per cent on total cost	1,666	10	0
Total	4,562	10	0

SITE.

8. Several sites were mentioned as having received consideration, but the Federal Capital Commission recommended the location of the baths on an area in front of old Acton House.

COMMITTEE'S INVESTIGATIONS.

9. The Committee carefully examined the plans submitted, inspected the site recommended and several other possible sites around the city; took evidence from the Chief Commissioner, Federal Capital Commission, the Chief Civil Engineer, Department of Works, the Director-General of Health, the Superintendent, Canberra Hospital, and from representative bodies and citizens in Canberra. In addition, visits were paid, and information obtained in respect of open baths recently constructed at Brunswick, Camberwell, Footscray and Malvern, Victoria, and enclosed, heated pools at Brunswick, the Y.M.C.A. buildings, Melbourne, and the Athenæum Club, Melbourne.

NEED FOR BATHS.

10. All the evidence taken by the Committee indicated the unanimous desire on the part of the residents that public swimming baths should be provided, and stressed the fact that, most of them coming from near the coast, felt the loss of such recreation. A private effort had been made to construct a swimming pool in the Molonglo, near the Power House, and a swimming club was formed and some sports held, but, owing to the muddy state of the river after heavy rain, and the impurity of the water when the river was low, the scheme was abandoned.

The Committee ascertained in evidence that there are numbers of school children in Canberra of whom but a small proportion have any knowledge of swimming, and it was urged that these children should have the same facilities afforded to learn swimming as exists in the cities and larger country towns.

12. After giving the matter careful consideration, and having in mind particularly the children, the Committee is unanimously of opinion that, when practicable, swimming baths should be made available.

SITE.

13. The Committee, in considering the question of site, felt itself at considerable disadvantage from the fact that no information could be given it as to the definite sites allocated for important permanent activities, and the Committee is unaware of the proposed sequence of the Commission's future building programme. It was pointed out in evidence that the location of certain activities such as permanent baths, as conceived by the designer of Canberra, is dependent to some extent on the knowledge as to where certain other activities are to be permanently located, and it was suggested that much difficulty in fixing sites for various important public functions might be avoided if early action were taken to design the Civic Centre and allocate the sites of such buildings as are to be associated therewith. It was represented to the Committee that the proper location for a permanent monumental first-class baths in keeping with the rest of the city, and designed to serve the whole of the people of Canberra, should be located somewhere near the Civic Centre, but, as the Civic Centre has not yet been designed, that is obviously impracticable at the present time. The Committee consequently turned its attention to the location of less pretentious baths which might be considered to meet the needs of the greater proportion of the citizens for a period of years.

14. Various sites were visited, and evidence taken which emphasised their advantages or disadvantages. The Committee endeavoured to keep in view that any site selected should not conflict with the accepted design of Canberra; that it should be on an area that allowed of construction at a reasonable cost; that it should be conveniently located in regard to water, sewerage, and lighting services, and be on or within reasonable distance of a bus route. Finally, that it should be in such a position as to be readily accessible to the main body of the school children.

It was stated in evidence that there are about 280 pupils at the school of Ainslie, and approximately 560 at the Telopea Park school, in addition to which there are about 70 children at the Grammar School, 100 at St. Garbiel's, and 250 at the Convent School, a total of approximately 1,000 on the southern side of the city.

15. After much consideration, therefore, it was decided to recommend that the baths be located on a convenient site in an area between New South Wales-crescent and Fitzroy-street, a little to the south-west of Telopea Park School area.

The decision arrived at by the Committee in connexion with this matter is shown by the following extract from the minutes of proceedings :—

Senator Dooley moved that the baths to be provided be located in an area between New South Wales-crescent and Fitzroy-street, a little to the south-west of Telopea Park School.

Seconded by Mr. Curtin.

The Committee divided on the motion—

Ayes, 7.

Senator Dooley.

Senator Reid.

Senator Sampson.

Mr. Cameron.

Mr. Curtin.

Mr. Lacey.

Mr. Long.

No, 1.

Mr. Gregory.

and so it was resolved in the affirmative.

16. It was realized that this position will not be convenient to the residents on the northern side of the city, but the Committee is less concerned about the adult residents, to whom the journey involved will not be a serious inconvenience, than with the children in that area. It is hoped, however, that reasonable transport arrangements can be made on those days when the children in school classes will visit the baths.

At a later date, when the growth of population warrants it, and funds are available, and before the monumental baths are established, it may be possible to provide a small swimming pool at the northern end of the city to meet the convenience of residents in the northern areas.

TYPE OF BATHS SUGGESTED.

17. The estimated cost of the proposal originally put forward by the Federal Capital Commission was quite at variance with the Committee's idea of what is warranted at the present time, and an effort was made to reduce the cost to a figure which would provide reasonable recreational facilities while avoiding anything in the nature of extravagance.

18. Considerable difference of opinion existed amongst the residents as to the advisability of providing an open pool or enclosed baths with heated water. It was represented that, in a climate like that of Canberra, it is unlikely that an open pool would be used for more than three or four months in the year, while an enclosed and heated pool would be patronized day and night during the whole of the year. It was also urged that the water of an enclosed pool could be kept cleaner on account of the exclusion of dust, and, by its greater use, would be likely to bring in larger revenue. As against this, many contended that swimming is essentially an open-air pastime, and most swimmers preferred the sunshine and fresh air, and that in cold weather it would be a menace to health to have to brave the keen air of winter after swimming in heated water.

While appreciating the various arguments advanced, the Committee is mainly concerned at this juncture was giving swimming facilities principally for the children at as low a capital cost as possible, and consequently is unanimously of opinion that an open pool only should be provided, and that no attempt be made to heat the water.

SIZE OF BATHS.

20. The length of the baths was suggested by the Federal Capital Commission to be 164 feet (50 metres) so as to offer a convenient distance for swimming races, but, after an inspection of several pools of this size, the Committee formed the opinion that such a length is unnecessary at Canberra, and an estimate was asked for of approximately half that length. The estimate furnished as a result of this request was set down at £21,010, which was still regarded by the Committee as too ambitious, and further efforts were made by the Committee to obtain swimming facilities at a lower cost.

21. On the 10th March, 1930, the second Commissioner, Mr. Murdoch, submitted a design of an open pool 82 feet by 40 feet which he estimated could be provided for approximately £9,000.

22. On examining the plans of this bath, the Committee was of opinion that an insufficient area of shallow water would be available for non-swimmers, and was not prepared to agree that the interior of the pool should be painted cement only. Mr. Murdoch was accordingly asked for an amended estimate of a pool 100 feet long by 40 feet wide, so graded as to give a greater area with depth up to 3 ft. 6 in. and with tiled bottom and sides. He estimated that such a pool could be constructed for approximately £10,000, which the Committee unanimously agreed should be approved.

SURROUNDING WALL.

23. Consideration was given to the style of enclosure for the baths, and it was eventually agreed that there should be a brick wall about 10 feet high, as recommended by the Federal Capital Commission.

The decision arrived at by the Committee in connexion with this matter is shown by the following extract from its minutes of proceedings, namely:—

Mr. Curtin moved that the pool be surrounded by a brick wall as indicated on the plan.
Seconded by Senator Sampson.

Mr. Gregory moved, as an amendment, that three sides be enclosed by a wall, and that the side towards the hill on the north-west be laid out in a lawn, with a surround of wire fencing and shrubbery.
Seconded by Senator Dooley.

The Committee divided on the amendment—

Ayes, 2.
Senator Dooley.
Mr. Gregory.

Noes, 6.
Senator Reid.
Senator Sampson.
Mr. Cameron.
Mr. Curtin.
Mr. Lacey.
Mr. Long.

and so it passed in the negative.

Mr. Cameron moved as a further amendment, that the pool be surrounded by lawns and shrubbery and an inexpensive fence on the model of the baths at Malvern, Victoria.

Seconded by Mr. Gregory.

The Committee divided on the amendment—

Ayes, 2.
Mr. Cameron.
Mr. Gregory.

Noes, 6.
Senator Dooley.
Senator Reid.
Senator Sampson.
Mr. Curtin.
Mr. Lacey.
Mr. Long.

and so it passed in the negative.

The original motion was then put and carried unanimously.

LIGHTING.

24. After due consideration, the Committee agreed to recommend that electric lighting be provided to enable swimming to take place at night, but that the expense of providing submarine lighting was not warranted.

STEPS, ETC.

25. It is recommended that the steps leading into the baths be recessed into the sides of the baths and that arrangements be made to provide plants and shrubbery around the outside of the baths to mask the encircling wall.

WADING POOL.

26. The Committee is unanimously of opinion that no wading pool for very small children should be provided in association with the baths.

DESCRIPTION OF BATHS RECOMMENDED.

27. The baths which the Committee recommend would have a pool 100 feet long by 40 feet wide, with white tiles on sides and bottom and swimming lanes indicated on the bottom with black tiles. The water would vary in depth from 3 feet to 9 feet, the slope in the shallow portion being so graded as to give a maximum area of water up to 3 ft. 6 in. in depth. Provision would be made, as in the original scheme, for the filtration and chlorination of water, but no provision would be made for heating or roofing the baths.


There would be a platform 10 feet wide on each side of the pool and 14 feet wide at the ends. Dressing accommodation would be provided for 88 men and cubicles for 41 women, with provision for lavatories, footbaths, and a small stall at which could be sold sweets, soft drinks, &c. The whole structure would be surrounded by a brick wall, masked on the outside with plants and shrubbery.

PROSPECTIVE REVENUE.

28. All the information obtained by the Committee indicated that there is little likelihood in the early stages that the revenue received will cover interest and maintenance charges, but, with the growth of population and the increased patronage of the baths, this matter may be expected to gradually adjust itself.

SAVING EFFECTED BY THE COMMITTEE.

29. The recommendation of the Committee will result in a saving on the original proposal of an amount of £20,300.

 W. LACEY

Chairman.

Office of the Parliamentary Standing Committee on Public Works,
Parliament House, Canberra.

3rd April, 1930.

MINUTES OF EVIDENCE.

(Taken at Canberra.)

WEDNESDAY, 11TH DECEMBER, 1929.

Present:

Mr. LACEY (Chairman);

Senator Dooley	Mr. Gregory
Senator Reid	Mr. Holloway
Senator Sampson	Mr. Long.
Mr. M. Cameron	

Archibald John Christie, Chief Commissioner, Federal Capital Commission, sworn and examined.

1. *To the Chairman.*—I have been responsible for the submission of plans concerning the proposal to construct public baths in Canberra. Most of the information that I have on the subject was given to me by the late Chief Commissioner or the second Commissioner. There has been a definite demand for public baths in this city for quite a long while. A great deal of correspondence has passed between the late Commission, the late Government, and the present Government, and the decision was arrived at that an amount of £5,000 should be placed on this year's Estimates as an instalment towards the cost of constructing the baths. The late Commission inspected a number of sites, and came to the conclusion that the site at Acton, which is marked No. 2 on the plan, would be the more preferable one. Other sites that have been suggested are marked on the plan 1 to 7. Site No. 2 is just in front of old Acton House. When the late Commission was considering its suitability it bore in mind the future development of Canberra, the general accessibility of the site from the different suburbs both now and in the future, and also the fact that for many years, if not for all time, it will be on a bus route. There can be no doubt that the bus route will be over Lennox-avenue, up Acton-road, and past the suggested site of the baths, rather than up Commonwealth-avenue. That was the factor which decided the late Commission to approve of this site rather than one where the settlement may be a little closer. There is the further factor that the hospital is on this route. The area to be set aside depends entirely on the amount of parking space and the approaches that will be required. It is in a plantation, and there is no reasonable limit to the area that could be allotted for any form of beautification or development. The outstanding advantage claimed for this site is its general accessibility to the different suburbs. It is conveniently situated to sewerage, water, electricity and power services. From an engineering point of view it is a good site. It has a bottom of rock, and the baths would be comparatively inexpensive to construct. So far as I know there would be no conflict with the accepted design of Canberra. On the original plan the peninsula on which the Commission offices now stand was allotted for a hospital, but a variation has been gazetted which permits of a road bisecting the original hospital block. The erection of the baths on this site would not conflict in any way with the design. Even when the city is further developed on the north this site would still be in a convenient location for the majority of the people, because it would always be on a bus route. There is a fair settlement in the locality of Canberra House and up towards Hotel Acton. When the lake-scheme is developed there will be a high-level bridge across Lennox-avenue over to Commonwealth-avenue. I think that undoubtedly this will always be the route of the buses that serve Ainslie, Reid and Acton. There

is, and there always will be, a very large area along Commonwealth-avenue that will not be residential, and it is only natural to suppose that the buses will travel along routes where they can pick up passengers. That is in the Acton locality rather than along Commonwealth-avenue. Then again, there must always be a bus route in the neighbourhood of the hospital. If the baths were located on this side they would not affect the development of the University area or the provision of the lake scheme. I produce a sitting plan showing the proposed baths on site No. 2. The baths are to be 50 metres (equal to 164 feet) long by 40 feet wide. Fifty metres is the standard length of all swimming races. The design has been made to conform to the regulations laid down by the American Association for promoting hygiene in public baths, and in consultation with swimming and filtration experts in Victoria. The design of the pool proper also allows of the conduct of competitions under Olympic and Australian championship conditions. Other factors affecting the size, shape and layout generally of the swimming pool are—(1) The probable maximum attendance of bathers and spectators; (2) the peculiarities of the site chosen; (3) the funds available for construction and upkeep; also probable revenue; (4) water supply. It is desired to keep the quantity of water required as low as possible and to avoid waste, particularly if the water must be drawn from the City mains. In Canberra pumping costs are 6d. per 1,000 gallons. It is considered that the water should be drawn from the City mains and not pumped from the Molonglo. In England the pool areas allowed for bathers are 20 square feet of wading area and 50 square feet of diving area to each bather. It is assumed that 80 per cent. of the bathers will be in the area having a depth of less than 4 ft. 6 in. The depth of water should not be less than from 3 ft. to 3 ft. 6 in. when the bath is to be used for swimming competitions, and 75 per cent. of the pool area should have a depth of 4 ft. 6 in. or less. The remaining 25 per cent. should vary from about 4 ft. 6 in. to 9 ft. in depth. It is advisable to mark the depth of the pool on the sides at approximate intervals of 15 ft. The rectangular shape of the pool which has been adopted is the simplest and most economical to construct. The area, as I have already stated, is 164 ft. (50 metres) long by 40 ft. wide—6,560 sq. ft.—and the capacity is approximately 230,000 gallons. The minimum depth of water is 3 ft. and the maximum depth 9 ft. A combined eum-gutter and hand-hold extends completely round the bath. The side and end walls are vertical and are designed to resist the inward pressure of the earth when the pool is empty, and the unbalanced outward pressure of the water when the bath is full. The slope of the floor in the shallow portion of the pool (3 ft. to 5 ft.) is 1 in 40. Expansion joints will be provided both in the walls and floor, and, if found necessary, sub-soil drainage will be provided under the floor. The reinforcement of the floor will depend to some extent upon the foundations exposed, and, in addition to reinforcement for the ordinary stresses due to the weight of water, etc., reinforcement will be provided to resist temperature stresses. The whole of the sides and floor of the pool will be covered with white glazed tiles. The corners will be rounded and six (6) swimming lanes will be marked on the bottom of the pool with black tiles. The lining of the bath with tiles will facilitate cleaning. Steps will be arranged at the ends of the pool outside the swimming area and particular care will be taken to avoid slipperiness. It is proposed also to provide a spring-board and a slide-clute for children. Around

the pool is a concourse 13 feet wide, paved with concrete finished with a bevelled surface and round edges. The slope of the concourse is $\frac{1}{4}$ inch in 1 foot away from the pool. Provision will be made for circulating, filtering and chlorinating the water. Water will be obtained from the City mains. Bacteriological tests of the water in order to determine its purity will be made from time to time, and at regular intervals the pool will be completely emptied and washed down. If the baths were not covered and heated they would be used for only a small portion of the year. In that case the water would be changed twice a year. But if they are used throughout the year it will be necessary to make the change every three months. We shall have bacteriological tests from time to time, and if it is found necessary to make more frequent changes they will be made. A decision will be come to purely on the results of those tests. The outlets from the pool are located at the deep end, and the water passes out through a strainer (hair-catcher) to a sump. It will then be pumped through the coagulating tank to filters and will gravitate from the filters to the shallow end of the pool, where it will be treated with chlorine from the chlorinator and pass to the pool by means of an inlet cascade. The system has been designed to give a complete turnover of water once in eight hours, i.e., three times per 24 hours. In addition, about 350 gallons of make-up water will be provided per day. The pumps will be of the centrifugal type with electric drives. The filters will be six in number, so arranged that effluent from five can be pumped through the sixth filter for cleaning. The filter-cleaning pump and motor will duplicate the circulating pump and motor and can be used as spares. The pool sides and bottom will be cleaned by suction cleaners worked by the circulating pump. By that means we shall always be able to ensure a plentiful supply of pure bathing water. Water will be obtained from the City mains located close to the site. Sewage will be drained into nearby sewers connected in Acton Nursery, and finally will find its way to the Acton septic tank. The lay-out and arrangement of entrances and exits from the pool in relation to the dressing-rooms, showers and toilets, etc., enforce proper routing of the bathers, and any one, other than bathers, will not be allowed in the pool room. Those who wish to enter the pool will be required first to have a shower. The lay-out is such that they must pass through the shower before they can enter the pool. The dressing-rooms are provided with smooth concrete floors, $\frac{1}{4}$ inch to 1 foot slope, with rounded joints. The walls will be smooth and impervious, and the lockers will be made vermin-proof. In the ladies' dressing-room it may be necessary to have cubicles to enable women to have greater privacy. The general lay-out of the bath-house is clearly shown on the plan. Provision will, perhaps, in addition, be required for laundry, refreshment-stand, room for valuables, costumes, etc. Turn-stiles should also be provided in order to ensure that the collection of hired articles is properly made from persons leaving the bath-house. Power and light points will be provided, and in addition it is proposed to illuminate the pool by a method of submarine flood lighting. Electric power for pumps, etc., will also be available. Electric current can be simply and cheaply obtained from the sub-station near the site. At night water looks oily and black unless it is illuminated, and therefore is not at all inviting. If we are to have night bathing it will be necessary to have a series of lights along the sides below the water level. If the baths are not to be covered they will be used for only a short period—probably only two or three months at the outside—during the year. The question arises whether it is not better to face what must be the ultimate development of the baths and provide those that can be heated, and thus make it possible for swimming

to be indulged in throughout the year. If that is done the baths must be wholly covered. If heating is not provided that will not be necessary. I am submitting two estimates to show the probable cost of both schemes. In the one scheme provision is made for the installation of heating equipment to heat the circulating water and the dressing-rooms and public galleries if required. To many people swimming is a most enjoyable recreation, but indulgence in the pastime is limited in Canberra by the lack of a suitable natural body of water easily accessible to persons who are without the means of transport. Good, safe, comfortable and convenient bathing would therefore probably be popular, particularly if the proposal provides comfortable accommodation and heating of the water and portions of the building, so that the pool is available for use during the greater portion of the year. A certain proportion of the people, no doubt, would be prejudiced against bathing in the public bath, but this is a feature which exists elsewhere and would be difficult to overcome. The patronage to be expected is most difficult to assess, and I am not in a position at present to make any reliable estimate of it. If, however, proper facilities are provided, the baths will be used, in addition to recreation purposes, for sport and exhibition swimming, and also for educational purposes; for example, school children will be taken there regularly. But if provision is made for spectators I think that even more revenue will be derived from them than from ordinary bathers. A certain revenue will also be obtained from the sale of sundries, the hire of costumes, etc. There is no doubt that the admission charges will be fixed without regard to the economic aspect. The provision of swimming baths will result in certain indirect gains to the population; and, even though at first the revenue obtained will not be sufficient to meet all the costs, the loss must be set off against the enjoyment gained by the people, and no doubt an improvement in their health. I have prepared estimates for two alternative proposals. The first is for open baths, with no accommodation for spectators and no provision for heating. With the inclusion of a wading pool the cost would be about £23,000. Such baths would be used for only a small portion of the year and would be neither revenue producing nor of full benefit to the population. The cost of upkeep under that proposal, making allowance for interest and depreciation, would be £2,066 per annum. The following are the details of the cost of construction:—

	£	s.	d.
Earthworks—4,800 cubic yards, at 8s.	1,920	0	0
Concrete in pool, including manholes for submarine lighting—287 cubic yards, at £8 10s.	1,578	10	0
Concrete paving of concourse, swimming pool—780 square yards, 3 inches thick, at 9s.	351	0	0
Wading pool 123— $\frac{1}{4}$ square yards, 3 inches thick, at 9s.	55	10	0
Tiling of pool—1,000 square yards, at 30s.	1,500	0	0
Curved tiles for angles	100	0	0
Concrete floor to dressing rooms, &c.—400 square yards, at 12s. 6d.	250	0	0
Wading pool—40 cubic yards, concrete, at £8 10s.	220	0	0
Scour drainings—Swimming pool	120	0	0
Scour Drainage—Wading pool	40	0	0
Drainage—Concourse	140	0	0
Plant—Filters, pumps, &c.	2,000	0	0
Fittings (Works Department estimate)	1,000	0	0
Sewer—£715	715	0	0
Water supply	100	0	0
Electric light and power	900	0	0
Superstructure and enclosure to pool and wading pool	10,000	0	0
Foundations for wall around wading pool	250	0	0
Access road and parking area	100	0	0
Contingencies	1,000	0	0
Total	23,000	0	0

The upkeep figures are as follow—

	£	s.	d.
Attendants—1 full time, four months	100	0	0
Laundry	50	0	0
Water—Two removals of water per year— sewers, showers, and make-up water— 600,000 gallons, at 1s. 3d. per 1000	37	10	0
Wading pool—Six renewals—60,000 gallons, at 1s. 3d. per 1,000	3	15	0
Electric light and power	130	0	0
Depreciation—Buildings—1½ per cent on £10,000	150	0	0
Maintenance—Concrete work—1 per cent. on £5,481	55	0	0
Plant—5 per cent. on (£3,000)	150	0	0
Electrical fittings—14 per cent. on (£900)	126	0	0
Roadway	10	0	0
Interest—6½ per cent. on total cost	1,265	0	0
Total	2,089	5	0

It will be noticed that interest accounts for more than half the total. An enclosed pool, roofed over, water heated and heated in the dressing rooms, offices and spectators' gallery, would cost £30,300, made up as follows:—

	£	s.	d.
Estimate previously given	23,000	0	0
Provision for spectators over entrance block	1,400	0	0
Glazing, and roof over pools	2,900	0	0
Heating	2,500	0	0
Contingencies	500	0	0
Total	30,300	0	0

With these additions, the pool will be available during both summer and winter, as well as for night swimming.

