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THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA

PARLIAMENTARY STANDING COMMITTEE
ON PUBLIC WORKS.

R E P O R T

RELATING TO THE PROPOSED ERECTION OF

ADMINISTRATIVE OFFICES

AT

DARWIN, NORTHERN TERRITORY.

Presented pursuant to Statute ; ordered to be printed, 5th December, 1939.

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MEMBERS OF THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

(*Ninth Committee.*)

THE HONORABLE JOSIAH FRANCIS, M.P., Chairman,

Senate.

Senator Charles Henry Brand.
Senator Gordon Brown.
Senator Walter Jackson Cooper.

House of Representatives.

Thomas Joseph Collins, Esq., M.P.
Charles William Frost, Esq., M.P.
The Honorable Edward James Holloway, M.P.
Walter Maxwell Nairn, Esq., M.P.
John Lloyd Price, Esq., M.P.

EXTRACT FROM THE VOTES AND PROCEEDINGS OF THE HOUSE OF REPRESENTATIVES, No. 94,

DATED 7TH JUNE, 1939.

6. PUBLIC WORKS COMMITTEE—REFERENCE OF WORK—ERECTION OF ADMINISTRATIVE OFFICES, DARWIN.—
Mr. Perkins (Minister representing the Minister for the Interior) moved, pursuant to notice, That, in accordance with the provisions of the *Commonwealth Public Works Committee Act 1913-1936*, the following proposed work be referred to the Parliamentary Standing Committee on Public Works for investigation and report:—Darwin, Northern Territory—Erection of Administrative Offices.

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

Debate ensued.

Question—put and passed.

LIST OF WITNESSES.

- Blain, A. M., Member of Parliament representing Northern Territory.
Bruce, W. C., Quantity Surveyor, Commonwealth Works Department, Sydney.
Carrodus, J. A., Secretary, Department of the Interior, Canberra.
Cook, Dr. C. E. A. (late Chief Medical Officer, Darwin), Medical Officer, School of Public Health and Tropical Medicine, Sydney.
Haslam, W. T., Superintending Architect, Department of the Interior, Canberra.
Hepburn, Wing-Commander A., Director of Works, Department of Defence, Melbourne.
Holmes, Dr. M. J., Senior Medical Officer, Commonwealth Department of Health, Canberra.
Lawson, R., Chief Engineer, Postmaster-General's Department, Melbourne.
Mehaffey, M. W., Assistant-Director-General of Works, Department of the Interior, Canberra.
Percival, A., Surveyor-General and Chief Property Officer of the Commonwealth, Department of the Interior, Canberra.
Stoddart, E. W. H., Commonwealth Works Director, Darwin.
Sutton, B. F., Architect, Commonwealth Works Department, Sydney.
Turner, D. K., Architect, Stephenson & Turner, Architects, Melbourne and Sydney.

ERECTION OF ADMINISTRATIVE OFFICES, DARWIN.

REPORT.

THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS, to which the House of Representatives referred, for investigation and report, the question of the Erection of Administrative Offices, Darwin, has the honour to report as follows :—

INTRODUCTORY.

1. When the Northern Territory was under the control of South Australia, government officials were housed in a single-storeyed stone building opposite the Residency. The Commonwealth assumed control of the Northern Territory in 1911, and as activities increased, additional accommodation, mainly of a temporary character, was provided from time to time.

2. At present, officials are variously located in six different and widely separated areas. The Administrator's office is in the grounds of the Government Residency, the main Administrative Offices are opposite, in the single-storeyed stone building above referred to, Aboriginal Affairs, Crown Law Officer, and Sanitation Section are in a building in Mitchell-street, the Lands, Mines, Taxation, and Stock branches are in a two-storeyed timber structure in Cavenagh-street, the District Naval Office is in a small concrete building near the Post Office, and the Works Director and staff occupy a timber structure near the railway.

PRESENT PROPOSAL.

3. With the expansion of activities and the increase in staffs, the space available in the main administrative building is becoming increasingly crowded, and it is represented that officials now are working under cramped and generally unsatisfactory conditions. The use of the Lands and Mines building was never regarded as other than a temporary measure, and the fact that staffs are scattered at various points throughout the town leads to loss of time and lack of efficiency and economy.

4. An investigation was made into the practicability of adding a storey to the existing building, but this course was not recommended, and the proposal now submitted for the consideration of the Committee is for the erection, on a site which has been acquired for the purpose, of a building capable of housing all administrative functions, in modern offices, under one roof.

DESCRIPTION OF THE BUILDING PROPOSED.