The annual charges for upkeep would be as follows:—

	£	s.	d.
Attendants—One full time	300	0	0
One full time, three months; half-time, nine months	187	10	0
Laundry	75	0	0
Water, four renewals; sewer, showers, and make-up water, 1,200,000 gallons at 1s. 3d. per 1,000	75	0	0
Electric light and power	200	0	0
Heating	1,300	0	0
Depreciation—Maintenance— Buildings, 1½ per cent. on £14,900	223	10	0
Concrete work, 1 per cent. on £0,485	5	0	0
Machinery and fittings, 5 per cent. on £5,500	275	0	0
Electric fittings, 14 per cent. on £900	126	0	0
Roadway	10	0	0
Interest—6½ per cent. on total cost	1,606	10	0
Total	4,557	5	0

In each case the building would be of brick and concrete. Under the second proposal there would be a tiled roof. It is proposed to have a low brick wall if the pool is to be an open one. I have not been able to form any definite or reliable estimate of the revenue which is likely to be received. That will depend on what the charges are, and whether school children are admitted free. The admission charges will have to be fixed irrespective of the cost of the baths. If swimming is to be a part of the school curriculum there will have to be either a nominal charge or no charge at all. I am seeking information in other States regarding the practice there. The system for the circulation and disinfection of the water has been designed to give a complete turnover once every eight hours. In the plan I have shown the wading pool attached to the baths proper, and the cost of covering it has been included in my estimate. The size of the pool is 32 feet by 50 feet. In the plans submitted by the Works Department no provision has been made for a wading pool because the question whether a wading pool should be inside or outside the baths is a controversial one. Women, accompanied by their children, may wish to have them under their observation. It has not been suggested that the wading pool should be heated in winter. I am inclined to the view that it would be better to have

it away from the swimming baths. It could be placed in the park, and provision could be made for a sand pit. In some places provision is made for a bigger expanse of shallow water inside the baths instead of a wading pool. The purification of the water in the baths would not be affected by having the wading pool inside. We suggest that the depth should be from 6 inches to 18 inches, and that the pool should hold about 9,000 gallons of water. If it is not to be heated, there will be no necessity to cover it in. I am now having prepared an alternative plan showing a wading pool outside the baths. If this were adopted, the cost of the baths would be about £2,500 less than the estimate I have given. The shape proposed is rectangular, with a gently sloping bottom. The construction will be of concrete. The pool will be surrounded by a concourse 7 feet wide. It will be supplied with water direct from the mains, and emptied direct into the sewer. The water will not be specially treated. I am in favour of having the wading pool outside. If it were inside and heated, a great deal of expense would have to be incurred in covering it, whereas the benefit would not be very great. The pool will be used only during the summer months, and it might just as well be in the park. The plans and specifications that I have proposed for baths on the Acton site could be readily adapted to any of the other sites. The approaches might have to be altered slightly. This is merely a tentative scheme.

THURSDAY, 12TH DECEMBER, 1929.

Present:

Mr. Lacey, Chairman;	
Senator Dooley	Mr. Curtin
Senator Reid	Mr. Holloway
Senator Sampson	Mr. Long.
Mr. M. Cameron	

Archibald John Christie, Chief Commissioner, Federal Capital Commission, recalled and further examined.

To the Chairman.—In the original plan the wading pool was placed alongside the swimming pool. The plan I now submit shows it a little distance away. The new proposal is for a circular wading pool 35 feet in diameter saucer shaped, sloping from the surface at the outer edge to 18 inches deep in the centre. There will also be a concrete path 5 feet wide surrounding the pool and a sand pit on either side. The wading pool could be placed almost anywhere but it might be well to place it as close to the swimming pool as the ground permits. A separate wading pool would necessitate a slightly different treatment of the swimming pool building, for there would be no wing as provided in the original plan. The new proposal will alter the estimate slightly. The separate wading pool would cost about £287 made up as follows:—

	£	s.	d.	£	s.	d.
Earthworks	60	0	0			
Concrete	80	0	0			
Concrete paving	37	10	0			
Concrete kerb around the sand pits	30	0	0			
Washed sand	40	10	0			
Contingencies and Sundries	30	0	0			
				287	0	0
The services in connexion with the pool would cost about £68, as under—						
Brought forward				£	s.	d.
4-inch cast iron pipes for draining the pool	25	0	0			
Concrete piping	10	10	0			
Sump and Gratings &c.	10	0	0			
Man hole	5	0	0			
Inlet and outlet valves	12	10	0			
				60	0	0
Grand total	355	0	0			

The annual cost of upkeep would be about £50. Of that amount depreciation and interest represent £37, the balance being for water, cleaning, and additional sand, from time to time.

I felt that the estimates previously submitted could be cheapened and I therefore revised them last night. Instead of £23,000 for scheme A the revised estimate is £20,900, or without the wading pool £19,440. For scheme B, with a separate wading pool the revised estimate is £23,200 in lieu of £30,000 originally estimated, or without the wading pool £20,200. The new shape of the pool will affect the design of the roof. It is also proposed to surround the pool with a series of piers having a 4½-inch brick curtain wall with a continuous beam on the top.

3. *To Senator Reid.*—The baths would not interfere with the proposed road approach from Commonwealth Avenue to the offices at Acton. The baths will be a little over 100 yards from the proposed road. The actual distance would depend on the site chosen for the bridge, which cannot be determined accurately at present. The baths will be in park lands away from any road or projected road or bridge approach. The proposed site No. 2 is probably one of the most inexpensive sites for a bath. The land has a rock bottom and the approaches can be easily made. The bottom at site No. 4 has not been specially tested, but we know that it would be all right. From the point of view of accessibility and engineering problems, No. 4 site is the second best of the sites proposed. The cost of making approaches to site 4 would probably be less than in the case of site 2. That is its only advantage over site 2. It is situated on one of the main 200 foot avenues and the land slopes from the road. Parking areas and roads could easily be made at site 4, whereas at site 2 there would be more earthworks. Site 2 would mean that the baths would be practically adjoining the proposed lake. Indeed they could easily be made right into the lake. That would mean that there would be no access from the lakeside. Even if the lake is not made there will be very little land between the baths and the river bank. On site 4 there is now sufficient room for approaches on all sides, but that site is also almost on the banks of the lake, so that if the lake were formed, there would be no approach from that side. There would be plenty of room for the parking of cars in either case. At site 4 a parking space could be provided between the buildings and the avenue, just the same as at site 2. There would be no necessity to drive between the baths and the lake. There is a little plantation already in the vicinity. Accessibility from the lake to the baths would not be any advantage because bathers would have to go to the turnstile to get in. No. 4 site would provide a more gradual approach to the lake edge, whereas No. 2 site would mean a steep approach to the lake. In either case the spoil excavated could be used on the site. The land alongside site No. 4 is now being filled in. The extension from the footpath from Hotel Canberra to the avenue facing No. 4 is now being made. The cost of excavations will be much the same in either case, but the No. 2 site would mean cheaper sewer, water, and electric light connexions. Site No. 4 is further from the services than is No. 2. The Commission prefers covered to open air baths. The difference between the capital costs of the two schemes would not be great, but by covering the baths and heating the water the premises could be used all the year round. The extra cost involved in roofing the pool would be about £5,000. That expense would be justified if the pool were used all the year. It would cost about £1,300 a year to heat the baths during the cold months. The cost of submarine lighting would not be very great. It merely means placing a few special lights on the side of the baths below water level. With our

remarkably good Cotter water, the baths, if properly lighted, would be very attractive at night. There is no need to cover the children's wading pool, unless it is desirable to heat the water in it. It would be better for that pool to be in the open. If their wading pool is in the vicinity of the baths, the children could be practically under observation all the time by the attendants at the baths. The weight of evidence is in favour of an open air wading pool. I have not discussed with the Minister the terms on which school children would be admitted to the baths. A good deal will depend on the school curriculum. The usual practice in other places is for the children to have one free swimming lesson each week during school hours. If a charge is made, it will be a nominal one. The idea is that the children attend the baths for one swimming lesson weekly under the supervision of a teacher. In some universities a degree is not conferred unless the student is able to swim.

4. *To Mr. Holloway.*—The suggested sites have been selected with a view to their accessibility. No. 7 site would be expensive because of the long distance from the necessary services. The cost of buildings would be practically the same on all the sites with the exception of the additional expense incurred in connecting water, sewers, and electric light. There is no need for the wading pool to be in the vicinity of the baths. The usual practice is to construct a wading pool in some park where the children can be under the observation of their parents. I thought that it would be a good idea to provide at least one wading pool for the children if the adults are given a swimming pool, and that that wading pool could with advantage, be situated near the baths. Site No. 2 will be a park in one of the most beautiful parts of Canberra. Even if the lake scheme does not develop, it will still be a beautiful place. Wading pools could be constructed in any of the parks, but it seemed desirable to provide something for the children when the requirements of the adults were being met. The plan provides ample facilities for the parking of vehicles. There will be a road from Lennox-avenue and a parking area surrounded by trees. The parking area can be as big as is required. The whole proposition will take about 1 acre of ground. It is proposed to provide parking space in front of the building.

5. *To Mr. Curtin.*—The roof of the baths will be 20 feet 6 inches high at the top of the walls, and 34 feet 6 inches to the ridge. Ample provision will be made for the ventilation of the building. There will always be a sufficient current of fresh air.

6. *To Mr. Long.*—No. 7 site would be most expensive because of its long distance from the sewer. The cost of excavation on sites 2, 4, and 7 would be much the same. The engineer's report regarding site 7 is that the cost of connecting the necessary services would be heavy; moreover it is not on a main bus route. The engineer's report on site 2 is that it is within an existing plantation; is already moderately sheltered and could be sheltered still further; surface drainage excellent; satisfactory rock bottom and good accessibility; on main bus routes; plenty of parking space; favorably situated as regards sewer, water and electric power; moderately inexpensive site for construction. In respect of site No. 4 the engineer reports—about 1,000 feet west of Commonwealth offices, West Block; low lying land; within an area set apart for park treatment; well sheltered; surface drainage good; accessibility good, being 1,200 feet from a point served by all bus routes, and near one important bus route; ample parking space; not so advantageous as sites 1 and 3 as regards sewer, water and electricity; no engineering difficulties in connexion with those services, but a slightly longer length of line. The maximum depth of water suggested is 9 feet. The baths would be

164 feet by 40 feet, giving a total area of 6,500 square feet. The area of the baths is the same in each case.

I have not the exact distances of sites 2 and 4 from the water main. There would be no engineering difficulties in connexion with either site for services; it is merely a matter of distance. The estimates I have submitted this morning were all prepared for site 2. For a covered bath and without a wading pool the cost is estimated at £26,200. The cost of baths on site 4 would be the same apart from the extra cost of connecting the services. The cost of upkeep would be much the same in each case; there would probably be a slightly greater charge for depreciation if the capital cost were a little greater. I favour covered baths because they could be used all the year round. An open pool could not be heated satisfactorily without considerable expense.

7. *To Senator Sampson.*—It would be possible to heat the water in open air baths, but the cost would be considerable. I think that a good deal of night swimming would be indulged in if the baths were attractive. Submarine lighting would make them attractive. If the baths were not heated they would not be popular in winter.

8. *To Mr. M. Cameron.*—There has been a very definite agitation by the people of Canberra for proper swimming facilities. If created I feel sure that the baths would be well patronized. There is a natural prejudice against public baths, but we hope to overcome that by making them attractive and ensuring that the water will be clean at all times. There will be a big demand for the baths for the use of school children. Until we get the site definitely settled, and full details of the cost prepared, we cannot consider the probable revenue from the baths. The policy of the administration in respect of school children will also have important bearings on the revenue. I cannot at present give a reliable estimate of the revenue.

9. *To Senator Dooley.*—I know of no other baths which have been erected on similar lines to the scheme proposed here; but the plans have been prepared from the best and latest information obtainable from baths experts in Victoria and America.

10. *To the Chairman.*—In the Griffin plan provision was made for a hospital on a blunt peninsula which would project into the lake. Mr. Griffin's plan provided for a road which cut off the peninsula and practically isolated the hospital. That plan has been altered. When the high level bridge is constructed, the road passing over it will cut into the site reserved by Mr. Griffin for a hospital. It is not desirable to have a main road in such close proximity to a hospital. The position of the present hospital is only temporary, but it might become the permanent hospital site. With slight modifications, the plan which has been prepared for No. 2 site, could be adapted to any of the seven sites suggested. Tests of the water in the Molonglo river are made every month by the microbiologist at the Sydney University. Any information desired by the Committee in relation to those tests can be supplied.

(Taken at Canberra.)

SATURDAY, 14TH DECEMBER, 1920.

Present:

Mr. LACEY, Chairman;

Senator Reid	Mr. Curtin
Senator Sampson	Mr. Gregory
Mr. M. Cameron	Mr. Holloway.

William Maloney, secretary, Fire Brigade Amateur Swimming Club, Canberra, sworn and examined.

11. *To the Chairman.*—Last year we had 63 members in our club. I am aware that it is proposed to

build public baths in Canberra; but my club has made no representations on the matter, nor have we, as an organization, formed any definite opinion regarding baths, or where they should be placed. I have resided in Canberra for about twenty years. As there were no public baths in Canberra, we decided to form a swimming club, and take steps to improve the swimming facilities in the Molonglo. We chose a place near the power house, and improved it by cutting away the bank, building a platform and putting up dressing sheds. We were able to hold a swimming carnival, and though it was not possible to make a charge, we took up a collection among spectators which realized £8 14s. After that the river got very low, and a warning was issued by the medical authorities that it was unsafe to bathe in it. This year, however, there is an ample volume of water, and we have been considering holding another carnival. I feel confident that open baths would be used all the summer, at least from the beginning of November to the early part of March. I should say that for nearly eight months of the year it is too cold for swimming in unheated water. I should strongly recommend having the water heated, so that the baths might be used in the winter time. I should think that, in any case, even for summer bathing, the water would need to be heated, because the Cotter water is very cold, much colder than that in the Molonglo. I should say that public baths in Canberra would receive a fair measure of support, judging from the fact that 50 or 60 people attend our swimming pool every Sunday during the warm season. As to the proper charge for admission to the swimming baths, I suggest that perhaps it might be fair; but if the baths were warmed it might be possible to charge more. I am in favour of building baths such as could be used for swimming carnivals, races, &c. The following is a list of some of the principal swimming baths in Australia and other parts of the world, and their dimensions—

METROPOLITAN BATHS.

New South Wales.

Abbotsford	32½	yards	course.
Dalmain	50	"	"
Brents	33½	"	"
Bondi	50	"	"
Cooze	33½	"	"
Döpinin	110	"	"
Manly	50	"	"

Interstate.

Adelaide (Fletcher's Dock)	.. 110	"	"
Melbourne (St. Kilda)	.. 110	"	"
Brisbane (Iliaca Baths)	.. 25	"	"
Hobart (Sandy Bay)	.. 50	"	"

INTERNATIONAL.

Antwerp (Belgium)	100	metres
Blackpool (England)	27	yards
Brighton (New York, America)	25	yards
Budapest (Hungary)	33½	metres
Christiana (Norway)	50	metres
Liverpool (England)	125	yards
Honolulu (America)	100	yards
Los Angeles (America)	33½	yards
Magdeburg (Germany)	25	metres
San Francisco (America)	33½	yards
Manchester (England)	25	yards
Stockholm (Sweden)	100	metres
Vienna (Austria)	100	metres

Fifty yards is quite long enough for the baths, but they should be more than 40 feet wide. Seating accommodation for 150 people is not sufficient. We had 300 people at our last carnival, and there should be accommodation for not less than that number at the baths. I do not care for the proposed site at Acton. I favour a site somewhere between the Commonwealth bridge and Beauchamp House, perhaps on the right

hand side just across the bridge. I would have no objection to a site on the road to the Prime Minister's residence, close to the Secretariat. It has the advantage of being on the bus route. Of the other proposed sites, I prefer that marked No. 3 on the map.

12. *To Senator Reid.*—I do not think that the site below the Acton Hotel would be convenient for people at the Kingston end of the city. I admit that the higher bus fare from the Causeway would be a consideration; but probably that would not worry those who were keen to have a swim. The proposed site No. 4, near the Secretariat, would, I think, be quite suitable, and I can urge no objections against it. It would have the advantage of being on a single section bus route from any part of the city. From the point of view of the swimmers there would be no objection to it. I know of no advantage associated with the Acton site, which would compensate for the increased fares which people living in distant parts would have to pay to get there. I think that 9 feet is quite deep enough for the baths at the deep end. I do not think that a great many people would attend the baths in the winter time, even if they were heated. It is too cold in the winter time here. No doubt some would attend, but not, I think, enough to make it a paying proposition. No doubt, if the baths were enclosed and roofed, the atmosphere inside would be warm, and this would attract people to attend at night, even in the winter. I should certainly prefer to have the baths covered in and heated in the winter.

13. *To Mr. Cameron.*—Our present swimming pool is just below the power house and above the weir, where the track crosses from Kingston to Duntroon. The river is always flowing at this point. Last year, even during the dry season, the water was always running over the weir or through it. I think it was about February that the warning was issued against bathing in the Molonglo, and the water was then at its lowest point. I cannot say what was wrong with the water; but a notification was sent to the club that it was not fit for bathing in. The club immediately ceased its activities. We are bathing there again this year, but have taken no precautions to determine whether or not the water is pure. It gets rather cold for bathing here at the end of March, and regular bathing could not be indulged in before the 1st November. If baths were erected we should abandon our present pool altogether. The trouble with the Molonglo is that, after 1 or 2 inches of rain, the water becomes very discoloured, so that it is impossible to bathe in it in comfort. Last year we had to postpone a carnival on this account. Once the river becomes discoloured it takes a fortnight or three weeks to clear.

14. *To Mr. Gregory.*—It would not be practicable to build baths on the Molonglo river, for the reasons I have just stated. After rain the water becomes quite thick. It would, I admit, be desirable to get representative opinions upon the question of site; but, so far as our organization is concerned, our members have drifted away since the bathing pool was condemned, and we have now only those members who are attached to the brigade. I suggest that the local citizens' organization might be asked for its opinion. It would be a pity if a site were fixed, and the citizens complained of it afterwards. It would be difficult to get a meeting of citizens before Tuesday next, although it might be possible to call one on Monday. I should very much like to see a paddling pool for children attached to the baths. It should not be too far away from the swimming pool, because parents might like to take their children to paddle, and use the swimming pool themselves, or watch while events were in progress there.

15. *To Senator Reid.*—Mr. Crapp is chairman of the Canberra Citizens Association. There are a number of progress associations in Canberra; but the Citizens Association represents all the residents.

The witness withdrew.

Henry Gustavus Connell, Chief Civil Engineer to the Commonwealth Department of Works, sworn and examined.

16. *To the Chairman.*—I have not seen the latest plans for public baths at Canberra, but I designed the original lay-out, which the Federal Capital Commission asked us to prepare. I am acquainted with the various sites suggested for baths, and I am aware that the Chief Commissioner recommends a site near Acton as the most suitable. I do not entirely agree that this is the most suitable position. Personally, I think that the baths should be where the population is. The proposed site was selected because it was on a bus route, but to me it has the disadvantage that whoever goes to the baths must travel to get there. In my opinion, baths should be on a bus route, certainly, but in a centre of population, so that at least half the people attending them would be able to walk. I have examined all the sites suggested, and two of them appeal to me. One is near the Anglican Church, in the district of Reid, and the other is in Ainslie. Anzac Parkway is opposite the church, and anywhere in that park would be a good place for the baths. Placed there they would be in a growing centre of population. A bitumen road connects the district with the settlements on the Kingston side of the river, and a railway station will eventually be built nearby.

17. *To Mr. Gregory.*—It is proposed to put a railway station near this point and another at Civic Centre.

18. *To the Chairman.*—The alternative site which I favour is in the Ainslie school reserve. I am attracted to that site because it is surrounded by a large population, and because it is accessible by bus. I have been closely associated with Canberra for a number of years. I came here originally in 1912, and for four years was in charge of public works here. I have visited the place fairly regularly since. There is some doubt that the site suggested by the Federal Capital Commission for the baths would be in harmony with the plans for the development of Canberra. I know of site No. 4 near the Prime Minister's residence, and, to my mind, it has only one thing to recommend it. It is on a bus route, but it is away from all centres of population, and I do not think there is any prospect of there ever being much population near it. Wherever the baths are placed some people will be inconvenienced, and will have to travel to them by bus, so the best thing to do is to place them where the smallest number will be inconvenienced. I have made a study of the construction of public baths in other countries. When we were asked to submit a lay-out for baths we recognized that it would have to stand criticism in more than one way. When the proposal was first spoken of there was a lively controversy in the Melbourne newspapers upon the possibility of epidemics being spread by people attending public swimming baths. We were, therefore, careful to obtain the best information we could on the lay-out of baths, and the preparation of water, &c. In 1925 the American Public Health authorities and State sanitary engineers formed a combined committee which drew up standards for the design, construction, and running of public baths. Those standards were amended in October, 1927; they have been accepted by a number of the States, and have been incorporated in their sanitary code. I wrote to the United States of America and obtained a copy of them. In order to be on the safe side, I followed the standards closely

in the lay-out of the baths for Canberra. The following are extracts which I have made from the final report of the joint committee on bathing places in the United States of America:—

JOURNAL OF THE AMERICAN ASSOCIATION FOR PROMOTING HYGIENE AND PUBLIC BATHS. VOL. X., 1928.

[Extracts from Final Report of Joint Committee on Bathing Places of Conference of State Sanitary Engineers and Public Health Engineering Section of American Public Health Association (Cincinnati, 18th October, 1927).]

Layout.—The layout or arrangement of entrances and exits of the pool-room in relation to dressing-rooms, showers and toilets must be such as to enforce proper routing of bathers. Coming from the dressing-room a bather should be required to pass the toilets and go through the shower-room before arriving at the pool entrance. Bathers should leave the pool-room through a separate exit leading to toilets and dressing-rooms. Ample room must be provided for filters. All recirculation piping, inlet and outlet valves, &c., must be located where they will be readily accessible. The chlorine apparatus should preferably be located in a glass enclosure in the pool-room.

Design.—Slope of bottom of any part of pool where water less than 6 feet deep must be more than 1/4 inch in each 15 feet. Side and end walls vertical. White or light coloured tiles for lining—round corners. Swimming lanes marked in bottom with black tiles. Markings showing depths in 1-ft. increments on both sides of lane.

Load.—Average space requirements of an adult swimmer (allowance for one-third of swimmers being on shore) 27 square feet to be provided. The total number of bathers using a pool during any period of time shall not exceed 20 persons for each 1,000 gallons of clean water added during that period.

Inlets and Outlets.—All pools should be provided with an outlet at the deepest end of sufficient size to permit the pool to be completely drained in four hours. Outlet opening in the floor should be at least four times area of discharge pipe to reduce currents. The opening must be covered with proper grating. In rectangular pools multiple outlets should be provided when the pool is more than 20 feet wide. Outlets should be spaced not more than 20 feet apart and not more than 10 feet from side walls. All inlets should be in shallow water end and not more than 1 foot below water line.

Scum Gutters should extend completely round the pool. The design of scum gutters should be such that matters entering them will not be washed out by a sudden surge of entering water and that danger of bathers catching arms or legs in them be reduced to a minimum. The edge of a scum gutter should be designed to serve as a handhold for bathers. Gutters should, therefore, be sufficiently deep that bathers fingers will not reach the bottom. Sufficient opening must be provided to permit mechanical cleaning of the gutters. Drainage outlets should be provided every 10 feet. Projection into pool should not be more than 2 inches.

Steps.—Treads should be of non-slip material. Should not project into pool. Should have handrail round top at runway.

Rampways or Sidewalks.—Slope of 4 inch to 1 foot—smooth and easily cleaned, but non-slip. Edge should be rounded. High tight walls should encircle rampways.

Visitors' Galleries.—Must be absolute separation of space used by spectators and that used by bathers. There should be no means by which bathers can enter space reserved for spectators, or vice versa. Visitors' quarters must have separate entrance. Galleries for spectators should not overlap any portion of pool. Floor and foot rail of gallery should be of tight construction to prevent dirt tracked in from getting into the pool. Gallery floor and seats regularly washed.

Dressing-rooms.—Floors smooth, impervious, 4 inch to 1 foot rounded joints. Walls smooth and impervious. Partitions should terminate 4 inches above floor. Lockers vermin-proof.

Showers, Toilets, and Lavatories.—Hot and cold water with adequate number of showers (1 to 40 bathers at maximum load). Foot trough with running water. One W.C. to 40 women, and one W.C. and one urinal to 60 men. Lavatory basins handy, one to 60.

Lighting, Ventilation, and Heating.—Lighting must be such as to light every portion of pool-room without dazzle. For day lighting, area of skylight or windows should be at least one-half the area of the pool-room. Good ventilation compulsory, but no direct draught on bathers. Pool-room and all dressing-rooms, shower-room, and toilets should be heated to temperature between 70 degrees F. and 75 degrees F. Thermostatic control of the temperature is desirable. Water about 72 degrees F. The temperature of the air should not

be more than 8 degrees F. warmer nor more than 2 degrees F. colder than the water in the pool. For best results air about 5 degrees F. warmer than pool.

Recirculation.—System designed to provide a turnover at least twice per 24 hours and preferably three times or more.

- Pumps.**
- Haircatcher.**
- Water Meter.**
- Filters.**
- Piping System.**
- Suction Cleaner.**

Disinfection.—Disinfect with chlorine and maintain in pool water at all times a residual amount of disinfectant to sterilize immediately any dangerous pollution disseminated by bathers. It always give trouble use copper sulphate as well as chlorine.

Chemical and Physical Quality of Pool Water.—The amount of excess chlorine in the water at all times shall not be less than .01 p.p.m. nor more than .5 p.p.m. (ortho-tolidia). When sulphate of alumina is used the water at all times must show an alkaline reaction. Tests must be made every day. The water must always be sufficiently clear that the bottom of the pool is visible.

Bacteria.—Not more than 10 per cent. of samples covering any considerable period shall contain more than 1,000 bacteria per c.c. No single sample shall contain more than 5,000 bacteria per c.c. Not more than two out of five samples collected on the same day, or not more than three out of any ten consecutive samples collected on different dates shall show a positive test (B. coli) in 10 c.c. of the water at times when pool is in use.

Our first task was to determine the size of the pool, and on that point, we consulted various swimming authorities in Melbourne, including Mr. Beauvoir. He told us that the pool should be of such a size as to be suitable for racing under standard conditions. That is why we chose one 50 metres long. The usual width of each swimming lane has been fixed at 5 feet, but Mr. Beauvoir was emphatic that swimmers were too cramped in that space, especially the swimmer who got behind. The overseer of the Melbourne City Baths told us that for cleaning the baths a suction cleaner was used, and that 40 feet was the maximum width in which it could be employed. Therefore, we fixed on 40 feet for the width, which allows a swimming lane of 8 feet 8 inches for each of six swimmers. The swimming authorities told us that we should be careful to insist upon a rectangular pool, because swimmers, when racing, always tend to follow the side of the baths; it was difficult for them to keep a straight course when the shape of the baths was other than rectangular. We made the baths 9 feet deep at one end, and 3 feet at the other for the use of non-swimmers. The baths are not in any sense for washing purposes, but purely for swimming. The size of the baths having been determined, that also fixed the number of people who could be accommodated. According to the standard rules laid down each swimmer should have 27 square feet of water space, so that the maximum number of persons allowable in baths of this size would be 240 at a time. But because a proportion of those using the baths would be non-swimmers, the total number using the pool at one time might be increased. The standard provides for twenty bathers for every 1,000 gallons of freshly added water per hour. As we intend to have 30,000 gallons of freshly added water an hour, these baths could carry a load of 600 persons. We followed the standard in all particulars, in the areas of the dressing rooms, the route of the swimmers passing in and out, and the situation of such fixtures as were necessary. The details, of course, we designed from our own experience. No matter which site is chosen, my lay-out can be followed. Our estimate of the cost was only tentative, because we made only a lay-out; we did not go into particulars. The actual construction of the building was left to the Commission. We were asked to design open baths, and we designed an open pool which could be converted into a closed one. The annual cost of running the open baths for six months of the year we estimated at £780, excluding interest on the cost of construction. The annual

cost of upkeep for closed baths with heating installed would be about £2,400. It is very difficult to estimate what the probable revenue would be. We realized that the number of persons regularly using the baths would not be sufficient to pay for upkeep. We did think, however, that when a swimming club was formed of important national and international swimming events might be held at the baths, and in that way a largely increased return would be forthcoming. I do not think that the establishments of baths in an area would attract residents to that place contrary to the intentions of the designers of the city.

19. *To Mr. Curriain.*—I do not think that it would be nearly so difficult to keep the water clean in closed baths as in open ones. Our experience of the weather during the last few days has convinced me that it is cleaner under cover than outside. According to our plans the water in the baths would be completely filtered every eight hours. If dust is continually blowing into the water the tendency of the filters to clog with mud is much greater. The height of the roof above the pool as shown in the plans appears to me to be sufficient. One radical alteration in the lay-out, as I designed it, is the inclusion of a wading pool in the plans before me. I think that 18 inches is too deep for a wading pool, but otherwise I agree with the design. A wading pool is essentially for the open air, whereas a swimming bath is better enclosed. I would make the wading pool with sloping sides, circular in shape, and at no place deeper than 12 inches.

20. *To Mr. Cameron.*—I think that the Ainslie district is destined eventually to carry the greatest population in Canberra because, according to the lay-out of the city, the Civic Centre is in that area. The population there is already greater than in any other one district, although it is not, of course, greater than that of all the other districts together. I should not like to prophesy that the Causway settlement will eventually disappear, but it will, I think, be reduced in size as time goes on. It is probably true that there are not many persons at the Causway with private means of transport, but other methods of transport should be adequate to serve them. The existing road over the low level bridge joining Kingston to Ainslie will disappear when the city plan is fully developed, but there will be another one close to it which will take its place. In the lay-out for the baths, as designed by me, accommodation was provided for seating 500 spectators in a gallery. This gallery was to be situated over the dressing sheds and entrance, and we had made arrangements that, on particular occasions another 400 persons could be accommodated on temporary seats around the swimming pool itself. A margin of 5 feet would be kept clear next to the pool. I cannot say what the accommodation is for spectators at the Melbourne city baths, but I should think it is well over 1,000. There are long galleries on each side of the pool. In view of the fact that these baths are to serve the needs of the capital city of Australia, and may be the venue of important international swimming matches, seating accommodation for only 150 is inadequate. I should rather have no gallery at all than one which would seat only 150 persons. From an examination of the plan, I do not think that the gallery, as provided, could be extended. However, there is still 15 feet of space around the pool, and on special occasions portion of this could be railed off, and accommodation provided for a further 400 or 500 people.

21. *To Mr. Gregory.*—I think that in years to come some sort of inter-suburban railway service will be justified in Canberra. There will be a railway station at Civic Centre, and it could be arranged that trams should run at stated intervals during the day. There would probably be sufficient traffic offering to warrant their being run in the morning and evening, at any

rate. I should not like, of course, to commit myself on the point as to whether or not such a service would be likely to be called for within the next ten or fifteen years. The tentative estimate of cost for baths, according to my plan, was £15,000 for open baths, and £23,000 for closed baths. When I went into the matter afterwards, I decided that £2,000 should be added to each estimate. My plans provided for the filtration of water and heating. Because the same water is circulating all the time in an enclosed area it loses from 3 to 4 degrees of heat, and that heat has to be made up again. The water will be kept at a temperature of about 72 degrees. We propose to pass a certain amount of the circulating water through a cast iron boiler, heated either by oil or coke fuel. The water runs out of the tank by gravity, and passes through what we call a hair catcher in a bag cylindrical machine with slits one thirty-second of an inch wide. It passes from there into a sump from which it is pumped by an electrically driven centrifugal pump into a mixing chamber in which is some coagulating agency, usually sulphate of alumina. From there the water runs over sand filters. We designed multiple filters in six divisions, each 3 ft. 6 in. deep. The filtering material consists of 24 inches of sand, and 18 inches of graded gravel divided by a wire mesh with 100 divisions to the square inch. The water passes over the top of the filters, and runs through them. It passes through the filters at the rate of 120 gallons to the square foot per hour. In order that the whole of the water may be circulated every 8 hours, it is necessary to pass it through the filters at the rate of 30,000 gallons an hour. To do that, we require 250 square feet of filtering area. Six filters will be installed, but only five of an area of 250 square feet each are necessary to deal with the water in the time stipulated. There will be one spare filter, and this will be used to relieve the others in turn while they are being cleaned. This is done by pumping the effluent from five filters back through the other one. The process can be carried on indefinitely, and the water itself can be kept quite good for six months. In fact, water put straight into a tank is not good swimming water for about three days. Even the Cotter water would not be clear enough at first. Water in swimming tanks which has been used continuously by 2,000 people a day for three months is still quite clear—so clear, in fact, that it is possible to see a small spot on the tiles on the bottom of the tank. In this plan the filters are situated at the end of the baths opposite to the entrance. The filters are only 10 feet by 5 feet, with 4 inch walls between them. I do not think that open baths would be very much availed of by people in Canberra except on very good days in the summer. For six months of the year people would not go near them, and on wild, windy days even in the summer, they would not be very well patronised. The revenue derived would be much greater from closed baths. I prefer not to offer any opinion on the architectural plans submitted: It is right out of my line. My work is utilitarian, not ornamental.

22. *To Senator Reid.*—The water in the baths is not changed three times a day. It is the same water which is continuously running out and running in again at a rate which empties and fills the baths three times a day. In some baths the water circulates completely only once a day, but we found that by having the water circulate three times a day we could increase the number of people using the baths. The number who may use the baths is determined according to a formula under the standards I have quoted. The water is not only cleared, but sterilized also. The filtering of the water makes it clear and transparent, but does not sterilize it. Sterilization is effected by the process of chlorination. After the water has been chlorinated it is better and purer for bathing purposes even than the water from

the Cotter itself. According to plans prepared by the Commission, provision is made for a small gallery for spectators at the end of the building. It would be possible to have a gallery along one side with dressing sheds underneath, but the lay-out would have to be altered. In some of our earlier trial designs we did make provision for a gallery along the side, but we came to the conclusion that it would be too expensive. By utilizing the area around the pool, I think it might be possible to get as many as 1,000 spectators into the building, and that might be all that would be needed. That could be done with the present design. It would, of course, be done only on special occasions, and the place would be thoroughly cleaned before the baths were used again. There is no reason why the baths could not be built in such a way that galleries could afterwards be built along the sides if necessary. Personally, I think that nearly everyone would avail themselves of baths if they were built. The transport problem could be overcome by the buses issuing bath tickets, which would enable bathers to travel two sections for the price of one, and which would give access to the baths also. I think most people would use the baths at night rather than when they knocked off work in the afternoon.

23. *To the Chairman.*—I certainly think that the wading pool should be in the open air. It need not be a very expensive affair, but it should be in the sunshine. The water would not need the same treatment as for the swimming pool. For the wading pool it would be necessary only to draw the water off and fill the pool again. I do not think the wading pool should have anything to do with the swimming baths. It could be built somewhere among the trees, or in some park area accessible to the children. If necessary, more than one paddling pool could be built. They could be placed wherever they were wanted.

24. *To Senator Reid.*—An ordinary concrete bottom would do for the bathing pool. The swimming pool, of course, should be tiled. I do not think it would be advisable to place sand over the concrete bottom of the wading pool. It would make it very difficult to keep the pool clean, and sand would tend to clog the pipes.

(Taken at Canberra.)

MONDAY, 16TH DECEMBER, 1929.

Present:

Mr. LUCKY, Chairman;

Senator Dooley	Mr. Curtin
Senator Reid	Mr. Gregory
Senator Sampson	Mr. Holloway
Mr. M. Cameron	Mr. Long

John Samuel Crapp, president of the Citizens League, Canberra, sworn and examined.

25. *To the Chairman.*—The provision of public baths for Canberra has occupied the attention of my league for some considerable time. We consider a public swimming pool a necessity in the interests of the rising generation, and we believe that if the State of the finances will not, at the moment, permit of adequate arrangements being made, it would be better to allow the matter to stand in abeyance rather than that the people should have to put up with some makeshift arrangement. The public baths for Canberra should be in keeping with the ideals of the Capital City. If the proposal were to construct baths to be used for only the summer months, I should say that an open-air swimming pool would be preferable; but we take the view that further expenditure on an enclosed pool which could be heated during the winter months would be justified. I have had experience of three summers in Canberra, and I feel sure that open-air baths would

not be used for more than three or four months in each year. If the baths were enclosed and heated artificially they could be used throughout the year, and in this way entertainment as well as recreation, could be provided for the citizens. We have discussed this subject at a number of public meetings, and the committee of the league has considered several suggested sites. The most suitable location, in our opinion, would be in the vicinity of site number 7. We believe that site number 2, suggested by the Commission, will not meet the needs of the future population. At present there is no bus route near site number 7, but we have every reason to believe that one will be established before long to enable the people of North Ainslie to reach the shopping centre at Kingston by a more direct route. This would take buses past the site which we suggest for the baths. Moreover, we claim that number 7 will be equidistant and within walking distance of the two large public schools. There is a strong feeling among residents in the northern suburbs that a more direct bus route should be provided for those who wish to shop at Kingston. At present, it takes them from three-quarters of an hour to one hour to make the journey. A bus route passing near to site number 7 would reduce the time to about twenty minutes or twenty-five minutes. We consider that, from the point of view of the population in, say ten or fifteen years, site number 7 is the best. Site number 4 would be convenient for school children from Telopea Park school, but inconvenient for children attending the Ainslie school. I may add that my committee has considered this matter more from the point of view of the needs of school children than adults. We have not discussed the proposed charges for admission. We do not approve of the Acton site, because we believe that in time the Commission will be succeeded by some other form of government and in all probability the Commission offices will be removed, so public baths located in that vicinity would not then meet the needs of the people. My committee has not considered the probability of the layout of the city being interfered with by the selection of site number 7, but the actual design has been departed from in minor respect on several occasions, and I cannot see how a swimming pool on site number 7 will seriously affect the layout of the city. I do not approve of a location in the vicinity of Civic Centre. A wading pool for small children should be provided adjacent to but not actually as part of the public baths, because of the danger of small children wading into water beyond their depth.

26. *To Mr. Curtin.*—We believe that in a few years' time site number 7 will more nearly meet the requirements of the capital than any of the other locations mentioned. The majority of the citizens own motor cars. Therefore we think that the convenience of those people living in the weatherboard area, and at the Causeway, which may be regarded as industrial centres, should be considered in fixing on the site for the public baths here. Because of the scattered nature of settlement in Canberra, there will be very little early morning swimming unless provision is made for more than one swimming pool. My committee would not approve of any proposal for a makeshift. We believe that it would be better for all concerned to expend, say, £20,000 on an up-to-date swimming pool, one that could be heated in winter time and made in every way attractive; than to spend £7,000 or £8,000 on two swimming pools for summer bathing only. Unless the pool is heated it will not be used for more than four months in each year. I have not had experience of similar conveniences in other cities, but I am sure that public baths here will not be successful without heating and protection from the cold winds. In Sydney, where most of the swimming is done in the open sea, men and women indulge in this recreation for at least eight

months in the year. I am familiar with the conditions in the Armidale district. The baths there are not heated for winter swimming. Consequently, they are used only during the summer months: I would not think of plunging into the water for six months of the year in Canberra unless I knew it had been heated. If we have enclosed baths and provision for heating, the people will be encouraged to use them fairly extensively in winter, and after business hours at night. So far as I am aware there is no instruction in swimming at any of our public schools during the winter months because the conditions then are not favorable. Because of the climatic conditions at Canberra, provision must be made for the protection of bathers from the cold winds.

27. *To Mr. Long.*—My committee considers that the additional outlay on enclosed baths and provision for heating the water in winter will be fully justified. Even during the last few days we have had unusually cold winds which would deter bathers from entering the water unless they had some form of protection. My first preference is for site number 7; my second for number 4, and my third for number 2. Number 7 site will be within fifteen minutes walking distance of both the large public schools. I believe that, if the swimming pool is artificially heated it will be largely used in the winter. If I were considering this proposal from the point of view of private enterprise, I should not hesitate for a moment. I should decide in favour of an enclosed swimming pool and arrange for artificial heating. I do not think that public baths will be in the nature of a nine-days' wonder, because Canberra is different from many other inland centres, in that it has not so many attractions, so a well-organized swimming club should be able to cater for the entertainment of the people as well as the recreation of its members. I feel sure that the Government will be justified in authorizing the additional expenditure necessary to construct an enclosed swimming pool, as against open baths.

28. *To Mr. M. Cameron.*—Unless we have an enclosed swimming pool it will be used for only a short period each year. The change in temperature during summer is not always so drastic as we have experienced during the last few days, and usually a cold change lasts for only 24 or 48 hours. Under present conditions, number 4 site, near the Hotel Canberra, would be convenient, and that is my second choice. If the lake scheme for the city area were carried out, the present crossing over the Molonglo in the vicinity of St. John's church would disappear. So if the public baths were located at number 7 site people who wished to reach it from the eastern part of the city area would have to make a considerable detour unless, as we anticipate, other crossings were made to the eastward of the lake scheme.

29. *To Mr. Gregory.*—If the lake scheme were carried out and if there were no other crossings provided, I should prefer No. 4 site, but that is looking a long way ahead. If arrangements could be made to construct the baths so as to allow of further improvements such as enclosing and heating subsequently, it might be advisable to carry out the scheme in that way; but unless the water is heated during the colder months the swimming pool will not be used for more than three or four months of each year. The swimming pool in the Molonglo was well patronized last summer until the public were warned by the Public Health Department that the water was unsafe.

30. *To Senator Dooley.*—Site No. 7 is about the same distance from both public schools. At present, No. 2 site is well served by a bus route, but it is quite possible that in seven or eight years' time, because of the increase in population, there will be an urgent

demand for greater bathing facilities. There is a swimming pool in the Cotter river below the dam, but it is fifteen miles distant, and is not used to any extent except by those who own motor cars. We are more concerned about the school children than the adult population.