5. The building proposed is to be of two storeys and designed on an "H" plan. It consists of a central block, 156 feet long by 46 feet wide, and two wings each 112 feet long by 40 feet wide. Accommodation for strong rooms, lavatories, store rooms, &c., has been planned between the central portion and each wing so as to be easily accessible to each section of the building.

6. Corridors, 7 feet wide, have been planned along the external walls of the central portion and each wing, for the dual purpose of ample and efficient circulation between each portion of the building, and as a protection for staff and furniture from weather conditions. On the ground floor a central hall 14 feet wide provides access across the building, and a 9 feet wide corridor would be provided on the first floor. Accommodation for tanks, a printing room, and a luncheon room 20 feet by 13 feet is provided in the tower.

7. After making due allowance for corridors, &c., the floor space available for office accommodation would be—

	sq. feet.
Central block	8,500
Each wing, 5,095 sq. feet	10,190
Total	<u>18,690</u>

or sufficient accommodation for 85 officials in the central block, and 51 in each wing.

8. The buildings are proposed to be erected on concrete foundations, with concrete foundation walls, and to be of steel-framed construction, with external and internal walls, stairs, floors, and subsidiary roofs of concrete blocks or reinforced concrete. External walls are to be constructed in 18 inch by 8 inch by 6 inch solid compressed concrete blocks, and the internal walls in 18 inch by 8 inch by 4 inch similar blocks—all set in cement mortar. The first floor is to be constructed of hollow block ribbed concrete. Floors and steps to porches are to be finished in cement rendering dusted with carborundum; vestibules and staircases are to be finished in terazzo, with stair treads having a carborundum inlay to prevent slipping.

9. It is proposed to have steel roof trusses, carefully painted, with karri purlins and sarking supporting a Marseilles pattern tile roof. The roof eaves suggested are to have a projection of 4 feet from the walls. They are to have a horizontal soffit sheeted with fibro cement battens for ventilation purposes, and lined internally with bird-proof wire. Projecting 4 feet concrete hoods have been designed as protection for the main windows on the ground floor.

10. Window openings are to be practically continuous, and of almost full height floor to ceiling. It is proposed to enclose the portion of windows below sill level with movable jarrah louvres, which, when closed, will be entirely weather-proof. Similar movable louvres would enclose the upper portion of windows above transom level. Windows are proposed to be glazed with non-actinic glass to prevent sun glare and the radiation of heat.

11. The estimate does not provide for sewerage, but a sewerage system for Darwin is under consideration, and it is expected that the town water supply will be available when the building is about to be erected. Provision is made for an adequate fire service, and the necessary electric light and power installation, but no provision has been made for the subdivision of the building into separate offices by walls and partitions.

ESTIMATED COST.

12. The estimated cost of the Administrative Building, as submitted to Parliament, is set down at £60,000, and the time fixed for completion about twelve months from date of commencement.

COMMITTEE'S INVESTIGATIONS.

13. The Committee carefully studied the plans of the proposal submitted, and took evidence from the Works Director of the Northern Territory, who was on a visit to Canberra, Dr. Cook, until recently Chief Medical Officer in the Northern Territory, and from Dr. Holmes of the Department of Health, who had recently returned from a visit of inspection to Darwin and elsewhere. Evidence was also taken from the Secretary, Department of the Interior, the Assistant Director-General of Works and other officials of the Department of the Interior, the Director of Works, Department of Defence, the Chief Engineer, Postmaster-General's Department, the Commonwealth Surveyor-General, a private architect who was carrying out work in Darwin, and the representative of the Northern Territory in the Commonwealth Parliament.

14. Members of the Committee, from their visit to the Northern Territory last year, are acquainted with conditions at Darwin, and are aware that the present main administrative offices were erected by the South Australian Government some 60 years ago. From its own observation, and from the evidence placed before it, the Committee is agreed that more commodious and modern accommodation is required for the staff at Darwin, and recommends that it be provided as early as practicable.

BUILDING.

15. The building, as planned, would provide accommodation in the central block for 85 officials, and for 51 in each of the wings, a total of 187. In the opinion of the Committee it is unlikely that the whole of this accommodation will be required for a great many years, and from the evidence placed before it the Committee is satisfied that all needs for some years would be met by the erection of the central block at an estimated cost of £32,500, and recommends that this section only be proceeded with at present.