31. *To Senator Reid.*—There have been no swimming facilities to speak of available in Canberra since the transfer of public servants. A swimming pool on site No. 4 would be convenient for all public servants employed in the various secretariats, but I imagine that the majority, instead of going for a swim immediately after office hours, would prefer to go home and change into suitable clothes and then return to the baths. Under present conditions, No. 4 site is the most convenient, but we are thinking of the future and we believe that No. 7 will more nearly meet the requirements of the people. If the baths were enclosed and the water heated it would be possible to arrange for swimming carnivals, and in this way add to the revenue. There is practically no other form of entertainment available to the people apart from the regular outdoor sports such as cricket, football and tennis. Canberra has no parallel in Australia. In Sydney, Melbourne and other capital cities the people have ample opportunities for sea bathing, and the populations of such cities as Bendigo, Ballarat and Kalgoorlie and towns like Albury and Orange differ materially from that of Canberra. In this city, the majority are public servants. A considerable percentage of those transferred to this city have been accustomed to open air sea bathing. With them it is a pastime and they feel the lack of it here. The extent to which the public baths will be used in the winter months by school children will depend upon the enthusiasm of the teachers. Certainly it would not pay to heat the swimming pool if only a small number of people used it in the winter months. It would be impossible, without taking a referendum, to ascertain on how many days it would be used by the people generally. Personally, I would not commit myself, at this stage, to the advocacy of establishing two swimming pools in the city area. I am putting forward the views of my committee and I am not prepared to depart from them without instructions.

32. *To Mr. Holloway.*—I think that medical and scientific authorities are agreed that sun-baking is as important as swimming for the promotion of health, but I suggest that, because of the climatic conditions in the Territory, it is not advisable to establish open-air baths. It is, I think, desirable to make adequate provision against the cold winds experienced in Canberra. The housing facilities of the people here are supposed to be up to date, and I have no doubt that in no other city in Australia are the inhabitants so well catered for as in Canberra in the matter of private baths and perhaps hot water services. The majority of public servants may be regarded as indoor employees and under ordinary climatic conditions would prefer open-air bathing and sun basking; but unless we provide enclosed baths and arrange to have the water artificially heated the swimming pool will not be used to any great extent except during the summer months. It is not suggested that the revenue from the users of the baths will be sufficient to meet interest and maintenance costs, because, like every other public utility in Canberra, the swimming pool should be planned for the needs of the future population. Our water supply scheme, electric light services, and sewerage system have been designed to meet the needs of a population of 50,000. It would be unjust to expect the present generation of users of any of these services to provide all the revenue necessary for the payment of interest, maintenance and contribution to the sinking fund.

The witness withdrew.

Lewis Windermere Nott, Medical Practitioner, Superintendent of Canberra Hospital, sworn and examined.

33. *To the Chairman.*—I am aware that there is a general desire among the citizens of Canberra, for the establishment of public baths in this city, and I am familiar with the several sites suggested. I prefer the site at Anzac-parkway, near St. John's Church on the Ainslie side. Because of the climatic conditions obtaining in Canberra, the swimming pool should be enclosed. This will make it difficult to provide for sunbaking except at largely increased cost. Unless the pool is artificially heated it will not be used for more than about three months in each year. I do not anticipate that any injurious effects will result from bathing in a heated pool, for I assume that the temperature of the water will not be raised above 64 degrees, and bathing in that temperature would be conducive to better health in the community. I assume, also, that in the interests of the public health, persons using the pool will be required first to use the showers and footbaths, and a regulation may be promulgated forbidding bathers from using their own costumes. I understand that the most modern methods for the filtration and chlorination of the water will be employed, and provided aeration is efficient, there should be no risk to bathers. I imagine that the changing of the water will be governed by bacteriological tests. On'y four changes a year would appear to be insufficient. I understand that the swimming pool will be 164 feet long by 40 feet wide. It will be a bit narrow, but I understand that 40 feet has been fixed, because it will enable the pool to be effectively cleaned by suction. The seating accommodation proposed is inadequate. In my opinion, it should be at least double; there should be provision for at least 300 people. I do not approve of a wading pool for children in combination with a public baths. These wading pools could be provided more suitably at popular picnic resorts and other convenient locations. I should not like to see the baths established on No. 4 site as I believe that a recreational building like that suggested should not be in the immediate vicinity of the group of permanent public buildings. From an aesthetic point of view, this is not desirable and moreover the traffic to and from the baths and the noise of children and young people in the water would not be in keeping with the general atmosphere in the heart of the capital city. Sunbaking is possible for only a limited time each year in Canberra. I believe, therefore, that an enclosed swimming pool would be more attractive than open air baths combined with conveniences for sunbaking.

34. *To Mr. Long.*—I am perfectly sure that from the point of view of physical development, the establishment of public baths in Canberra is an urgent necessity. All children should be taught the art of swimming and receive instruction in efficient principles of life-saving. Enclosed baths with water artificially heated will be patronized to a much greater extent than an open-air swimming pool. Sunbaking is regarded as being beneficial to health, but in my judgment it is much over-done nowadays. The rapid climatic changes in Canberra would militate against the success of open-air bathing. High external walls around an open-air swimming pool would not meet the case, because the dust-laden atmosphere would quickly contaminate the swimming pool and render frequent cleansing imperative. If the baths are enclosed, and the temperature of the water is raised to between 60 and 70 degrees, the air temperature in the baths will correspond to the temperature of the water so that it will not be necessary to have additional artificial heating in the building itself, and if sound architectural principles are followed, the ventilation

should be quite satisfactory. For the type of population we have in Canberra, facilities are required for bathing all the year round.

35. *To Mr. A. Cameron.*—I consider this provision necessary in the interests of health and for the recreation of the people. Swimming should be included in the curriculum of all the schools. The Molonglo swimming pool last year was condemned as being unsafe, from a health point of view. The water in the proposed public baths will be filtered and chlorinated, and its purity will be determined by bacteriological examination at frequent intervals. This will be the responsibility of the Board of Health. The frequency with which the water should be changed will be determined by the number of people using the pool. Filtration will cleanse the water of all suspended matter, but if the pool is not enclosed, dust may settle in the water and contaminate it subsequent to filtration. Dust storms are fairly prevalent at this time of the year, so I am absolutely certain that, in the interests of public health, the baths should be enclosed.

36. *To Mr. Gregory.*—When the committee, of which I was a member, investigated this proposal some time ago, it is estimated that there would be 600 ticket holders, members of the swimming club, and that it would be necessary to provide transport facilities for school children attending for the purpose of instruction. When we agreed upon the site which I have recommended, I was under the impression that the lake system would not materialize for another 25 or 30 years, and that the population would then have increased to such an extent that there would be a demand for swimming pools on both sides. I assume that arrangements will be made for the transport of all children to the baths. The present low-level bridge giving access to the site which I recommend is at times under water. I understand that the Christian Brothers will build a school on their site north of the river so that there will be schools at the extreme northern and extreme southern end of the Federal Capital area. That being so, the site at Anzac-parkway should be the most convenient from the point of view of all the schools. My second preference is for No. 4 site; but, as I have said, I should not like to see a public baths erected in close proximity to the monumental public buildings. I assume that the filtration plant will provide for the adequate agitation and aeration of the water, but I do not know under what pressure the water will be forced through the filter beds. I assume that aeration will take place in the filter beds. Efficient filters will deal with the bulk of the suspended matter which would lodge in the water as the result of dust storms, and chlorination will prevent algae from multiplying. I should prefer the wading pools to be established in well-known picnic spots or some of the public reserves convenient to the residential areas, and I suggest that the water should not be more than 18 inches deep. There should not be much danger of contamination of the water from the dust off visitors' shoes, if additional temporary accommodation were provided at the baths for special occasions such as carnivals.

37. *To Senator Dooley.*—If provision is to be made for sunbaking, I suggest that it should not be in connexion with the baths, because not a few people object to others indulging in this practice. Arrangements could be made, I suppose, for sunbaking on the roof of the baths, but probably that would mean an additional expenditure on foundations to carry the flat roof.

38. *To Senator Reid.*—I am absolutely certain that satisfactory arrangements could be made for three swimming carnivals in the season. These would attract good attendances, thereby adding to the revenue of the baths. The expenses need not be heavy, because most of the swimmers are amateurs, and are not paid

appearance money. Winter swimming would be largely in the nature of an experiment, but I feel certain that if it were encouraged, an increasing number of people would continue with what is at present regarded as a summer recreation. Winter swimming is really a cultivated sport, and the numbers taking part in it would progressively increase, especially if swimming becomes part of the curriculum of our schools. The children of the average parents have multifarious duties to perform, but I am sure that, if transport facilities were provided, there would not be serious objection on the part of parents to swimming being included in the school curriculum. In my opinion, a considerable number of public servants would patronize the baths in the luncheon hour. This is the experience in metropolitan centres. I assume also that, if the baths are properly equipped, there will be a great deal of night swimming. I agree that at present No. 4 site would suit the convenience of the majority of the people, but from an aesthetic point of view the erection of public baths there would detract from the general effect conveyed by the monumental public buildings. I assume it will be obligatory on the part of the health authorities to see that the water conforms to the established standards in connexion with public baths. Parliament will be fully justified in authorizing the expenditure of about £30,000 on up-to-date baths for Canberra.

39. *To Mr. Curtin.*—It is desirable that modern bathing facilities should be available in all large centres, and I am surprised that a town the size of Goulburn, has not made provision for winter swimming, which I regard as an important recreation for the people. There is swimming all the year round in many cities in New South Wales, and even in London. It is, I admit, a cultivated sport, and the people should have been encouraged to acquire it. I agree that the success of the baths in Canberra will depend largely upon the transport facilities provided. If, instead of erecting central baths at a cost of £25,000 or £30,000 it were possible to provide two swimming pools in the vicinity of the two public schools at Ainslie and Telopea Park, and if these pools were reasonably accessible to the people generally, the needs of the people would be met for three or four months in the year, assuming that the water were drawn from the Cooter River; but I consider that even with the inconvenience of transport one up-to-date swimming pool equipped for all the year swimming would be more acceptable to the people. The people would prefer to have something in which they could take a pride. With a well equipped public baths we should have a healthy swimming club, and the people would then be encouraged to indulge in this recreation for a considerable period each year.

40. *To the Chairman.*—The sides as well as the bottom of the baths should be tiled. I had an opportunity, on one occasion, to visit the Coney Island baths, and I was much impressed with the efficiency of the arrangements for submarine lighting. The baths were so inviting that one could hardly refrain from entering the water. It would be better to make a good job of the public baths for Canberra. I do not consider that 18 inches is too deep for the suggested wading pool, but, as I have stated, I do not approve of such a pool being constructed as part of the scheme for public baths. These pools should be in the popular picnic resorts and in some of the reserves.

41. *To Mr. Curtin.*—I should prefer swimming to be made compulsory in our schools, and, accordingly, I should not oppose a proposal to make it free; as I consider it an essential part of every child's education. Most of the children below school-going age would not be taken to the public baths, but if wading pools were provided in convenient locations, their mothers would no doubt, allow the little ones to enjoy the pastime of

wading in shallow water. An efficient transport system will be an important factor in the success of the public baths in Canberra.

The witness withdrew.

John Howard Lidgett Gumpston, M.D., D.P.H., C.M.G., Director-General of Health for the Commonwealth, sworn and examined.

42. *To the Chairman.*—I have considered, in a general way, the proposal to establish public baths in Canberra. The Acton site is portion of the area on the original city plan that was reserved as a hospital site, and I think that the committee might take into consideration the point whether part of the site allocated for hospital purposes should be alienated for the purposes of public baths. The Adelaide City Baths are located on an attractive site facing a public park that has a waterfront. It seems to me that we should choose a site for the Canberra baths at a spot where there will be a park near the edge of the proposed lake, and for that reason, I am attracted to proposed site No. 7, near the new rectory. This would be in line with the Anzac-reserve. My opinion as to the aesthetic value of any site would be of no special value. The hospital is not now located on the site assigned to it on the city plan, and the question arises whether we should continue to spend more money on the present site, or establish a hospital on a permanent site. If the baths were established on the site definitely assigned for hospital purposes, the land would be unsuitable for the erection of a permanent hospital. To prevent any danger to health, it is necessary to provide means for insuring the cleanliness of the bather before he bathes and also for ensuring a supply of clean water. There should also be proper dressing rooms, and provision for preliminary showers and foot pools. Another requirement is proper drainage facilities, such as eum gutters and vacuum cleaning apparatus for the bottom of the pool. The bath itself should be lined with some impervious material. The water must be as clean as is available in the first instance. It should be kept clean by circulation through a filter, and there should be some provision for disinfection. It is essential for the baths to be tiled in the bottom and up the walls. The use of water from the river Molonglo is out of the question. It is too dirty, and the possibility of even approximate cleanliness is too uncertain. This water is too turbid; but, apart from that, it contains too high a bacteriological content. A location near a waterside implies no risk of contamination unless the baths are placed below the flood level, which is unlikely to happen. Open baths would probably furnish a more healthy environment than closed baths, but it would be impracticable to have a fully equipped bath system unless it was enclosed. On some days an open bath could not be kept clean because of dust. Certain standards that are already well established have been laid down in great detail by an American committee. If this committee has not already had them, I can make them available. Given the conditions therein laid down, I can suggest no other precautions. Concrete is not impervious to water, and it seems to favour the growth of algae, which would immediately make the swimming pool unpopular, and associated with which is a certain degree of risk. The baths should be covered with some material of a baked, vitreous nature. The water from the baths could quite well be run into the Molonglo, or used for the watering of gardens. I am not sure as to the effect that any residual chlorine would have on plant life. Some plants might not stand it; but it would not be objectionable from a health point of view, if it were disposed of in either of those ways. The treatment required for the purification of the water is circulation, filtration and chlorination. The

number of times that it should be changed is best determined by bacteriological examination at intervals; but, two or three times a year it should be totally changed. Examination should be made every three or four weeks, if it were considered that the water should be changed four times a year. Since less bathing would probably be indulged in in winter in Canberra, four changes a year might be more than necessary. It seems to me that the provision of wading pools and sand pits should be considered apart from any large bathing scheme; but, funds permitting, those facilities are very desirable, though I am unable to say to what extent they would be used. These things are apt to come and go in public favour somewhat capriciously. Experience shows that it is quite possible to keep water pure by chlorination. Water so treated has a definite odour and a definite taste, but it is not unpleasant; it is rather healthy in fact. Its use is one of the treatments recognized by the British Pharmacopoeia for complaints of the nose and throat. There would be a risk of over-chlorination, if the plant were not functioning properly, but that disability would immediately correct itself. The water would be slightly too irritant for comfortable bathing, but it would not be dangerous to health. I do not feel able to say definitely whether an expenditure of £30,000 on public baths would be justified by the increased health that would be enjoyed by the community. The health of this community is quite good now. I do not see how one could express increased health in terms of cash on that basis. I do not know whether the people would avail themselves of bathing facilities in winter time. The climate here is somewhat severe in winter, and, if people could bathe in water that was comfortably warm, I believe that a good many of them would avail themselves of the facilities. It is desirable that school children should be taught to swim, and those lessons might properly be distributed over the whole year as part of the school-curriculum. The site of the proposed baths should be decided having regard, not to the present, but the ultimate distribution of population.

43. *To Senator Sampson.*—I have given no previous consideration to the subject of wading pools. There is so much dust in the summer and so little warm weather that I am not sure to what extent these proposals would be in favour throughout the year.

44. *To Mr. M. Cameron.*—There is some doubt as to whether the present hospital will be removed in the near future. I think that the original hospital site extends right across the suggested site at Acon for the swimming baths. An exercise such as swimming is always good for the development of physique, and it reacts beneficially on the health of the bathers. Generally speaking, I should say that the proposed expenditure of £30,000 is warranted, but if I were in control of affairs here, and there was only £30,000 available, and if I had to choose between baths and new abattoirs, I would spend the money on the latter, because they are more urgently needed.

45. *To Mr. Gregory.*—The water of the river Molonglo is unsuitable for bathing purposes, because it contains too much suspended matter. In a tiled bath it would look very objectionable. Bacteriological counts have been made and the best count was considerably worse than the lowest permitted by any of the recognized standards. Even if we arranged for filtration and chlorination of the Molonglo water, there would still be the uncertainty in the supply as well as the cost of the work. I think that the fact that this river runs through Queanbeyan, which is unsewered, has something to do with the condition of the water. It might be advantageous to run water from the baths into the sewer, but on the other hand, the chlorine might adversely affect the digestion of the sewage. This water would not tend to cause the growth of algae, but would rather have the reverse effect.

46. *To Senator Reid.*—The sluggish flow of the Molonglo in comparison with the width of the stream causes the water to have a muddy appearance. This river consists of a series of pools, with a slight overflow from one to another. Artificially heated baths would, I think, be used by young people in winter time. As a parent, I, personally, should encourage their use. The distance from the baths to various parts of the city would not be very great, and, of course, there is the bus service. It would be necessary to regulate the temperature of the water in winter so that there would not be too great a contrast between it and the outside atmosphere. The percentage of chlorine in the water would not be harmful to the human system. It is difficult to say whether an expenditure of £30,000 on baths would be justified in the interests of public health, but, as a parent, I welcome the proposal, and I think that the Government would be justified in providing modern baths in Canberra.

47. *To Mr. Holloway.*—The provision of facilities for sun-baking in open baths need not be discussed, because the amount of sunshine experienced here is quite sufficient for the requirements of the citizens. You ask me whether it would not be better to establish two or three open baths for the money that closed baths would cost. I point out in the first place that so much dust is experienced here in summer that open baths could never be kept clean; they would become very dirty after dust storms such as that experienced last week. It is more important, however, to remember that open baths would be quite unsuitable for winter use in Canberra. Those who have lived here in July and August, know that it would be idle to suggest the use of open baths at that time of the year. Such baths would limit the swimming to a period of about three months in the year. I strongly urge the desirability of swimming instruction being given throughout the year. Children cannot be taught to swim in three months of the year. Quite apart from the health aspect, it seems to me to be rather an important duty of the community to see that the children are given an opportunity to learn to swim. I am rather definitely in favour of closed and adequate baths, and it seems to me that £30,000 is not a large sum to spend on an establishment that will provide bathing facilities for, say, 30 years.

48. *To Mr. Long.*—I should say that the proposed baths are not altogether necessary in the interests of the health of the people, because the citizens of Canberra would continue to be healthy without them, but I have tried to indicate that artificially heated baths would be preferable to open baths. Even an open bath with high walls would collect sufficient dust to affect the appearance of the water. It might be reasonably expected that the architects would provide adequate provision for ventilation of the building. A temperature of 70 degrees would be suitable for the water in the pool. If the temperature rose 10 degrees and the water became uncomfortable, the bathers would simply leave the bath. I realize that open baths are desirable in districts favoured with a long summer like that of Sydney, and the mild weather that is experienced at sea level. But Canberra is situated at an altitude of 3,000 feet; there is one inch less barometric pressure than at Sydney, and we have a somewhat exacting climate. I would not say that facilities for sun-bathing would be required. The suggested treatment of the water would meet all requirements from a health point of view. The site near the Institute of Anatomy does not appeal to me so much as that near the old church. The former has the disadvantage of being located off the main city routes, whereas the site near the church is on a road which in time must be one of the main arteries.

49. *To Mr. Curtin.*—The proposed site near the Secretariat, No. 4, is a good one, except that one

wonders if it would be desirable to bring a civic function into an official area. It is said that this site is about mid-way between the northern and southern portions of the city, and would involve a 3d. bus fare for the patrons of the baths. I have not formulated a view on that matter, but the present distribution of population is not at all likely to coincide with the ultimate distribution. I think that eventually the majority of the people will live on the Ainslie side. The Forrest area is already built on, but the northern areas are far more desirable for residential purposes than those of the south. The population on the south side may be regarded as temporary. It seems to me that we should consider how the population will be eventually distributed.

(Taken at Canberra.)

TUESDAY, 17TH DECEMBER, 1920.

Present:

Mr. LACEY, Chairman;	
Senator Dooley	Mr. Gregory
Senator Reid	Mr. Holloway
Mr. M. Cameron	Mr. Long.
Mr. Curtin	

John Hopping Mills, Nightwatchman, Federal Capital Commission, sworn and examined.

50. *To the Chairman.*—I have been a resident of Canberra for over fifteen years. At present I reside at No. 12 Eastlake. By trade I am a carpenter, but on account of the scarcity of work I am now employed as nightwatchman at the offices of the Commission. I am greatly interested in the proposal to establish public baths at Canberra, and have discussed the matter with the people with whom I associate. There is a strong demand for these facilities. I consider that any baths erected should be open, for health reasons. No people in the world are more fond of the open air than are Australians. Open baths could be used during the whole of the cricket season, from the 1st September to Easter time. The fact that young girls go to their offices in the middle of winter wearing sleeveless dresses indicates plainly that they are fond of the open air. There are various types of open baths. The Bronte bath is completely open; but if there were a wall about the height of the average man a bath could still be regarded as an open one. I would close in only a portion, and leave the other open to the air so that sun bathing could be indulged in. Miss Edith Walker has baths at Concord which are purely open. She has a little shed in one corner. I favour the site at Scott's Crossing. It is almost the centre of the city proper, is within easy walking distance of Eastlake, and is handy to the offices and Ainslie. We should erect baths that will be self-supporting. In Pretoria, they have baths that are partly closed in. The water is pumped from the heights and flows through continuously. When it leaves the baths it is used to clean the streets. Then it is conveyed by pipes to the sewerage farm. It is used to irrigate vegetable gardens that supply Johannesburg regularly with vegetables. Those baths are a paying concern. The reason that I advocate Scott's Crossing is that for a very small expenditure you could have an almost continuous flow of water. It could be conveyed through pipes across the river, and the Duntroon flats could be turned into market gardens. That would go a long way towards removing the present scarcity of vegetables in Canberra, and the baths would be a really good paying concern. Any company would be only too happy to take them over. I do not see any chance of the baths paying here if you incur a large expenditure on artificial heating. It would be interesting to find out what is the cost of heating the Government offices. I would not go to tremendous expense in the erection of a beautiful building. The cardinal point to keep in

view is to have real good baths. Then if you had any money to spare you could put up a nice building and cover it in. If a man wants a hot bath he should be compelled to pay for it. I have no wish to swim in hot water.

51. *To Mr. Holloway.*—I believe that the majority of the people at Canberra would prefer to have open baths.

52. *To Mr. Long.*—The demand for baths has been growing rapidly. The first sports club that was formed after I came here was a swimming club. There has always been an agitation for baths, but for some reason or other the proposal has not been proceeded with. I consider that the demand justifies their construction. I do not think that the rapid climatic changes that take place in Canberra would have any effect on the patronage, which, in my opinion, will be sufficiently great to justify the holding of carnivals. If the baths are fitted up with proper appliances, the football clubs and other sporting bodies will use them for training purposes. If they are established at a reasonable cost, and are properly maintained, they will pay. I prefer to swim in water in its natural state rather than to have it artificially heated. I do not think it is the wish of the sporting people that the water should be heated.

53. *To Mr. M. Cameron.*—I favour Scott's Crossing because it is most central. The St. John's Church site is also central, and favorable to the irrigation scheme I have suggested.

The witness withdrew.

Joseph Stewart Weatherston, *Hansard* Reporter, sworn and examined.

54. *To the Chairman.*—I am appearing before the committee as the representative of the Parliamentary Officers on the Public Service Welfare Committee. I have been empowered to express the opinion of that committee, which, for the last eighteen months has had under consideration a question of establishing public baths in Canberra. During the week-end I consulted the various delegates over the telephone, and ascertained their views. An overwhelming majority of them are in favour of site marked No. 4 on the plan. It is on a permanent bus route. The two bus routes fork within 100 yards or so of the site, and to reach it a resident in any part of Canberra would have to pay only one fare. The largest concentration of public officers will be in the administrative block, within a quarter of a mile of the site, and within a few yards they will number 1,500 or 2,000. The intention underlying the establishment of Canberra is to have all the Federal activities here, and that means the compulsory transfer of large numbers of public servants. We are selfish enough to think that the prime consideration always should be the welfare of the public servants. Therefore, we consider that bathing facilities should be made to suit us. The suggested site at Acton (No. 7) is not regarded favorably by us, not only because it is inconvenient, but also because it would involve an additional bus fare. Further, we recognize that the peninsula on which the Commission offices now stand will ultimately be abandoned, and that will mean the abandonment of the bus route in that direction. It will then be along Commonwealth-avenue, in as direct a line as possible to Civic Centre. If the baths were on the Acton peninsula those who wished to make use of them would be compelled to walk a considerable distance from the bus route. The same remarks apply to the suggested site in the neighbourhood of the Rectory. There is no bus route in that vicinity except on Sundays, for the benefit of those who attend divine service at St. John's Church. The bus services are not paying at the present time, and it is not likely that they will be supplemented to suit intermittent travellers to the baths. From a citizen's point of view, we consider that it would be better to have the baths on No. 4 site for a start, and to provide further facilities in the northern

and southern areas at a later date in the development of Canberra, particularly wading pools for children in the neighbourhood of the schools. My committee has not considered whether the baths should be open or closed. I have also been asked to pace before your committee the views of the Canberra branch of the Australian Natives Association. It was that body which initiated the move in Canberra for the establishment of baths. It favours an even temperature of water throughout the year. I understand that that would involve the roofing of the baths. There is a feeling that some opportunity should be given for indulgence in sun bathing. It might be possible to have a considerable portion of the roof glazed. That would provide covering, and at the same time allow the rays of the sun to penetrate to the pool. In the event of that being impossible, I consider that heating throughout the year would be more advantageous than sun bathing. There is also need to make arrangements for a cafe, for which facility the plan does not appear to make any provision. A small cafe would be the means of adding to the revenue derived by the baths. People returning along Commonwealth-avenue from the Cotter would stop there for light refreshments, which otherwise would not be obtainable except by making a considerable detour round by Manuka or Eastlake. Such a cafe would also be a convenience to members of the Public Service, who are located in the Secretariats, and be of great advantage to school children who attend the baths. Provision along these lines ought to be made.

55. *To Senator Dooley.*—There should be ample gallery provision for parents to watch their children bathing, and for spectators at carnivals. I suppose that £40 or £50 would provide plenty of material such as Oregon, that could be erected at a moment's notice. The attendance at the baths would not, on the average, be as many as 100 or 150 a day. There are numbers of people who enjoy an early morning dip, but it would be too much to expect a daily average of 150 throughout the year.

56. *To Senator Reid.*—I believe the baths would be more freely patronized if the water was kept at an even temperature throughout the year. The climate of Canberra is exceedingly variable. If you have your bath water at an even temperature you provide greater facilities for night bathing. I am sure that the opportunity to bathe in the luncheon hour would be availed of largely by public servants, particularly if there were a cafe at which they could get a snack. The youthful members of the Public Service also would patronize the baths between the hours of 5 and 6.30 p.m. Then at night time, those who had worked late would be patrons. But we must have public baths in Canberra whether they are patronized freely or not; they are an absolute necessity. I cannot say how many would take advantage of them. As to whether the Government would be justified in spending money on baths for the benefit of a small minority of the people, I say that, from one point of view, the Commonwealth has not been justified in building Canberra at all; but having built it and brought us here it must provide us with the facilities that we have lost. That is a duty which it owes to us. I do not know whether the authorities would issue special tickets to those who wished to travel to the baths. Our experience has been that not too much is given away. It would not be out of place to ask for concessions, but it would be out of place to expect to get them. A cafe at the baths would benefit many people who might not wish to bathe. The site which I suggest is approximately one mile from the nearest cafe, and is in a locality which is very ill served in that respect. We hope that very shortly the Bowling Club will have its headquarters at a site in Forrest; therefore that aspect need not be taken into consideration.

57. *To Mr. Holloway.*—There has been, is, and will continue to be, an insistent demand for bathing facilities. I agree that school children must be considered equally with public servants and other citizens. In Melbourne, school children are transported long distances to the baths in special trams once or twice a week. Four of the five schools in Canberra are fairly close to the site I suggest. On the principle of a bird in hand being worth two in the bush, I think we ought to get the best baths we can now in a central position, and later endeavour to have others constructed in other parts. If it were decided to divide the available funds and construct two baths you would have to cut down in some direction. I understand that channels will have to be let into the concrete to carry the heating apparatus and the submarine lighting. It would be a pity to economize by cutting those channels out. They could be let into the concrete so that they would be ready for future development in the matter of heating and lighting. The amount saved could be utilized in the construction of other baths somewhere else.

58. *To Mr. Long.*—I consider that the support given to the proposed cafe would be sufficient to justify the additional expenditure involved. A cafe in this neighbourhood is very badly wanted.

59. *To Mr. M. Cameron.*—I favour the revenue derived from the cafe being devoted to the maintenance of the baths.

60. *To Mr. Gregory.*—Such a cafe would not be inside the baths but in the foyer. Biscuits, confectionery and other articles could be purchased, either upon entering or leaving the baths. It might be better to have it altogether outside the main building and thus remove any possibility of pollution of the water. I am not in favour of the children's wading pool being attached to the baths. If possible, there should be wading pools near the schools. It would be better for estates to be purchased after bathing instead of before, but that would involve the Government in much additional expenditure. If the cafe were a portion of the baths the additional cost would not be very great. There is ample ground in the neighbourhood of site No. 4 to provide a parking area for motors and for laying out gardens. I do not know how you could prevent food from being taken into the baths unless you had a searching room. I am in favour of those who enter the baths being compelled to pass first through a shower bath. We have not considered the possibility of inducing swimmers from other parts to visit Canberra to participate in swimming carnivals, but it goes without saying that that will eventuate. It would not be necessary to have permanent accommodation for more than 150 spectators. Temporary galleries could be provided at very little cost and kept on hand for such occasions. I have had to utilize provision of that sort in connexion with lawn tennis carnivals. Such structures can be erected in half a day. There would need to be room for them on the site. The danger of pollution could be overcome by the engineers. All our requirements would be met if provision were made for heating apparatus to be installed at a later date. So long as we are given the baths we shall be satisfied to have the other things added subsequently. Although the population of Canberra is limited just now, it will steadily grow. It must always be remembered that the public servants in Canberra have been transferred compulsorily from the seaside to a dry interior. For the time being, it would not be unsatisfactory to have the baths a distance of a couple of miles from where we live, although the transport facilities are not very good and the heat is great. Assuming that there is to be only one bath for many years, the site I have suggested would give satisfaction.

The witness withdrew.

John Leo Mulrooney, President of the Canberra Football League and the Northbourne Cricket Club, sworn and examined.

61. To the Chairman.—I was treasurer of the Social Service Association which functioned for some considerable time, but ultimately grew too unwieldy, and has now passed out of existence. It was an organization created by Sir John Butters for the purpose of considering various sporting and social propositions that might be submitted for the benefit of the people of Canberra. I am aware of the proposal to establish

public baths. Several public meetings have been held which affirmed the urgent need for proper swimming facilities, and I was one of a sub-committee of five appointed by the citizens of Canberra to formulate a comprehensive scheme which was submitted to the Federal Capital Commission, but probably has now been forgotten. I believe it is the unanimous wish of the people of Canberra that swimming baths should be established here. The following statement furnishes particulars of fifteen swimming pools, all, with one exception, in Victoria:—

Suburb where Pool Located	Cost (Approximate).	Dimensions and Capacity.	Revenue.	Expenditure.	Charges.
Camberwell	£11,000, including cottage; £1,500, including filtration plant.	150 feet long; 36 ft. to 76 ft. wide; 2 ft. 9 in. to 9 feet deep; 220,000 gallons	£2,000 per season (Season is from 1st November to 30th April)	£18 15s. per week = £487 10s for season, or 144 per cent. on capital invested	Season tickets £1 adults, 15s. juniors, 6d. adults; 4d. children under fourteen years
Malvern	£10,000 (including filtration plant)	200 feet long; 30 feet to 100 feet wide; 9 inches to 8 ft. 6 in. deep. Racing track 50 meters; 280,000 gallons	£700 per season (November-April. Action dance—Adults, 20,000; juniors 32,000; School children in mornings, 10,000)	£650 for season	Season tickets—£1 5s. adults; 15s. juniors. £2 2s. family tickets
Hawthorn	£2,000	120 feet long; 60 feet; 2 ft. 6 in. to 7 ft. 6 in. deep; 260,000 gallons	£200 for season.	£260 per annum	Season tickets—gentle 15s.; juniors 10s. 6d.; ladies, 5s.
Collingwood	£2,000	152 feet long; 30 feet long; 2 ft. 6 in. to 8 ft. deep; 400,000 gallons	Charges for admission—Id., 2d., 3d.
Moonee Ponds	£2,268	150 feet long; 60 feet wide; 3 feet to 7 feet deep	£400	£600	Season tickets—adults 17s. 6d.; children 12s. 6d.
Y.M.C.A. (Melb.)	£10,000 to £12,000	55,000 gallons	Attendance 1928, 63,000	Heating £40 per annum; Soap, towels 500 per annum; Chlorine £30 per annum; Light, power £125 per annum; Water, £125 per annum; Sundries £100 per annum; Salaries, £630 per annum.	£3 per annum; £2 per annum (18-21).
Kew	£7,000	155 feet long; 60 feet wide.	Season 1927-28, £311	£250	Season tickets—Men. £1; Ladies 15s; Junior 15s.
Northcote	£6,000	150 feet long; 60 feet wide	Operation expenses met but not interest	£210	Season tickets—Adults 15s.; under fifteen 10s. 6d.; Schools Id.
Preston	£11,000; Filtration Plant £3,000; land £2,000	209 feet over all length; 90 ft. to 30 ft. wide; 15 in. to 8 ft. 6 in. deep; 280,000 gallons	1st month £200 (opened 10th November, 1928)	£12 per week	Adults 15s.; Children 10s.; 3d. swimming; 3d. towel
Brunswick (Victoria)	Originally cost £3,000; Spent £22,000 on additions, including heating and filtration plants	Men's 55 yards long; 20 yards wide; 3 feet to 14 feet deep; 400,000 gallons; women's 75 feet long; 33 feet wide; 3 feet to 9 feet deep; 80,000 gallons	£200 per annum from 1925-1928	£600 per annum from 1925-28	
Richmond	Constructed over twenty years ago, cost not known	160 feet long; 80 feet wide	£400 per annum	
Footscray	£18,000	165 feet by 75 feet; 3 feet to 9 feet deep; wading pool 50 feet; 25 feet; 2 feet deep.	Not yet opened. Mixed bathing. Filtration plant.		
Melbourne.	£32,000 (including slipper baths (heated and covered)	Men's 30 feet long; 100 feet wide; 3 ft. 6 in. to 7 ft. 8 in. deep; 110,000 gallons; women's 50 feet long; 200 feet wide; from 4 ft. 7 in. deep	For 1928 £8,940	For 1928 £10,605	Adults 6d.; half-yearly (S.) £1 1s; half-yearly (W.) 17s. 6d.; juniors 3d.; half-yearly (S.) 15s. (all with towels) Juniors (without towels) 2d.
Albury (N.S.W.)	£4,000 (open baths)	165 feet long; 50 feet wide; 4 feet to 10 feet deep; 275,000 gallons	
Dandenong	£2,800	120 feet long; 60 feet wide	£116	£350 (including interest redemption £200)	

CAMBERWELL.

The pool is an octagon shape, and the reasons for this novel shape are:—

(1) More accommodation is provided at less cost than in the usual rectangular shape.

(2) It is found that non-swimmers are always in the majority and the shallow end is therefore wider.

(3) Those who are learning to swim have a very definitely designed danger point, thus ensuring safety.

(4) Requirements for swimming races are met by the sides being parallel.

Baths are open for six months in the year.
Filtration plant, chlorinator, &c., cost £2,350.

MALVERN.

Filtration plant cost £2,000.

HAWTHORN.

Baths open during summer months, and no hot water baths provided.

PRESTON.

Erected mainly for the convenience of the many schools in the municipality.

There is also a wading pool, the depth of which is 18 inches to 3 feet.

Filtration plant cost £3,000.

The same water is retained throughout the season.

BRENTHWICK.

New baths opened on the 2nd November, 1929. Elaborate seating accommodation for 1,600 spectators who can see every movement in the water, owing to effective lighting system. Heating plant included.

FOOTSCRAY.

Not yet opened. The old style of long lines of dressing rooms has been dispensed with, a large dressing room being provided for each sex—one on either side of the entrance pavilion.

Two pools are provided—a swimming pool 165 feet by 75 feet, and a wading pool 70 feet by 25 feet, and an average depth of 2 feet. Both pools are lined throughout with white glazed tiles while the larger pool has black racing guide lines.

The swimming club house provides meeting place for different clubs.

MELBOURNE.

Heating plant keeps water, when required, to 70 degrees Hot and cold water showers provided.

Reconstructed baths at North Melbourne and Carlton will be opened shortly.

Young Men's Christian Association.—Temperature of the pool is maintained at 72 degrees to 76 degrees Fahrenheit.

So far as Australia is concerned, each year sees an increase in the number of swimmers and the demand for well conducted and sanitary places in which to enjoy the healthiest of sports. The question of expenditure should be a secondary consideration. In America there are thousands of privately controlled pools operating. These pools are not simply an excavation filled with water. The proprietor, who is a business man and realizes how dependent he is upon good will, looks after the comfort and convenience of patrons. There is a restaurant attached to most pools, accommodation for parking and picnicking and everything in the way of tobacco, soups, sweets, &c., can be purchased. The aurlor ties are to be congratulated upon their having been convinced the idea of using Molonglo water. The matter of vital importance to bathers is the purity of the water used. Let us adopt the slogan, "Swim in Drinking Water" coined by public health associations in America. It is in the last few years only that plant for the purification of swimming pool water has been made in Australia. The first installation was at the Young Men's Christian Association (Melbourne). Shortly after a filtration system was installed at the Brisbane baths, at Camberwell, and at Malvern (Victoria). I understand that at Lismore memorial baths have been erected by the Soldiers and Sailors' Committee, and this includes a filtration and sterilization plant. The site for the baths is an all-important one, and it would appear that history is to repeat itself and Canberra is again to be concerned in a great battle of sites, but it is to be

hoped it will not be necessary to re-incarnate Alexander Oliver of historic memory to settle the question. The site must be on a bus route, and it must be in a central position. An economical feature of any design would, I understand, be rendered possible by the site being on sloping ground. Of the sites suggested, that near the Church of England is the most suitable. At the present time, the residents of Ainslie, Reid, and Braddon who wish to shop at Kingston, must travel through many suburbs to reach Kingston. The journey takes about one hour and the residents of the suburbs I have named hope that the day is not far distant when there will be a direct bus to Kingston, which will thus save many useful hours of the housewife's time. At the present time, the bus runs along Constitution-avenue on Sundays, so that much deviation will not be necessary to introduce a service over Scott's Crossing. It will be approximately an equal distance from the schools on the north and south sides of the river, and in this connexion, I might refer to the fact that at the distribution of prizes yesterday afternoon, the lack of swimming facilities was referred to by the headmaster of the Telopea Park school. Mr. Christie's statement that the children would have baths next season was loudly cheered by the large assembly of boys and girls. The pool should be available for mixed bathing—for men, women, and children. Golf links, tennis courts, and bowling greens have been provided, and it is to be confidently anticipated that there will be no lack of interest in making available a pool which will meet every contingency. This is a democratic investment. Up to the present, it can be truthfully said, speaking comparatively, that little has been done for the married folk who have established their homes in Canberra. The Federal Capital has become known as "a flapper's paradise". The buses call at the doors of houses which are chiefly occupied by the single folk and concrete foot paths have been constructed round these establishments. Personally, I would make the baths free, but it is hardly likely that such a proposal would meet with approval. Consideration should, however, be extended to the married man and his family, and it is presumed that family tickets to the baths will be issued. These family tickets would cover a man, his wife, and children under the age of sixteen years, and provide free bus facilities journeying to the swimming pool. I understand that no facilities are being provided to enable sun-bathing. It is recognized that 90 per cent. of the swimmers enjoy a sun bath more than the actual swimming, and a larger portion of their time inside the enclosure is spent in sun-bathing in the sunbath. We should make full and wise use of the darty dividend that is paid to all out of the boundless resources of the solar system. Sunlight is being used, not only to keep healthy people well, but also to cure many sick people who respond to no other treatment. It is unfortunate that if we are to have the baths heated all the year round, it is absolutely essential that they must be roofed in. I am opposed to the roofing in of the baths, but if the roof is absolutely compulsory, let it be the flat roof so that there will be ample facilities for sun-bathing. Experience has shown that in very few instances in Australia have baths proved a paying proposition from a financial point of view only, but the establishment of a kiosk would be an excellent method of obtaining revenue. This kiosk could also be the entrance pavilion and the attendant in addition to controlling the entrance could be the observer who is so essential at any bathing pool. It is also anticipated that any structure which may be erected will provide a gymnasium and a room where sporting organizations could hold their periodical meetings. This, then, would ultimately become the centre of sporting activity for the Federal Capital. I have examined the seven suggested sites,

but am unable to say whether the establishment of the baths on any of them would be contrary to the spirit underlying the design of Canberra. Speaking as a layman, I was under the impression that Canberra would be built in a north-westerly direction, and that any baths scheme should conform to the establishment of those centres. I am opposed to site No. 4, because I cannot see whom it would serve. It might be useful in the case of those who work in the Secretariats, but I do not consider that it offers greater advantages than site No. 7, which would certainly serve a larger section of the community. I am of the opinion that the wading pool should be adjacent to the swimming pool so that when parents were accompanied by their children they would be able to keep an eye on them.

62. *To Senator Reid.*—I do not think that any of the baths about which I have given particulars are paying propositions. From a revenue point of view, I do not know that there is any material difference between open and enclosed baths; they all seem to be losing approximately the same amount. Enclosed baths would provide greater facilities for those who wish to swim in the colder months of the year, but I do not think that they are more revenue producing. All the baths to which I have referred are in thickly populated localities; yet they do not pay. The Town Clerk of Preston has said that the baths in that suburb were built principally for the convenience of school children. Only three of the number are heated. I have no information with respect to the attendances during the winter months. I admit that a fatal objection to any site would be the necessity to pay a double bus fare; but in the event of the site that I have suggested being chosen, we were hopeful of having the section extended to at least that spot. I have suggested that married men and their children ought to be transported free of charge to the swimming pool. The deficiency would have to be made good by those who have been responsible for having Canberra built to its present design; in other words, the Nation. I am favorable to the construction of three baths. Such a proposition might involve the people in fairly considerable expenditure, but I sincerely hope that the residents of Canberra will not be called upon to pay more than they are paying at the present time. Even if free bus facilities and free baths were provided the people of Australia would get a good return, not in pounds, shillings and pence, but from a health point of view. If a medical man has said that the health of the people of Canberra is good, and that he does not see how it can be improved by bathing, I would not put my opinion against his, because I am only a layman. It might be argued that as the majority of the population work in the area in which site No. 4 is situated, that site would be the most suitable for those who would use the baths; but similar arguments could be advanced in regard to some of the other sites. There is one site opposite the Commission offices. If the people who work there would make use of the bathing facilities provided that would be a suitable position. But there are other people who have to be considered besides those who work in these buildings. It is certainly in a central position, and situated on a bus route. Those who live on both the north and south sides could be landed at the end of the section, and thus receive equal treatment. My proposal, however, is a double-barrelled one. Those who live on the north side want to see a new bus route instituted over Scott's crossing. If that were ultimately brought about, the site between the Church of England and Scott's crossing, also would be in a central position and on a bus route. I hope that that day is not far distant. I live in the suburb of Reid, which, in regard to transport facilities, is very inconveniently situated. It takes over an hour to get from there to Kingston. We want the bus to go by the short route, so that a woman will

not waste an afternoon doing her shopping. I consider that eventually site No. 7 will be more suitable for the population of Canberra than site No. 4. It must be remembered that these are to be permanent baths. A proposal has been put forward to lay a line of railway through the city. If it were constructed, it would be in close proximity of this site. There is a large area of land at North Ainslie which has been overlooked, and if baths were erected there they would be of considerable advantage to the people who live in the northern part of that suburb. Canberra is being built in that direction; the greatest activity is taking place north of North Ainslie.