16. As regards the design for the whole building, it was pointed out in the course of the inquiry by those witnesses best acquainted with conditions at Darwin that if only the central block be erected the ventilation of same would be satisfactory, but that in the event of the end wings being constructed they would obstruct the ventilation of the central block because the prevailing winds blow along the axis of the building. The opinion was expressed that it is particularly necessary that a north-west wing should not be joined up to the central block. Under the circumstances, the Committee suggests that there might with advantage be a slight alteration in the orientation of the structure to secure the utmost benefit from the prevailing winds.

VENTILATION.

17. In Darwin, the average temperature in the cooler months rarely drops below 65 degrees Fahrenheit, while in the hot months it does not average over 95 degrees Fahrenheit. But, during the latter period, the percentage of relative humidity is at its greatest and this is consequently the period of maximum discomfort. It is for this reason that the attention of the Committee has been specially directed to the question of the ventilation of the proposed offices.

18. Consideration was given to the question of installing an air-conditioning plant, and estimates obtained showed that the cost of this proposal would be £9,000 for the whole block, and £6,500 for the central block only. In addition there would be a running cost of from £75 to £100 per annum. In the course of its investigations, however, the Committee found that the weight

of evidence was against the adoption of an air-conditioning scheme, and it is considered that greater comfort and convenience could be afforded and healthier conditions maintained by providing commodious working space and ensuring adequate natural ventilation. The design of the building, with large window openings and louvred apertures above and below the windows, and with ventilation space below the roof eaves, provides for this and meets with the approval of the Committee.

EAVES.

19. Provision has been included in the design for the roof eaves to project for 4 feet beyond the building walls, thus providing shade for the windows on the upper storey, and serving to throw off rain water from the walls of the building, as, owing to the mosquito menace, no roof gutters are to be provided. A concrete hood projecting 4 feet beyond the walls provides shelter for the windows on the ground floor.

20. It was stated in evidence that in some tropical countries 6 feet eaves and hoods are provided in order to throw almost the whole of the walls into shadow, and the Committee considered the advisability of increasing the eaves and hoods of this building an extra 2 feet with the same object in view. It was ascertained that the additional cost of providing 6 feet eaves and hoods in lieu of 4 feet would be £1,525 for the whole building, and £700 for the central block only. It was pointed out that there might be some danger that the wider eaves would interfere with the ventilation through the upper windows, and evidence was given that 4 feet eaves are being used right through the Royal Australian Air Force buildings and are proving satisfactory. In view of all the circumstances, therefore, the Committee recommends that the eaves and hoods be kept at 4 feet.

USE OF TIMBER.

21. In view of the depredations of white ants in Darwin, it is recommended that timber be used in construction as sparingly as possible, and such timber only as has been shown to be definitely white-ant resisting. For this reason the Committee recommends that metal sashes for window frames be used in lieu of the timber frames suggested, and that, in place of the wooden louvres proposed, use be made of fibrolite louvres, which have been used in other buildings in Darwin and proved to be satisfactory.

LAVATORIES.

22. In the plan submitted, two two-storeyed blocks of lavatories were provided—one at each end of the central block and forming the angle of junction of the central block with each of the wings. This planning did not commend itself to the Committee, as it impeded the free ventilation between the wings and the central block, and when the building is to be completed it is recommended that provision be made to have the lavatories on island blocks connected with the main building by covered ways. If the central block only be now proceeded with, it was stated in evidence that one lavatory block providing accommodation for males on one floor, and females on the other, will be sufficient to meet the needs of the officials who can be accommodated in the building.

23. It was ascertained that provision has been made to connect these lavatories to the main sewer when a water-carried system is established in Darwin. In the meantime the sewage from this building will be dealt with by a septic tank installation.

NON-ACTINIC GLASS.

24. Some consideration was given by the Committee to the proposal that the windows of the building should be glazed with non-actinic glass. This glass is usually of a green or yellow tint and is claimed to have the effect of minimizing the sun's glare and the radiation of heat. It is used fairly extensively in the tropics and in large industrial buildings where the colour is not of great consequence, but it is suggested that it does not give a reasonably white light such as is necessary to provide favourable working conditions for clerical officers.

25. Non-actinic glass is slightly more expensive than ordinary glass, and its use would involve an expenditure of about £170 for the supply necessary for the whole building. For windows which are to be kept always closed non-actinic glass has its advantages but if the building is to be ventilated by the free circulation of air, and the windows are to be kept open for the greater part of the time, the use of non-actinic glass does not appear to be necessary.

AUTOMATIC TELEPHONE EXCHANGE.

26. During the course of the Committee's investigations, evidence was obtained from the Chief Engineer, Postmaster-General's Department, that steps were in contemplation to provide an automatic telephone exchange in the existing postal premises at Darwin in lieu of the existing manual exchange, but that in view of the expressed intention of the Navy Department to take over the postal premises a proposal was now being put forward for the erection of an exchange building in the vicinity of the proposed administrative offices.