63. *To Mr. Holloway.*—I admit that when we try to analyse the possibilities of the revenue being equal to the expenditure, we must take into consideration the geographical situation of Canberra, where the baths would not have to compete with open sea bathing such as the Melbourne baths have. I agree that baths which are situated in a place where open sea bathing cannot be indulged in ought to have a better chance of paying their way. Baths in Canberra will not only be used by the permanent residents, but will also be a considerable advantage to those who visit the city. Only last week a resident of Melbourne was in Canberra, and the only complaint he had to make about it was that he could not get a swim. I should favour the provision of a cafe in such a situation that it would be open to the public as well as to swimmers. A cafe is an auxiliary to the majority of modern baths. Public servants would appreciate the provision of facilities for obtaining a light luncheon, particularly in the summer months, when the weather is too hot for them to go home. The restaurant in the Sydney Domain is very extensively patronized. Before the St. Kilda baths were burnt they had a restaurant attached to them, and it was patronized by people who used the promenade. At the present time site No. 7 is not on a bus route. I favour the building of two or even three swimming pools so long as reasonable facilities are available. The Dandenong baths cost only £2,500, and they are excellent. If we had here a couple of baths like those, they would meet the convenience of the people, although the cost of building them here would be greater than in Melbourne, and it would be necessary to install a filtration plant. It would be best to have here baths that would cater for the people throughout the year. Not more than 50 "spartans" attend the St. Kilda baths throughout the year, and if the water was not heated here, it is hardly likely that more than 5 would do so. I do not think that in other places temporary arrangements are made for accommodating spectators at carnivals. At Brunswick there is accommodation for 1,000 spectators.

64. *To Mr. Long.*—I know the location of the baths about which I have given particulars, and can say that they are conveniently situated, but I cannot speak with any degree of accuracy regarding the internal arrangements, except in the case of St. Kilda. I am opposed to the roofing in of the baths here. I should like facilities to be provided for sunbathing. If they are to be heated, and on that account must be roofed in, would it not be possible to have a flat roof and allow bathers to sunbathe on it? I believe that the revenue from a cafe would justify the additional expenditure involved. Taking all aspects into consideration, I consider that site No. 7 is the most suitable. The only objection at the present time is that it is not on a bus route; but we hope that the day is not far distant when it will be. Some months ago I was one of those who recommended that the baths should be on No. 2 site at Acton. The reason which prompted me to support that recommendation was that the site was in the neighbourhood of the Bachelor's Quarters, Ho el Acton, Beauchamp House, the Hospital and the Commission

offices. But I consider that we are doing too much for the single people and not sufficient for the married man, his wife and children. Taking those factors into consideration, I altered my opinion in favour of site No. 7.

65. *To Mr. M. Cameron.*—Even if I had longer time to consider the matter, I cannot say that I might again change my view. I cannot see the motive which underlies the suggestion that site No. 4 should be chosen. I am of the opinion that the people who live in Canberra are worse off than those who live in many other inland towns, in that they have not been allowed to select the place where they shall reside. They have been told that they must live in this or that suburb. If they went to another town they would have the choice of where to live. But I would not say that this is a more disagreeable place to live in than many other inland towns. I would not favour free transport for the people of other towns, but I would support free baths. In municipalities such as Malvern and Camberwell the baths are maintained principally out of the revenue received from the rates. Why should not the municipality of Canberra act similarly?

66. *To Mr. Gregory.*—I would not be in favour of a special rate to make up any deficiency. We are not asking for something for nothing; all that we want are reasonable facilities.

*The witness withdrew.
The committee adjourned.*

(Taken at Melbourne.)

FRIDAY, 10TH JANUARY, 1930.

Present:

Mr. LACEY, *Chairman;*

Senator Sampson | Mr. Holloway
Mr. M. Cameron | Mr. Long.
Mr. Gregory

George Wall Wall Bagot Hughes, *General Secretary,*
Y.M.C.A., Melbourne, sworn and examined.

67. *To the Chairman.*—I am aware of the proposal to establish public baths at Canberra. The Young Men's Christian Association pool in Melbourne was opened in January, 1926. I would not say that it is right up to the minute, but it is quite up to the standard required. It is 75 feet long and 20 feet wide. The depth varies from 3 feet 6 inches to 9 feet. One-third of the bath is between 3 feet and 4 feet in depth, and then it slopes rapidly to 9 feet, rising at the end of the wall to 6 feet 3 inches. The bottom is spoon-shaped. The membership of the association has considerably increased, and, therefore, the use of the pool has also increased. The following figures show the extent to which the pool has been availed of, holidays and Sundays being excluded:—

Year.	No. of bathers.	Daily average.
1925 ..	39,620 ..	120
1927 ..	48,847 ..	102
1928 ..	63,253 ..	211
1929 ..	65,033 ..	217

For the heating of water we have a battery of three boilers, one of which is utilised solely for heating the swimming pool. This is a White Rose boiler, manufactured by Hartley and Sugden, of Halifax. The agents in Melbourne are A. E. Atherton and Sons Proprietary Limited. It is a low pressure system, and, therefore, the attendance of a certificated engineer is not required. It is a circulatory system, the water being pumped from the pool to the boiler and back to the pool. We have discarded coke as a fuel and substituted crude oil. This, we find, has made not only for cleanliness in the boiler-house, but also for simplicity in working. That is why we made the change-over about eighteen months ago.

We use an oil tank that has a capacity of about 1,400 gallons. The oil flows through small pipes to the engine-house by gravitation; it then passes through oil vaporizers by what is known as the "Oilonatic" system, the local agents for which are Industrial Instruments Proprietary Limited. The object of using oil is to get heat quickly and in a more constant flow than is obtainable by ordinary stoking with coal or coke. The machine is comparatively simple. As the oil flows through, it is atomised, and an electrically-operated fan drives it down a pipe at the end of which the vaporised oil is driven out in a spray. It is then ignited electrically. Combustion takes place on the inside of the boiler, which is firebrick lined. The combustion chamber has been considerably reduced in size to make it suitable for oil burning. At present we are using Shell crude oil. We have been burning the Commonwealth Oil Refinery product, which had given satisfactory results until a few months ago when a certain wax deposit made us change to Shell. We think that the latter oil, being thinner and capable of quicker vaporization, gives quicker combustion. With its automatic control this system gives us an effective piece of machinery for our purposes. The heating of the pool is manually controlled. The boiler is only kept going two and a half hours a day in the winter. In the summer months we do not use the boiler at all for heating the pool water. We maintain a temperature of approximately 72 to 74 degrees in the pool water, which loses approximately 2 degrees overnight by radiation, so we have only to raise the temperature the following day by two degrees to maintain the average. That necessitates the use of the boiler for from two to two and a half hours daily. I submit for the information of the committee the following details of the cost of operating our pool since its inception:—

YOUNG MEN'S CHRISTIAN ASSOCIATION OF
MELBOURNE.

SWIMMING POOL.

Receipts.

	1926	1927	1928	1929
	£	£	£	£
Membership fees ..	646 ..	881 ..	1011 ..	847
Soap and Towels ..	74 ..	103 ..	134 ..	141
Single Swims ..	14 ..	16 ..	8 ..	10
Sundries ..	2 ..	11 ..	1 ..	5
Deficit ..	185 ..	30 ..	88 ..	149
	921 ..	1,050 ..	1,242 ..	1,152

Expenditure.

	1926	1927	1928	1929
	£	£	£	£
Salaries and wages ..	504 ..	679 ..	789 ..	701
Soap and Towels ..	22 ..	32 ..	57 ..	68
Light and Power ..	52 ..	80 ..	91 ..	65
Oil and Coke ..	78 ..	71 ..	67 ..	77
Coagulant and Chlorine ..	28 ..	25 ..	28 ..	13
Cleaning materials and sundries ..	43 ..	61 ..	68 ..	13
Water ..	93 ..	56 ..	122 ..	120
Repairs and renewals ..	11 ..	50 ..	20 ..	24
Retains ..	— ..	— ..	— ..	2
	921 ..	1,050 ..	1,242 ..	1,152

A record is kept by our boiler attendant which indicates the number of hours for which each boiler is used daily. The amount debited against the swimming pool shows an average cost of from £72 to £77 per annum for heating the pool water. The temperature of the water is never raised above 74 degrees, the average being 72 degrees. Over that temperature the conditions become somewhat enervating. In the summer months we lower the temperature to about 68 degrees. We have installed a system of radiators through such rooms as the locker, bath, and check rooms. These are operated from the steam chamber of the domestic boiler. We have no special system of ventilation of the pool and dressing rooms. There are times, particularly in the

middle of the winter, when the tendency is to close all windows. Our system enables us to heat the atmosphere from 80 to 85 degrees. As no bathing costumes are worn in our pool it is necessary to heat the atmosphere to a temperature approximately 10 degrees higher than that of the water in the pool. If I were building a new pool, in the light of the experience we have had with the present one, I would make the pool room—or, as we call it, the natatorium—larger and higher, with a width of at least 10 feet on the sidewalks. This would be advantageous, particularly if the holding of aquatic carnivals was contemplated. At the deep end it is desirable to have the sidewalks from 15 to 20 feet wide to allow running room for divers. Most of the diving done now in our pool is of the standing type. We now have a width of 10 feet at one end and 6 feet at the sides. In providing seating accommodation for spectators we erect three-tiered or bleacher seating, and we can accommodate from 300 to 400 persons. If we had a higher roof and wider sidewalks we could increase that accommodation. Another result of that improvement would be to give better atmospheric conditions. At present we have a portion of our roof glazed in. Originally we had more glass than at present, but we lengthened our gymnasium and cut off about 12 feet of the glass roof. An entirely glazed roof is desirable. Certainly there ought to be a skylight roof so as to provide top ventilation. Our pool, being situated in an industrial area, the ridge ventilation became a nuisance because of dust and coke and coal smuts making the water dirty, but on the south side of the pool we have windows. We use a Wallace and Tiernan chlorinator, an invention employed extensively in America. The local agents are Sulphates Proprietary Limited. This has been entirely satisfactory, and, so far as we know, has met all the requirements of the health regulations governing swimming pools. The under-water lighting of the pool is desirable, but not essential. With a refiltration system the water is so clear that there is no possibility of anybody being in the pool without being seen. With a white-tiled pool we did not consider under-water lighting necessary. The light above perfectly illuminates the pool, and under the worst conditions every movement of a swimmer can be seen from above at any time. One big disadvantage of our pool is the fact that we cannot have a diving tower; the height of the building precludes it. Facilities for diving from various heights would add to the attractiveness of the pool and would be appreciated by expert swimmers and divers. Another desirable feature would be increased dressing room accommodation. Our work is based on the club idea, and we do not advocate the use of the small cubicle bathing box in vogue at most swimming pools. We use a large open dressing room with locker accommodation for the individual swimmers. It would be desirable to add to that space if we could afford to do so. With 100 men using our dressing room at one time the space is taxed, and this does not make for the best hygienic conditions.

68. *To Mr. Gregory.*—There are a number of satisfactory boiler heating systems. Ours is of English make; another is "The Ideal." We have never used residual oil. The fuel must have a degree of clarity, or otherwise it will not vaporize. Our boiler-house measures 35 feet by 20 feet. It contains three boilers, a filtration plant, which includes an agitation tank and a waste water tank, and also a refrigerator for the cool store. The plant provides hot water and steam for the whole establishment and gives us a standby boiler in the event of anything going wrong with either of the other two. In certain portions of the premises we have steam radiators. The electric motors which drive the centrifugal and centrifugal pumps in connexion with the filtration scheme work from eight to nine hours a day. It is only necessary to clean out the pool twice a year. We have

had practically no trouble with the installation. On one occasion we had difficulty with one of the valves, and when we dismantled it we discovered that somebody had thrown something into the pool which had gone through the grating and blocked the valve. In my opinion, it would be unwise to build an open pool in a cool climate. I do not think that such a pool would be used. It is desirable to place the lavatories near the dressing room, in such a position that the bathers would have to pass them before entering the shower room. The last thing they should do before entering the pool is to shower. It is necessary to consider the effect of the chlorine on the bathing costumes. We insist on no clothes being worn in our pool because the dyes come out in the water. Even going from the shower to the pool a certain amount of dirt is collected by the bathers. The greatest problem is caused by hair from the human body. I should say that if we desired to erect our pool to-day as a separate feature of our work it would cost about £12,000. The provision of a diving tower is most important. If it is intended to hold swimming carnivals at the baths at Canberra, the committee would be well advised to obtain the views of men like Mr. Frank Beaurepaire, who have seen swimming pools in other countries.

69. *To Mr. Long.*—One boiler would probably be sufficient, but it would be wise, in my opinion, to install two, so that one would be available as a standby. Our pool holds 55,000 gallons of water. I do not contend that the system we have adopted is the best available, but we have proved it to be effective from every point of view. Being automatic, practically two-thirds of the time of the boiler attendant is available for other purposes. The boilers cost approximately £200, to which must be added the cost of installation. The cost of the filtration system, together with the extras put in, amounted to £1,550. The pool cleaning tool—a variety of vacuum cleaner—cost £70 to land. The chlorinator was landed and installed for about £180. The tiles were imported direct and cost us £760. The tiling contract amounted to £808. The filters were locally made, but otherwise the whole of the plant was imported. The white ceramic tiles of the type we have adopted could not be secured in Australia at the time our pool was built. A heating plant such as ours should be suitable for the proposed baths at Canberra. The pipe leading from the boiler to the pool has a diameter of 4 inches, which we find quite effective.

70. *To Mr. Holloway.*—I believe that residual oil could be used with certain types of machinery, but it would not suit our plant.

71. *To Mr. Cameron.*—Our peak period occurs on Saturday mornings, when we have from 320 to 370 swimmers during two hours. From 80 to 100 persons could comfortably use the pool at one time. A raised gallery of a permanent nature is desirable, but I would have the whole of the sidewalks clear. Bleacher seats could be placed there for the accommodation of a large number of visitors. The city health authorities take tests of the water in the pool at different times. In May last they published a statement on swimming pools in Melbourne, and specially commended the pools at Camberwell, Malvern, and the Young Men's Christian Association.

72. *To Senator Sampson.*—The losses on our pool amounted to £185 in 1926; £39 in 1927; £88 in 1928, and £149 in 1929. The variation in those figures is due to the different sums received by way of membership subscriptions. If our membership fees in 1929 had equalled those of the previous year, the pool would have shown a profit of £10.

73. *To Mr. Gregory.*—I believe that the gravity type of filter was used for the first time in connexion with our pool, and has been adopted in other places as the result of our experience. The drainage from the pool

goes direct to the sewer, and that is probably desirable.

74. *To the Chairman.*—The scum gutter is designed in such a way that we can clean it out satisfactorily. It should be made sufficiently deep, so that when the water goes over it, it cannot return. This gutter also acts as a life rail. The gutter should be well trapped.

(Taken at Canberra.)

MONDAY, 10TH MARCH, 1930.

Present:

Mr. LACEY, Chairman;

Senator Dooley	Mr. Curtin.
Senator Reid	Mr. Gregory
Senator Sampson	Mr. Holloway.
Mr. M. Cameron	

John Smith Murdoch, member of the Federal Capital Commission, sworn and examined.

75. *To the Chairman.*—Since my appointment as member of the Commission, I have given consideration to the proposal to construct public swimming baths in Canberra. On the 20th December, 1929, your committee, in a communication to the Minister for Home Affairs, indicated that it favoured the site known as No. 4, lying to the south of the Hotel Canberra, and to the west of Commonwealth offices, West Block. It also expressed a view that the size of the baths should be restricted to 82 feet by 40 feet; that the depth of water should range from 3 feet to 9 feet; that the sides and bottom of the baths, also the walls of the building to the height of 5 feet, should be tiled; that submarine lighting should be omitted, and that the roof should be constructed so that one-quarter of the area covering the deep end should be of glass. When I came to Canberra in January, action had been taken by the Federal Capital Commission to prepare a design for the proposed baths on the lines suggested in the letter of your committee to the Minister. The design was submitted to the Minister on the 10th February, together with an estimate of cost at £21,020. The Minister expressed the definite view that the expenditure of that sum was not warranted, and he asked that a less expensive scheme should be considered. I now submit two designs, showing a much simpler arrangement for open baths. One of these designs is estimated to cost £10,150, and the other, a somewhat smaller scheme in some respects, about £9,000—less than one half of the estimated cost of the proposal submitted to the Minister on 10th February. The plans have been prepared on the supposition that site No. 4 is to be adopted. Speaking for myself, I hope it will not be. The amended scheme for a bath 82 feet by 40 feet, is estimated to cost £10,150. There will be a platform 15 feet wide around the swimming pool, and 10 feet or 15 feet of this platform at the end will be covered with a flat roof for the use of sun-bathers. There will be no roof over the main swimming pool. The necessary accommodation is planned on simple lines. There will be two entrances—one for each sex. This may not be necessary, but it has been provided in order to balance the front elevation. Between these entrances there will be a kiosk for the sale of cool drinks, confectionery, &c. There is provision, also, for an office, and storeroom for towels, as well as dressing rooms for both sexes, giving accommodation for 88 men and 49 women, with the usual lavatory arrangements. The surrounding walls will be about 10 feet high, and the construction in brick. Altogether the design is good, and, compared with the scheme originally recommended, is a modest one. I consider that it will give ample accommodation for many years.

76. *To Mr. Gregory.*—There is provision for the treatment of the water to ensure its purity. It had been suggested that this might be omitted; but I would not recommend the construction of baths without making adequate provision for the filtration and sterilization of the water. Therefore this estimate of cost includes the proper sterilization and filtration of the water, but not for heating.

77. *To Mr. Curtin.*—The cost of a heating plant for an open-air pool would be fairly high; but this could, under certain conditions, be provided for, as at Brunswick (Melbourne), where the warm water from an enclosed pool is circulated into the open pool, thus reducing materially the temperature of the water in the latter pool.

78. *To the Chairman.*—Provision for heating could be made at a later date. In any case, I do not admit that artificial heating of the water is essential in Canberra. If another site of similar formation and levels were selected the estimate of cost in regard to both amended schemes would not be altered materially. I have not personally inspected the various sites that have been suggested. In the second and simpler scheme which I now submit to the committee, it is proposed to leave out the two dressing rooms provided in the more expensive proposal, and to have a platform 10 feet wide down either side of the swimming pool, and a platform 14 feet wide at the ends. Beyond the platform along either side there will be dressing cubicles for 88 men and 41 women, and the same arrangements for lavatories, kiosk and foot baths. Around the 10-ft. space between the dressing cubicles and the edge of the bath there will be a wooden platform about 3 feet wide for sun-bathing. Adequate arrangements have been made to ventilate the cubicles and other accommodation. Altogether the building will be quite nice in appearance, and if the committee thinks fit, its cost can be still further reduced by construction in hardwood and galvanized iron, suitably treated.

79. *To Mr. Holloway.*—It is not proposed to tile the sides or the bottom of the swimming pool. Cement sides and bottom suitably painted will look quite well. Tiles may be substituted at any time if considered necessary. I would suggest, also, that if the committee favours the less expensive of the two modified schemes now submitted to it, the work can be designed in such a way as to permit of the future extension of the swimming pool.

80. *To the Chairman.*—Both schemes provide for a pool of the same size—82 feet by 40 feet. A cement-lined pool, treated in the way I suggest, could be kept clean. It could be regarded as a contribution to a more perfect scheme to be undertaken at a later date. I would not recommend any scheme that omitted ample provision for filtration and sterilization of the water. On the question of site for any permanent baths proposal, I think this should be determined in association with the Civic Centre of Canberra. Action should be taken as soon as possible to design the Civic Centre, because the location for many important public bodies must be fixed before many years elapse. I am aware, of course, that for several years the Federal Capital Commission has been extremely busy with other important matters, with the result that, up to the present, there has been no serious attempt to design the Civic Centre. Now that things are comparatively quiet, the present is an opportune time to give attention to this matter. A reminder from this committee would probably carry weight with the Government. If the design were made, we should have less difficulty in fixing the location of many important public functions that will be demanding accommodation in the near future. Mr. Griffin, the

designer of the Federal Capital, considered the needs of the city for the next 100 years. Accordingly he provided a location in his plan for a great natorium, somewhat on the lines of the ancient Roman baths. A beginning has been made to design the Civic Centre. As no doubt members of the committee know, the city plan contemplates the erection of a monumental town hall forming the centre of the hexagon, and huge commercial buildings surrounding the outer circle, from which streets radiate in all directions. Altogether two such blocks have been erected. One has been completed and the other is about three-fourths built. All these buildings are privately-owned. It is assumed that other similar blocks will be erected in the course of time for shopping and other purposes, and that within the hexagon, which is about 1,600 feet across its axis, will be the town hall and other semi-public buildings.