27. At present 200 subscribers are connected with the existing manual exchange at Darwin, and there is provision for a total of 300. The natural increase has been slow, the average being seven additional lines per annum. It is estimated, however, that within the next five years 500 subscribers' lines will be connected with the Darwin exchange, and the departmental estimate for the future is about 600. The actual development in this respect cannot be definitely foreseen, because it depends largely upon circumstances which cannot be readily forecast.

28. It is proposed that the exchange should be a single-storeyed structure in the form of an annex at the rear of the administrative offices. It will provide for an exchange 40 feet by 22 feet, power room 17 feet by 10 feet, battery room 17 feet by 8 feet and an air-conditioning room 18 feet 6 inches by 17 feet. The area set aside would be sufficient for the provision of 1,000 subscribers' lines, which would probably cover twenty years' development. At present it is proposed to install 300 lines, which number can be easily extended in blocks of 100 as required.

29. *Estimated cost.*—The site having already been acquired, the estimated cost of this proposal is set down at :—

	£
Building	5,000
Air-conditioning plant	1,700
Exchange equipment	6,000
Subscribers' equipment	1,200
	£
	13,900

The time fixed for completion would be approximately 15 months from date of approval.

30. *Revenue.*—It is not anticipated that any additional revenue will be obtained as a result of the establishment of an automatic telephone exchange, but the present policy of the Postmaster-General's Department is to install automatic equipment wherever practicable, particularly where new exchanges are required, and it is expected that an appreciable saving will be effected in operating costs as compared with the manual exchange.

31. The Committee is aware that the general trend of development throughout the world is in the direction of automatic equipment, and, having had some experience of the telephone service at Darwin, is satisfied that an automatic exchange would be of considerable benefit to the town. For these reasons, the installation of an automatic telephone exchange as proposed is recommended.

32. The Committee, however, considers that the exchange building should be placed in such a position and at such a distance from the administrative office as to mask that building as little as possible from the prevailing winds.

NAVY REQUIREMENTS.

33. During the course of the Committee's inquiry it was apparent that the proposal submitted resulted to some extent, or at least was accelerated, by the desire of the Navy Department to obtain accommodation for its present and projected activities at Darwin. It was stated in evidence that whilst consideration was being given to the necessity of bringing the various administrative activities into closer contact, the Navy Department was recommending the erection of naval headquarters at Darwin, and the idea was conceived that if the existing administrative offices were to be vacated the vacant premises could be made to serve Naval purposes and thus avoid the necessity for the erection of another building.

34. It was explained that the Navy intended to concentrate all its activities in the region of the waterfront, and was prepared to erect a new post office for the Postmaster-General's Department and take over the existing postal premises. It was stated that whilst accommodation is needed for only approximately twelve officers in the old administrative building, the proposal to take over the postal premises is suggested because it is necessary to have a mess for petty officers and single seamen. The number will vary from 20 to 30, for whom the usual cooking and dining facilities, recreation room, and wet canteen will be needed.

35. The desire to take over the existing postal premises was expressed because these were formerly used by the British Australasian Telegraph Company and contain amenities to cater for the housing of 20 to 30 officials. There is a tennis court, and adequate space which could be readily equipped to provide mess accommodation for petty officers and seamen. The postmaster's residence could be used for chief petty officers, while other ratings could be located in the linesmen's quarters. All of this could be effected at comparatively little expense, whereas the estimated cost of constructing a mess and the necessary accommodation for these ratings is set down at £8,500.

36. Although it was stated that the question of the removal of the post office from its present site had not been officially before the Postmaster-General's Department, it was gathered that there would be no objection on the part of that department to the proposal of the Navy Department to erect, without cost to the Postmaster-General's Department, a new post office in the vicinity of the proposed administrative office.

DARWIN DEVELOPMENT COMMITTEE.

37. When the Government decided that certain defence personnel were to be stationed at Darwin, and it was apparent that considerable expenditure would be involved in the acquisition of land and the carrying out of various defence works, the Minister for the Interior, at the request of the Department of Defence, constituted the Darwin Development Committee of three, consisting of Wing-Commander Hepburn, Director of Works, Department of Defence, Mr. Giles, Government Secretary, Darwin, and Mr. Haslam, Superintending Architect, Department of the Interior, Canberra, who were entrusted with the task of endeavouring to forecast what might be the ultimate requirements of the various services likely to be established there. They submitted a plan for the re-modelling of Darwin—including the allocation of an area in which all naval activities could be developed, the removal of aliens from the vicinity of the oil tanks, the location of the administrative offices now under consideration, and the acquisition of certain areas contiguous to the administrative offices, with the idea of forming a Civic Centre around which the new town should be developed.