81. *To Mr. Curtin.*—No. 5 site is the nearest to the Civic Centre, and site No. 2 was recommended by the Federal Capital Commission. This recommendation disregarded the idea of the designer of the city. Parliament has laid it down that Mr. Griffin's plans shall not be departed from without parliamentary sanction. Had the scheme for the Civic Centre been designed, this committee and the people generally would have had no difficulty in determining the site for public baths, as well as for other public utilities, such as a fire station, court house, police station, post office, and citizens' library. The population of Canberra is fairly evenly distributed in the Ainslie and Kingston districts; but the principal public school is in Telopea Park. I think that, whilst the aim of the committee should be to establish the permanent public baths at Civic Centre, the present needs of the people would be best met by the construction of a simple open bath in the vicinity of the Telopea Park school. Then, as the city develops, arrangements could be put in hand to build the permanent public baths on a location within the Civic Centre design.

82. *To the Chairman.*—A bath in the Telopea Park district would not interfere with the integrity of the Griffin plan. I assume that, as the population develops, other open baths will be established in various portions of the city area, but the site for the permanent baths, which, no doubt, will include Turkish baths and gymnasium, as well as other accessories, should be in Civic Centre.

83. *To Mr. Curtin.*—I consider that we should cater for the needs of the children particularly, and, since Telopea Park has an attendance roll of, I believe, over 600 children, many of whom travel from all suburbs within the city area, a public bath in the vicinity of that school would serve the needs of the greatest number.

84. *To the Chairman.*—In compliance with the request of the committee, I submit the following estimates of cost for a swimming pool, 82 feet by 40 feet in accordance with the design set aside by the Minister as being too ambitious for present needs:—

	£	£
Administrative block (brick finish, including end galleries seating 120 persons)	5,000	
Lockers	250	
Baths (from concourse level, not including paving to concourse, but including foundations, to enclosing walls and column supports)	3,180	
Painting generally	200	
Boiler house (not including retaining wall or special foundation for plant, or any plant)	1,800	
	<u>10,430</u>	
Plus interest and overhead charges	1,043	
		<u>11,473</u>

ENGINEERING WORKS AT BATHS.

Earthworks	336
Concrete in pool	924
Retaining wall	237
Concrete concourse	229
Tiling of pool	730
Curved tiles for angles	60
Drainage	159
Filters, &c., plants	1,500
Sewer	750
Water supply	154
Electric light and power	500
Parking area and grounds	250
Heating	2,000
Contingencies	800
	<u>8,659</u>
Interest and overhead charges	9,537
	<u>21,010</u>

If the estimated cost be considered beyond what should be expended on this work, it could be reduced to £16,070 by omitting the roof and bringing down to a 9-ft. wall (£2,750), and omitting heating (£2,000). The Minister considers that even this estimate is not low enough. I agree with him. The modified plan might very well be regarded as a good beginning. Certainly it is as much as the people of Canberra can expect at this stage. Opinion differs widely as to the need for an enclosed swimming pool. Personally, I would not enter an enclosed bath if an open pool were available. I have seen the new bath at Brunswick (Melbourne); but I have not inspected the Malvern or the modern bath constructed by the Melbourne City Council. The conditions at Brunswick are not comparable to the conditions of Canberra, because a not inconsiderable section of the 80,000 people in that suburb are living in old houses with imperfect bath accommodation. I doubt that the bath estimated to cost £21,000 could be got ready in time for next summer; but either of the modified schemes, plans of which I have just submitted, could be finished by October next. The roof or the arrangements for heating could be provided later. I have formed no idea of the probable revenue, but I do not think a public bath in Canberra will ever pay. It must be regarded as a concession from the people of Australia to the inhabitants of this city. I consider the establishment of a public bath here desirable, but only on a modest scale. I would not say that the need is urgent, except that I believe the rising generation should have facilities to learn swimming, and in this respect be on a level with the children in almost every city or town in Australia. I consider that a bath constructed in accordance with the modified plans would be quite hygienic. Provision would necessarily be made for scum gutters around the swimming pool.

85. *To Senator Reid.*—The cleansing of the sides and bottom of the swimming pool, if the work is carried out in concrete, should not be a difficult matter. Even a tiled bath has to be cleaned regularly by the attendants. I admit, of course, that it is not possible to keep concrete as clean as a tiled surface; but tiling would add £750 to the cost of the pool. In suggesting that the baths should be located near the Telopea Park school, I am guided almost entirely by the needs of the children attending that school and other private schools situated south of the Molonglo. It would not be more than about 2 miles, via Scott's crossing, for children and adults living north of the Molonglo, and as most of the people in Canberra own motor cars, it would be no hardship if they had to travel to Telopea Park. I should not say that the bulk of the people live in the northern suburbs. The people are fairly evenly distributed between Ainslie and Kingston, but the latter area contains a big artisan population. An inexpensive public bath in the Telopea Park district

would meet the needs of the Federal Capital for probably five years. By that time, perhaps, a start would be made on the construction of the permanent public bath somewhere within the Civic Centre. It would be possible to construct a building with a pleasing appearance in hardwood and galvanized iron, appropriately panelled and painted; but as this would probably be objectionable to the people, and not in conformity with the building regulations, it would perhaps be better to carry out the construction in brick. The judicious planting of the surrounding area would quickly beautify the site.

86. *To Senator Sampson.*—I have no figures with me to show how the population of the Federal Capital is distributed; but I consider that it is fairly evenly divided between the two areas mentioned. During week days large numbers of children from all suburbs attend the Telopea Park school. Consequently a public bath somewhere in that locality would meet the needs of the greatest number of children. Site No. 7 is not far distant from the site selected by Mr. Griffin for the natatorium. I have no doubt that, well within the next quarter of a century, arrangements will have to be made for a court house, police station, post office, head fire station, public library, and other quasi-public bodies, and I suggest it is desirable to design the Civic Centre without delay. This would do away with the necessity for searching for sites, because every one would know that the permanent location of all these bodies would be somewhere within the Civic Centre. I consider that it is better to meet the convenience of one half of the population by constructing the swimming pool in the vicinity of Telopea Park school, than to inconvenience the whole of the population by fixing the location at, say, No. 4 site. The great bulk of the children in the Capital City area, as well as many from distant centres in the Territory, attend the Telopea Park school, and arrangements could be made by the head master for swimming instruction during the summer months. The pool might even be established in school grounds, because a large area of these is not really necessary, or it would be in Telopea Park itself. Possibly the actual cost would be less than £9,000, because tendering for all works is now pretty keen. It might be desirable to invite alternative tenders; that is to say, for construction in concrete with or without tiling.

87. *To Mr. Gregory.*—If the pool were constructed somewhere in the vicinity of the Telopea Park School, it would not be so far distant from Anslie, via Scott's Crossing, where there is a low level bridge, and in a few years it might be possible to begin the construction of the permanent bath, which should be somewhere within the Civic Centre. I recommend a site near Telopea Park School because of the need to teach children the art of swimming, and also because children of both sexes swim, and also because children from all parts of the city area as well as from the surrounding rural districts attend the Telopea Park School. I agree that, as the city develops, the bulk of the population should reside north of the Molonglo; but at present it is evenly distributed in the two districts, and I consider it is better to suit the convenience of at least one-half of the population if, at the same time, the other half is not inconveniently served. Site No. 7, near the Church of St. John the Baptist, is within the triangle reserved for official buildings, and I should not like to see public baths constructed there. My idea is to keep all buildings, except official buildings, outside that triangle. The site is near to where Mr. Griffin intended to place the natatorium; but I do not consider it so good a site as a location near the Telopea Park School. I am keeping the needs of the children in mind all the time. The cleansing of a cement-lined swimming pool will require fairly con-

tinual scrubbing of the sides and bottom. I admit that algae and other impurities will adhere to cement, no matter how finely it is mixed. Glazed tiles provide the ideal surface, but the extra cost would be £750. I understand that the Melbourne City Council has constructed a model swimming pool, 200 feet by 30 feet, in Alexandra drive, for £10,000. A similar pool should be possible in Canberra for about 15 per cent. advance on the Melbourne cost. We should have no difficulty in getting particulars of costs from the Melbourne City Council and making a comparison with our costs. We have made no estimate of the probable upkeep of the baths.

88. *To Senator Dooley.*—The estimate of 8s. a cubic yard for excavation, given in evidence before the committee, is probably high. The cost naturally depends upon the nature of the material to be taken out. We estimate tiling will cost 27s. a square yard. The estimate of £3 10s. a cubic yard for concrete is perhaps on the low side; it represents the finished cost of the work.

89. *To the Chairman.*—I shall look up our estimates for the cost of tiling and verify my figures. It may be of interest to the committee to know that recently the Federal Capital Commission received a communication from Williams and Company, a Sydney firm, stating that polished slabs made centrifugally might be used for the bottom and sides of the swimming pool.

90. *To Senator Sampson.*—A few years ago the Telopea Park district was subject to floods, but that trouble has been rectified now by efficient drainage.

91. *To Senator Reid.*—Cement surfacing costs 8s. 6d. a square yard, and tiles 27s. a square yard. If cement were used, and if it were painted—the work of repainting could be done by the caretaker in the slack season—there should not be great difficulty in cleansing it of water vegetation.

(Taken at Canberra.)

TUESDAY, 11TH MARCH, 1930.

Present:

Senator Dooley	Mr. Curtin
Senator Reid	Mr. Gregory
Senator Sampson	Mr. Holloway.
Mr. M. Cameron	

William Henry Bale, Private Secretary to the Prime Minister, Canberra, sworn and examined.

92. *To the Chairman.*—Regarding the proposal to build baths in Canberra, I would like to offer a few observations in the hope that they will be considered by your committee. The fact that I am an enthusiastic bather and have been connected with swimming and life-saving clubs for many years does not, of course, entitle me to speak authoritatively as an expert on the building of baths; but perhaps these suggestions from me as an individual may be of interest in determining what should be done to meet the desires of those residing in the Federal Territory. These seem to be a difference of opinion as to where the baths should be located. With the houses scattered, in some instances 4 or 5 miles apart, this is natural. Assuming that only one bath will be created, it would be a question of deciding which is the position that would—(a) harmonize with the lay-out of the city, and (b) meet the convenience of the whole of the residents as far as practicable. I suggest that in regard to (a) that the site near the No. 2 Secretariat and the Hotel Canberra should be selected. It would be unfortunate if baths were built in an inconspicuous part near the Commission offices. Respecting

(b) the position suggested by me would, I submit, be as fair as possible to all. Those on the north side of the Molonglo River would be required to take a 3d. bus ride to the Hotel Canberra, whilst those on the south could reach the baths by paying a 3d. fare. If the baths were built near the Commission offices it would mean that those on the Kingston side must pay 1s. return fare to reach them. The Hotel Canberra is midway between the two big settlements and, in my opinion, the baths should be located as near as possible to it. The location of only one baths must necessarily be inconvenient, to a certain extent, to every one, as most of the people will have to depend on transport arrangements to visit them. This is most undesirable. What is really required is two cheap open-air baths, costing, say, £7,000 each—one situated near the school at Telopea Park, and the other in close proximity to the Ainslie Park School. They would then be convenient to all the school children, which is the most important consideration to the public generally. I understand that there has been some discussion regarding the matter of tiling. From my experience I have no hesitation in stating that not only the sides but the bottom of the baths should be tiled. That has been done in a number of cases. I know places where the bottom has not been tiled and in no time there is a growth of fungus which makes it very slippery and dangerous, consequently it is more expensive to keep clean. The most important point which I desire to stress is the question of covering the baths. I am astonished to learn that there is a suggestion to cover them in. It would appear that there are still a few people—very few, I believe—in this enlightened age who do not recognize that sunlight and fresh air play a very important part in the health of our people. I would not be far out in saying that out of the hundreds of modern baths built you could count on the fingers of one hand those that are closed in. I know of only three, two of which were built many years ago. I once visited one of them during the summer time, and was glad to get out into the warm sunshine again. They were gloomy, stifling, and most uninviting. To me, they seemed to be very unhealthy, and the noise was deafening. Swimming is essentially a summer pastime, and I venture to say that should your committee decide to cover in the baths it would be a fatal blunder. All modern baths, and I have seen photographs of many that have been built in recent years, are left open so that bathers may bask in the sunshine. Sun-bathing through a glass roof in a stuffy enclosure is a poor substitute for the open air. Only a few months ago I visited the baths just opened at Albury. They are well worth a visit by members of your Committee. The Albury Council apparently knew the value of fresh air and sun-bathing, and made ample provision in that direction. The Aquarium, at Coogee, New South Wales, is another open air baths well worth a visit. Katoomba, New South Wales (which is much colder than Canberra in the winter) has baths similar to Albury. A large percentage of those who will bathe in Canberra will be men and women who work indoors. My conversations with them leave no doubt in my mind that 99 per cent. want to get out into the fresh air as speedily as possible. They realize that plenty of fresh air and sunshine must be combined with swimming to make it a real pleasure. If it is desired to heat the water for winter swimming then it can be done, but not at the expense of shutting out the rays of the sun during the months when one really desires to bathe. The swimming season lasts at least six months in Canberra, and that is the period which should be specially catered for. If the water can be heated for the remaining months, all the better, but I venture to assert that the extra cost for heating and closing in the baths for the convenience of the small number who will require warm water for bathing

in the winter, will not be justified. I do not pretend to know anything about costs, but speaking as an ordinary citizen, the expenditure of £30,000 to build baths seems to me to be far too much, especially at this time of financial stringency. The Albury baths cost in the vicinity of £4,000. With certain improvements, such as a filtration plant costing £2,000, every one here would, I think, be quite satisfied. I am mindful of the fact that the more they cost the higher will be the charge for admittance. This is an important factor to be considered if it is desired to make the proposition a payable one as far as possible. There seems to be a general impression that there should be a palatial building in Canberra in order to induce the swimming association to hold its championship carnivals here. It appears to be forgotten that it is very expensive to invite international champions to Australia to compete with our local swimmers, and there is no likelihood of races being held in Canberra until the population exceeds that of either Melbourne or Sydney. I am afraid it will be many years before that happens. Baths are badly needed in Canberra. Most of us came from homes near the seaside, and, during the recent spell of hot weather, missed bathing accommodation very much. I am sure I am speaking on behalf of the whole of the residents of the Federal Territory when I say that we would much appreciate action being taken that would ensure the building of suitable baths in time for the beginning of next season. I have been a resident of Canberra for about 2½ years, and am of the opinion that a public swimming bath would be patronized by a great number of persons for more than six months in the year; but, generally speaking, a swimming pool would be well patronized from October to March. I base my estimate of cost of £7,000 on a statement of Mr. Mulrooney that the cost of the Albury baths was £4,000. I think a swimming pool could be built at Canberra at practically the same cost as at Albury. In addition to the estimate of £4,000, which I have mentioned, £2,300 would have to be added for a filtration plant, which would then make the total cost only £6,300. The Albury baths are not tiled, but any pool erected in Canberra should, I think, be tiled. Mr. Murdoch, I understand, suggested the use of tile paint, but from what I have heard, the use of this preparation has not been at all successful where it has been tried. I have been informed that an additional £780 would be involved for tiling, and I am surprised that the cost should be so great. Even if tiling should cost £780, I consider the expenditure justified as it would provide a permanent floor and one which could be easily cleaned, whereas tile paint has many disadvantages.

93. *To Mr. Holloway.*—If tiles were used, the same fine finish would not be required on the concrete, and to that extent some expenditure might be saved.

94. *To the Chairman.*—I have had an opportunity of inspecting the plans and am surprised to find that the length of the proposed bathing pool is to be only 82 feet. I think it should be 55 yards, as that is the length usually provided in important swimming pools. In baths of that size 32 lengths would be equal to a mile, or sixteen lengths to half a mile. A length of 82 feet is not of any advantage from that viewpoint, and special provision would have to be made for arranging distances in the event of swimming carnivals. Swimming races in Australia are not conducted under the metric system, and championship races are usually over a quarter of a mile or half a mile. The Domain baths, in Sydney, where championship races are held, are 110 yards long. It is not likely that championship races will be held in Canberra for some time to come; but it is desirable when arranging the size to keep the dimensions in conformity with those used in connexion with such events. I would favour a bathing pool 55 yards long, and I consider one 82 feet in length much

long

too small. If a bathing pool were constructed in the vicinity of the Telopea Park School, it would be convenient to a large number of those resident on the southern side of the river, but inconvenient to those on the northern side of the Molonglo, particularly if they had to be transported by the present bus route past the Commission offices and the Hotel Canberra. If transport facilities were provided via Scott's Crossing, the distance to be traversed would perhaps be no greater than to the vicinity of the Hotel Canberra, where, I understand, it was proposed to build the baths. Dressing-room accommodation, for 88 males and 41 females should be adequate.

95. *To Mr. Holloway.*—I understand the Brunswick baths are 55 yards long, and the Richmond baths 50 yards long, but I do not know the length of the Young Men's Christian Association swimming pool. For the information of the committee, I produce photographs taken from current newspapers showing open air baths, which I very strongly favour. Even if the first proposal which the committee was considering, namely, covered-in baths, was considered, I do not think they would be patronized to any extent during the winter months. There would, of course, be a few patrons, but I do not think the revenue obtained would in any sense justify the extra expenditure involved. Those who like to bathe in the winter usually prefer cold water. In order to meet the requirements of all of the residents of Canberra, I think it only fair to say that a site midway between the two big centres of population, say, adjacent to the Hotel Canberra, would be most convenient, although every one visiting the baths in that locality would have to travel by bus or use some other means of conveyance. Baths on a site adjacent to the Telopea Park School would, I believe, be more convenient to a majority of the people in Canberra, and would also be handy to a very large number of school children who should be the main consideration. If baths were erected in that locality, a large number would be able to have an early morning swim without having to contend with transport difficulties, whereas, if they were adjacent to the Hotel Canberra, time would be taken in travelling backwards and forwards, which is an important consideration.

96. *To Mr. Curtin.*—If only one swimming pool is to be erected certain residents of Canberra must necessarily be affected. If the baths are erected adjacent to the larger school, transport difficulties will be reduced to a minimum. I contend that the primary object in erecting a public swimming pool is to provide school children with the opportunity of learning to swim, and the next is to provide recreation facilities for the public generally. I do not think it necessary to provide bathing facilities in keeping with the present architectural standard of Canberra. A brick wall as is suggested seems to me to be an unnecessary expense. The erection of a cyclone fence with creepers and shrubs should be sufficient, and would, before long, prove attractive in appearance. The wall and narrow roof suggested is, in my opinion, quite unnecessary, as most of the bathers would prefer to take advantage of the sunlight. Sun-bathing is a popular pastime and very little advantage would be taken of the shade which it is proposed to provide, excepting on an extremely hot day. In any case, only a little shade is needed. It may be necessary to provide a small kiosk for the sale of soft drinks, sweets and fruit, which could be made under the control of the person in charge of the baths. I would not advocate the erection of a pool less than 150 feet long. I cannot understand how a pool less than 30 yards long is likely to cost over £10,000, particularly as the Albany baths, which are 55 yards long, cost only £4,000. A cyclone fence 10 feet high covered with creepers, such as I have suggested, should be sufficient to break the strong winds. If the baths are to be built on a site adjacent to the Hotel Canberra, possibly the erection of a brick wall would be necessary in order that

the structure should harmonize, architecturally, with the surrounding building, but if they are to be built in the vicinity of the Telopea Park School, that factor need not be taken into consideration.

97. *To Senator Sampson.*—When I inspected the Albany baths, they had not been opened and the disadvantage of concrete bottom to which I have referred, was not then strikingly apparent, but I know that other baths of that type of construction have caused a good deal of trouble. I consider tiled baths preferable and less expensive in the end.

98. *To Mr. M. Cameron.*—The distance which a person could reasonably be asked to walk to a swimming pool is, of course, a matter of opinion, but a mile would not be too far for me. If baths were erected on a site to the south of St. John's Church, a majority of the residents of Kingston and Ainslie would have more than a mile to walk, which is too great for some people, especially the womenfolk. On a very hot day, I suppose 500 persons would be patronizing the baths in Canberra at the one time. I would not be surprised to learn that the Footscray baths, which are double the size of the proposed structure at Canberra, have accommodated 5,000 people during the one period. In those circumstances, I suppose a pool 82 feet long should be sufficient for 500 people to cool themselves, but they would have little opportunities for swimming. Although I consider a pool 82 feet long inadequate, I suppose "half a loaf is better than no bread".

99. *To Mr. Gregory.*—I have not any definite data concerning the population on the northern and southern sides of the Molonglo, but I should say that a great proportion resides in Forrest, Griffith, Telopea Park and Kingston, which is on the southern side of the river. The Federal Capital Commission seems to be conducting its building operations in the vicinity of Manuka, which is on the southern side. Assuming that only one pool is to be constructed for some years to come, and taking all the circumstances into consideration, I should say that the baths should be constructed in fairly close proximity to the Telopea Park School, as by so doing bathing facilities would be provided for a majority of the Canberra people with a minimum of inconvenience. I am strongly in favour of an open pool, which could, in the absence of a wall, be protected with a covered fence or shrubbery. Baths erected in the vicinity of St. John's Church would not be convenient to any number of people, as the Ainslie children would have to travel by bus, as would also the scholars from Telopea Park.

100. *To Senator Dooley.*—Whichever site is selected there will be dissatisfaction, but that is due to the remarkable manner in which the city has been laid out. If a site midway between the two principal centres of the population is selected, there are likely to be expressions of dissatisfaction from both. If the committee thinks there is any possibility of a second bathing pool being erected at some future date, very careful consideration must be given to the selection of the site on which the first is to be built. If the first is to be built in the vicinity of Telopea Park to convenience those on the southern side of the river, another could be erected later for the benefit of those on the northern side; but if the first pool is erected in the vicinity of the Hotel Canberra, neither the residents on the northern or the southern side will be immediately benefited. If the committee has in mind the ultimate erection of a second bathing pool, the first should be erected in the vicinity of the Telopea Park School, which has a much larger number of scholars than the Ainslie School.

101. *To Senator Reid.*—The first consideration should be given to the requirements of the children who should be taught to swim early in life. If the baths were conveniently situated many adults would take advantage of the opportunity of an early morning swim.

The witness withdrew.

Harold John Fishie, B.A., headmaster, Intermediate High School, Telopea Park, Canberra, sworn and examined.

102. *To the Chairman.*—I am aware that the committee is considering a proposal to construct swimming baths in Canberra, for which, I contend, there is an urgent need. I cannot claim to have any intimate knowledge of modern freshwater swimming pools. I have been closely associated with swimming for the past 25 years; but mostly in connexion with the metropolitan schools in Sydney, the scholars from which have attended swimming classes at different salt-water baths. The only closed baths of which I have any knowledge are those at Drummoyne and Coogee. If baths were erected in Canberra they would be extensively patronized by school children, and swimming would be included in the school curriculum. Of a total of 320 children of nine years of age and over attending the Telopea Park school, there are only 110 who can swim a distance of 10 yards or more. That is a low percentage in comparison with that of other schools. Fully 200 scholars would join a swimming class if facilities were available for instruction. At attempt was made some time ago to establish a Christmas vacation swimming school in Canberra. Instructors were appointed by the Education Department of New South Wales, and 160 non-swimmers were enrolled during the Christmas vacation, when a large number of the children were absent from Canberra with their parents. The scheme fell through, however, owing to the fact that the health authorities said that the water in the Molonglo at that time was not fit for swimming purposes. A similar scheme was not proceeded with this year, as it was felt that the same objection would be raised, and the class would have to be disbanded. The only swimming pool available is at the back of the power house, where the water is badly discoloured, overgrown with weeds, and entirely unsafe for non-swimmers. We have been conducting classes amongst the secondary boys; but our efforts have not been altogether satisfactory owing to the conditions which prevail. I have been in Canberra for over two years, and I do not think there would be much swimming in the open between April and October. From the 1st of November to the end of March would, I think, define the limits of the swimming season. There would be a limited number that would, perhaps, utilize a bathing pool for a longer period, particularly those who have been accustomed to living at such places as Manly, where bathing commences in September and continues until May. I am not in favour of enclosed baths, as I contend that one of the principal pleasures associated with swimming is the opportunity of sun-bathing. Heated water would not, I think, prove an attraction to school children, who derive pleasure not only from swimming in cool water, but from a general romp and the opportunity of sun-bathing. I think it of great importance to erect public swimming baths in close proximity to our principal schools. I was a member of the committee of Canberra citizens which considered this subject some twelve or eighteen months ago, and I then recommended the construction of baths on a recreation area adjacent to the Blandfordia tennis courts and bowling green, which would be fairly central to the four principal schools, which have a total attendance of approximately 1,000 children. The present attendance at Telopea Park is 560, St. Christopher's 250, Canberra Boys' Grammar School about 70, and St. Gabriel's Girls' School 90 to 100. The time taken to walk from the Canberra Boys' Grammar School to the site I suggest would not be more than 10 minutes, and is not more than a few minutes from the other schools I have mentioned. The site is a permanent recreation reserve, on which tennis courts and a bowling green have been provided, and is not more than a few minutes'

walk from a bus route. Baths on such a site would, doubtless, be availed of by tennis players and bowlers, as well as being centrally situated in a large residential area. Baths conveniently situated to the Telopea Park school would be used on Wednesday afternoons by the pupils of the secondary school, and on Friday afternoon by those of the primary school, as well as by a large number of adults. It is necessary that a bathing pool should be easily accessible from the school rather than from the children's homes. Wherever the baths are situated transport arrangements will have to be provided. There are only 250 pupils at the Ainslie school; but at the Telopea Park school we have 40 or 50 scholars from Ainslie receiving secondary education, as well as scholars from the Cotter River, Molonglo and Hall. If the convenience of the school children is to be considered, it must be remembered that there are approximately 1,000 attending schools on the southern side of the river, and only 250 attending school on the northern side.

103. *To Mr. M. Cameron.*—I do not know what proportion of the population of Canberra resides on the southern side of the river; but I consider the site I have suggested fairly central for the residents on that side of the river. A large proportion of public servants who work at Civic Centre and in the secretariat buildings live on the southern side of the Molonglo. The committee should also bear in mind that a high school is to be established in Canberra, and the site suggested is in the vicinity of the Hotel Wellington, which is also convenient. I understand the site for the high school has been definitely decided upon by the authorities.

104. *To Mr. M. Cameron.*—In most cases the school children would patronize the swimming baths after leaving the schools provided satisfactory arrangements were made for transport, and I suggest the issue of season tickets, at a cost of, say, 2s. a month, which they would use on probably three or four afternoons a week. I understand the proposed swimming pool is to be 82 feet in length; but I would prefer it to be extended to 33 yards or 33 metres, with ample provision at the shallow end for the use of beginners. I think that the proposed pool is too small for the requirements. I could not say definitely how many school children would be using the pool at the one time, but I think that probably 200 scholars from Telopea Park would make fairly frequent use of it. We would have big classes under expert male and female instructors for teaching the beginners, with the necessary provision for classes in connexion with life-saving. There is no finer way of developing children physically than by swimming. I have been associated with swimmers such as Charlton and others at Manly, and have always noted that the physique of a swimmer is superior to that of any other athlete. The physical development of the children should be carefully considered and the establishment of baths would assist in that direction. If 200 children from the Telopea Park school were using the baths they would not all be there at once—probably 100 on Wednesday and 100 on Friday. At present approximately 65 per cent. of the children of nine years and over at Telopea Park school cannot swim at all, and two-thirds of the number who would be present would be in the shallow end.

105. *To Mr. Gregory.*—I understand that the committee is desirous of serving, to the best of its ability, the whole of the people; but wherever the baths are erected, some must be inconvenienced. I do not think the children should be expected to walk more than a mile to a swimming bath. If baths were built on the site suggested in the Griffin plan it would be very inconvenient to residents of Griffith, the Causeway, Kingston, Forrest and Red Hill. I am considering this matter more from the school children's viewpoint, as many of the adult population have got out of the swimming habit. Baths will be patronized principally by

members of sporting bodies and school children. In view of the severity of the wind during certain periods of the year, I think the baths should be protected. The absence of any break would be an inconvenience to bathers and probably cause the water to become discoloured by dust. I have seen the Melbourne City and Richmond baths, but I have not visited the baths at Malvern in Victoria. Probably an earthwork gallery or break would be more expensive than a brick wall.

106. *To Senator Reid*.—Where facilities are available swimming is included in the school curriculum. It is quite voluntary, but there is not much compulsion needed where facilities are available. I asked the children at Telopea Park this morning how many would join a swimming class if baths were available, and they were quite unanimous in favour of joining up. During the Christmas vacation 160 youngsters were ready to join a class and go to the pool at the Power House for daily instruction, and that was at a time when half the population was absent on holidays. We are not allowed to instruct children under nine years of age. There are 320 scholars in the Telopea Park school of nine years of age and over and of that number 85 per cent. cannot swim. I have suggested a brick wall for protection against wind and dust, as I think it would be some years before a creeper or a shrubbery would be sufficiently advanced to keep out wind and dust. Even if a wall is erected it could be covered in time with creepers, and the general surroundings of the pool beautified by shrubs, lawns and garden plots.

(Taken at Canberra.)

WEDNESDAY, 12TH MARCH, 1930.

Present:

Mr. LACEY, Chairman;

Senator Dooley	Mr. Curtin
Senator Reid	Mr. Gregory
Senator Sampson	Mr. Long.
Mr. M. Cameron	

Rupert Clarence Smith, Head Master of the Ainslie Public School, sworn and examined.

107. *To the Chairman*.—I am aware of the proposal to erect public swimming baths in Canberra, and although I have had no experience of teaching swimming in closed baths I have taught hundreds of children to swim in rivers where stretches of shallow water have been chosen as swimming grounds. Special consideration should be given to the needs of school children in constructing baths in Canberra, and careful attention should be paid to the depth of the water. Our department provides for the handling of classes of from 40 to 50 children at a time. Under the latest methods of teaching, the group system is used. As many as 60 or 70 children are controlled by one teacher, the pupils working in pairs. In the teaching of swimming it would be necessary to have a sufficient area of water of a depth of from 3 to 4 feet. In my opinion, there would be an insufficient area of shallow water in a pool 80 feet long with a depth of 3 feet at the shallow end, and gradually sloping to 8 or 9 feet at the deep end. A pool of such measurements would prevent us from handling a sufficiently large number of children at one time. We usually take children from the age of 9 years, and a depth of 3 feet 6 inches would not be too great. If half the pool ranged in depth from 3 feet to 3 feet 6 inches, there would be an area of about 40 feet by 40 feet of shallow water in which a large class could be taught to swim. If a rope were hung across the baths at the point where the water suddenly deepened, there would be no danger, because the children receiving lessons in swimming would be under the close supervision of a teacher. Even on days when

there was no teacher in attendance such a rope would indicate the deeper water and make the pool safe for the youngest pupils. I have resided in Canberra for about eighteen months, and I should say that swimming could be indulged in, in an average season, from the middle of November until about the middle of March, and in some years until the end of March. I do not think that swimming could have begun last year until the end of November. We have about 130 children over the age of eight years at the Ainslie School, and only twelve of them, 7 boys and 5 girls, can swim. The total number in attendance is 250, and I believe that practically the whole of the children would attend the baths for instructional purposes. Last year the department proposed to hold a swimming school in the Murrumbidgee River, but owing to the state of the stream the arrangements were cancelled. About 90 per cent. of the children were then anxious to learn to swim. If the proposed baths were built, swimming lessons would be included in the school curriculum. In my opinion, the baths should be located within walking distance of the greatest number of homes. I should say that a site on a regular bus route, or within a few minutes walk of it, should receive first consideration. It seems to me that the most favorable site is near the main bridge at Acton. It would be within reach of children living on both sides of the river. You inform me that it has been suggested that a site at Telopea Park would suit the largest number. There are between 500 and 600 children attending the Telopea Park School, but they are not all residents of that district. About 100 of those children live on the north side of the river, and travel to school by bus. Those children would desire to use the baths in other than school hours. A number of the schoolers come from Westridge and other outlying portions of the Capital. I anticipate that the attendance at the Ainslie School will be 300 by the end of the present year, and it may increase to 400 next year. Therefore, a large number of children would be deprived of the use of the baths if they were not built within a reasonable distance from their homes. I do not think it would be better to compel one-third of the school children to use the buses in attending the baths than to make all of them travel some distance. Very few children in capital cities have swimming baths so close to their doors that they can reach them without travelling at least one section by tram or train. While I consider the baths most desirable from the point of view of the adult population, I regard them as most necessary in the interests of the children.

108. *To Mr. Long*.—In saying that the swimming season in Canberra would extend from the middle of November to the middle of March, I am thinking of open baths. I do not think that the heating of the baths would be justified, so far as the children's interests are concerned. I do not think that the heating of the water would encourage swimming for the whole year. I have not considered the wisdom of providing heated baths. I am doubtful whether winter swimming would be popular. I do not think a sufficient number of pupils would be attracted to the baths in the winter months. I have no doubt as to the readiness of the children to bathe, even in icy water, because I have found it difficult to restrain them as the swimming season approaches, but I am afraid that their parents would be prejudiced against allowing them to participate in winter swimming. The parents would be enthusiastic over the teaching of their children to swim in the summer months.

109. *To Senator Sampson*.—Assuming that the baths were erected near Telopea Park it is conceivable that the Commission might grant concessions to the children who had to use the buses in reaching the baths for swimming lessons. At present, child on are charged 1d. each way between Ainslie and Telopea Park. Some

pupils travel from Ainslie to Telopea Park on Thursdays for domestic science instruction, and they are carried free of charge. Since swimming would be part of the school curriculum it is possible that some concession would be made on bus fares. I am quite satisfied that the children are very keen on having swimming lessons.

110. *To Mr. Cameron.*—The department considers that the average pupil can be taught to swim in ten lessons. I have taught children of 8 and 9 years to swim 10 yards in two lessons. Results have been recorded from year to year, and we have found that between 90 and 95 per cent. of the pupils acquire the art in ten lessons. Only delicate or nervous children fail to learn after that amount of instruction. You suggest that for the purpose of teaching large classes, there ought to be a sufficient area of shallow water in a pool 82 feet long, 40 feet wide, ranging in depth from 3 feet to 9 feet, and having a gradual slope, and that the great majority of the pupils would soon be taught to swim. I point out that under ordinary circumstances, a class would receive only one or two lessons a week, and the lessons would extend over ten weeks. In the swimming schools conducted during the vacation, the lessons are given on ten consecutive days. I admit that once the pupils acquire a taste for the water they attend the baths of their own accord, but they do not necessarily learn to swim; they generally play about in the shallow water. I should say that the baths should be located within a walking distance of about a mile of the residential area to be served. There are some residents who look upon swimming facilities as most important, and they might be influenced to reside in the vicinity of public baths. Residents of Ainslie already feel that they are furthest removed from railway and shopping facilities and picture theatres, and they would regard the building of public baths on the south side of the river as an addition to their drawbacks.

111. *To Mr. Gregory.*—Having regard to the interests of the residents of Canberra as a whole, I should say that either No. 1 or No. 2 site would be the most suitable. It is within reach of both the adult and juvenile population of Ainslie.

112. *To Senator Dooley.*—If the baths were built in the Telopea Park area the residents of Ainslie would be offended, and I am afraid they would not patronize them. I do not favour the building of baths on a site that suits one section of the people more than another. The site proposed near St. John's Church would not be satisfactory, being some distance away from a bus route.

113. *To Senator Reid.*—There are many sand beds along the river Murray that are ideally suited for the giving of swimming lessons under the group system. There are generally deep parts of the river alongside the sand beds, and the deep water is indicated by ropes or flags. In my opinion, a depth of more than 3 feet would be rather dangerous for children aged 7 years. Thirty children between the ages of 12 and 14 years travel from the north side to Telopea Park to receive extra lessons, and they are all of the swimming age. If the baths were established at Telopea Park those children could easily attend them, but the number of pupils at Ainslie is increasing, and I claim that the interests of the 250 children already attending the Ainslie School should not be set aside. I have already pointed out that those figures are not likely to remain stationary.

114. *To Mr. Curtin.*—I see no strong objection to the choice of a site that would involve the use of transport facilities by all those desirous of patronizing the baths. You ask me if it would be practicable to provide transport to the baths for over 1,000 children. I am assuming that such transport would be unnecessary, because the site I have mentioned would be within

walking distance. Proposed site No. 4 would be satisfactory if it did not involve an increase in bus fares. My objection to the building of the baths at Telopea Park is that they would not be largely availed of by residents on the north side of the river. If a bus fare of 1d. were charged, school children would be prepared to travel any distance to the baths. You tell me that it would be cheaper to provide special bus facilities for 300 pupils on the north side of the river than for 1,000 on the south side. I point out that many of the children would use the baths six days a week. I am considering the proposal from the point of view of the interests of both children and adults.

115. *To the Chairman.*—If the baths were built at Telopea Park it would take Ainslie pupils from 25 to 30 minutes to travel to and from the baths, and a swimming lesson would last for half or three-quarters of an hour.

116. *To Mr. Curtin.*—I do not think that our department would approve of the whole of an afternoon being devoted to swimming instruction.

The witness withdrew.

Joseph Stewart Wennerston, representing the Public Service Welfare Committee, recalled and further examined.

117. *To the Chairman.*—The evidence that has been given recently regarding the provision of a swimming pool in Canberra has been discussed by the Public Service Welfare Committee, which has asked me to attend and say that, in view of the new proposal to erect a smaller and less costly pool, it is not anxious that such a structure should be placed in a central and prominent position. Therefore, my committee approves of the proposal to provide the pool on one side of the city on the understanding that in the future similar facility will be given on the other side. The site that we understand has been recommended by the headmaster of the Telopea Park School is approved by us. We believe it is on the Forrest recreation reserve alongside the No. 2 bus route. We are particularly anxious that the pool should be placed on a bus route. We are also desirous that, if possible, it should be tiled. We are of the opinion that provision should be made at once for future additions. In case it may be decided to install under-water lighting, we should like the necessary channels to be provided now so that this lighting might be added at trifling additional cost at some future date. We hope that provision for extension of the pool will be made immediately. We consider that the proposed pool is slightly smaller than it should be if it is to be in keeping with the requirements of Canberra, but if provision is made for extension we shall be in accord with the proposal to reduce the length to 82 ft. 6 in. We understand that quite a number of swimming pools in the United States of America in which championships are held are less than 82 ft. 6 in. in length. We hope that in the not far distant future it will be possible to provide an additional swimming pool in the northern residential portion of the capital. We are not altogether in accord with the suggestion that if one pool is to be built on a site that will suit the residents on the south side of the city another pool should be built on the north side at a distance from the residential area. That is to say, we do not altogether agree with Mr. Murdoch that the main pool should be located on the hexagonal area at Civic Centre. We think it should be closer to the residential area in order to provide greater convenience to the people, and, therefore, a more satisfactory revenue. If it is to be a main bathing pool on the lines previously suggested we recommend that it be located in the centre of the capital near the half-way point along the bus routes, but if a smaller and less ornamental structure is to be provided we do not desire to see it built near the central administrative block.

We consider that the site on the Forrest Recreation Reserve will suit by far the greatest number of the children in Canberra, and will also be handy to at least half the residents of the city. We hope that the pool will have a surrounding wall of brick, and that provision will be made for the addition at a later period of heating appliances. Despite the optimistic remarks of many persons, we know that the season for swimming in open baths is limited in Canberra to a period of about three months. The rapid changes of temperature here will preclude bathing to a great extent for nine months of the year. We trust that when the financial position improves provision will be made to regulate the temperature of the water so that swimming facilities will be available for a much longer period than will be possible with a small open pool. The proposed pool will be 40 feet wide, and the depth will increase gradually from 3 feet to 9 feet. At least an area 12 feet by 40 feet could be roped off at the shallow end of the pool to make a safe bathing area for those unable to swim. I do not advocate attempting to cater to any great extent for non-swimmers. Every boy and girl ought to be taught to swim, and if the pool were too shallow it would greatly interfere with the bathing facilities of the adults. The exact depth at various parts of the pool is a matter to be dealt with by swimming experts.

118. *To Mr. Cameron.*—The residents of the northern portion of Canberra are well represented on the Public Service Welfare Committee. They know that if there is to be a small pool it must be provided at one end of the city and that later on another will be built at the other end. The population of Canberra has not yet reached the point to which it will normally increase. The figures of Washington over a large number of years show that the population of that city as compared with that of the United States of America is in the proportion of 1 to 240. On that basis, allowing slightly different figures because of the large black population in Washington, and taking a basis of, say, 1 in 300, with the present population of Australia there ought now to be 25,000 people residing in Canberra. I am assuming that Commonwealth activities are equal to the Federal activities in the United States of America, but we know that the Commonwealth activities are greater than those of the Federal Government in the United States of America. So it is a conservative estimate to say that the normal population of Canberra should be 25,000 for every 6,000,000 people in Australia. On that basis we think that there is ample justification for the construction of two bathing pools in Canberra.

119. *To Mr. Curtin.*—You suggest that I am comparing a capital that has been developing for over 100 years with a capital in embryo, but I submit that Canberra will grow rapidly in population, and residents on the north side will soon have justification for the erection of a second bath there.

120. *To Mr. Cameron.*—There is an ample area of land available at the Forrest site. You ask me whether the grounds on which the baths are located

should be made a beauty spot where visitors could rest on seats or lawns while watching the swimmers. The question presupposes a transparent enclosure, but I contend that climatic conditions in Canberra would not lend themselves to a wire netting enclosure. Almost every afternoon in summer a sea breeze springs up, and the nights are almost always cold. I think that the baths will have to be enclosed. I trust that the surroundings of the baths will be made beautiful in keeping with the general tone of the city, but not for the purpose of enabling parents and visitors to witness the exhibitions of swimming.

121. *To Mr. Gregory.*—The erection of mounds planted with grasses and shrubs to serve the place of walls seems a good idea, but I am afraid it would not provide sufficient protection from winds.

122. *To Mr. Cameron.*—I consider that there is a great difference between the climatic conditions at Malvern, Victoria, and at Canberra. Here we get a cold sea breeze between 2 and 5 p.m. nearly every afternoon throughout the summer. On the bowling-green one needs a sweater to rely on playing in comfort. You ask me whether I think that a plain brick wall would make the enclosure look too much like a gaol. I have too much confidence in Mr. Murdoch as an architect to imagine that he would sponsor the erection of a structure resembling a prison. Some of the brick walls to be seen in the Old World are beautiful in design. The Melbourne climate cannot be compared with that of Canberra. The summer breezes experienced here pass over 60 miles of tableland; while a breeze in Melbourne comes across thousands of miles of temperate ocean. Canberra has very few humid nights in the summer. It is nearly 2,000 feet above sea level, while Melbourne is almost awash with the sea.

123. *To Mr. Gregory.*—The Public Service Welfare Committee represents all the public servants in Canberra. Half the departments are located on the north side of the city. Our decision was unanimous, because those members on the north side knew they had no chance of the bathing pool being placed there. They realized that the greatest development has occurred on the south side, and they supported the request in the hope that later on a pool would be erected in the residential district on the north side.

124. *To Senator Reid.*—I cannot say what was the population of Washington when it was as young a city as Canberra. Some time has elapsed since I took out the figures relating to Washington, but I noticed how steadily the proportion of 1 in 240 was maintained throughout the decades. Members of our committee have seen public swimming pools in various parts of the world. One spoke very highly of the heated bath in Capetown. Another told us what he had seen in Havana. Some members of the committee are familiar with the Camberwell baths near Melbourne, and some of them have said that the Footscray baths are the most up to date in the metropolitan area of Victoria. If there is any money available for beautifying the proposed pool we should prefer to see it spent in tiling it. The surroundings are of secondary consideration.