38. Unfortunately, as the details of this scheme were treated as secret, the opportunity of enlisting the co-operation of local bodies and representative business men was lost, and no action was taken to consult a representative of the Postmaster-General's Department, which would be intimately concerned with the proposal to hand over to the Navy the present postal premises and establish a new post office at the other end of the town. It was stated that up to the present the scheme submitted by the Darwin Development Committee has not been approved; but the fact that some such scheme was under consideration, with the consequent distorted version which rumour spread of what was proposed, led to some dissatisfaction amongst those people of Darwin who had in contemplation plans for building, and hesitated to proceed with them until a decision had been reached. It was represented that it would be of advantage to the residents if the Government's intentions regarding the future development of the town were revealed.

39. The town of Darwin was laid out under the direction of the South Australian Government many years ago, and with the growth of population and the increase in activities in the North beneficial results might be achieved by the adoption of a considered scheme for the development of the town on a definite progressive plan. Many of the premises occupied by aliens are unhygienic and unsatisfactory; undoubtedly the presence of potential enemies in the vicinity of the oil tanks or defence areas is undesirable; and the creation of a Civic Centre, although it cannot be regarded as economic, might be considered an attractive feature of the town.

40. In launching any scheme for the re-planning of Darwin, however, the Government should be prepared to embark upon a re-housing programme. It was stated that the shortage of dwellings in Darwin is at present acute, and that the acquisition of various areas for defence purposes has involved the dispossession of a number of inhabitants from their homes, while any decision to remove from the south-eastern end of Cavenagh-street aliens who are not in a position to build themselves new quarters would involve considerable hardship.

SITE.

41. It was ascertained that the Commonwealth had, by notification published in the *Commonwealth Gazette* of 15th June, 1939, acquired an area of seven and a half acres of land bounded by The Esplanade, McLachlan, Mitchell, and Peel streets, Darwin, which, together with one block of half an acre it already owned, provided an area of eight acres, on which it is proposed to erect the building under consideration. The site is in an attractive locality, facing the harbour, conveniently situated as regards most of the inhabitants of the town, is good building land, easily drained, and is generally regarded as suitable for the purpose in view.

42. The selection of a site, however, is of paramount importance by reason of the fact that this building will be the centre of administration and might be expected to influence the growth of the town. Darwin is at present in a transition stage, from a backward township of little moment to one of increasing population and growing importance because of the fact that it is a port of call for overseas and interstate aircraft, and a base for defence operations. The Administrative Offices, as a focal centre, should be sited as part of a general scheme of ordered development designed in accordance with the latest ideas of scientific town-planning.

43. The Committee, therefore, recommends that before any work is commenced on this project, or any action is taken to implement the report of the Darwin Development Committee, or any approval given for the adoption of a long range scheme for the re-planning of Darwin, an effort should be made to enlist the services of a competent town-planner.

SUMMARY OF RECOMMENDATIONS.

44. Briefly summarized, the recommendations of the Committee are as follow :—

- (a) That more commodious and modern office accommodation be provided as early as practicable. (Paragraph 14.)
- (b) That of the proposed building the central block only be erected at present. (Paragraph 15.)
- (c) That no action be taken to install an air-conditioning system. (Paragraph 18.)
- (d) That eaves and hoods projecting four feet from the walls be adopted. (Paragraph 20.)
- (e) That timber be used as sparingly as possible, and that only of the type shown to be definitely white-ant resisting. (Paragraph 21.)
- (f) That metal sashes be used in window frames. (Paragraph 21.)
- (g) That fibrolite louvres be used instead of timber as proposed. (Paragraph 21.)
- (h) That provision be made for lavatories on island blocks. (Paragraph 22.)
- (i) That there is no necessity for the use of non-actinic glass in the windows. (Paragraph 25.)
- (j) That an automatic telephone exchange be installed as proposed. (Paragraph 31.)
- (k) That the exchange building be placed in such a position, and at such a distance from the administrative office, as to mask that building as little as possible from the prevailing winds. (Paragraph 32.)
- (l) That before any action is taken to implement the report of the Darwin Development Committee, or to take any steps towards the adoption of a long range scheme for the re-planning of Darwin, an effort should be made to enlist the services of a competent town-planner. (Paragraph 43.)

JOS. FRANCIS,

Chairman.

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

Canberra, 16th November, 1939.