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THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA

Parliamentary Standing Committee on Public Works

REPORT

relating to the proposed redevelopment of

TENNANT CREEK HOSPITAL

Northern Territory

(FIRST REPORT OF 1974)

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PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

REDEVELOPMENT OF
TENNANT CREEK HOSPITAL
NORTHERN TERRITORY

REPORT

By resolution on 7 March 1974, the House of Representatives referred to the Parliamentary Standing Committee on Public Works for investigation and report to the Parliament, the proposal to redevelop the hospital at Tennant Creek, Northern Territory.

The Committee have the honour to report as follows:

THE REFERENCE

1. The proposal referred to the Committee is for the construction of a 42-bed hospital with associated staff quarters and services at Tennant Creek. The hospital is to be constructed in one stage with provision made for future expansion. It is designed to provide normal hospital and emergency treatment for the Tennant Creek township and surrounding district.

2. The new construction will comprise an outpatients, casualty and administration block with adjoining wards. Other facilities provided will be a kitchen and staff dining room, boilerhouse extension, store, toolshed and ambulance garage, car parking, covered ways, paths, roadworks and landscaping. A new residence for the superintendent will be constructed. Bedsitter accommodation for nursing and paramedical staff will be provided on the south end of the existing hospital site. The

existing permanent ward will be converted into three self-contained flats. A swimming pool will also be provided.

3. The cost of the works at the time of reference to the Committee was estimated to be $4.5 million.

THE COMMITTEE'S INVESTIGATION

4. The Committee received written submissions and drawings from the Departments of Health and Housing and Construction. A Sectional Committee took evidence from their representatives at public hearings in Tennant Creek. The Committee also received written submissions and took evidence from the Tennant Creek Town Management Board, the Hospital Board and Peko Mines N.L. A representative of the Country Women's Association also gave evidence. The local representatives support the proposal for a new hospital as a much needed asset for the town.

5. Prior to the public hearings the Sectional Committee inspected the existing facilities at the Tennant Creek Hospital and the site for the proposed new buildings.

6. The proceedings of the Committee's hearings will be printed as Minutes of Evidence.

NORTHERN TERRITORY HEALTH SERVICES

7. Administration The Northern Territory medical service is operated by the Australian Government Department of Health and its responsibilities cover most aspects of the community's health and

hygiene requirements. The largest element is the planning, operation and maintenance of public hospitals in the Northern Territory.

8. For administrative purposes, the Territory is divided into three regions, each serving urban areas and scattered sparsely populated centres including missions, pastoral properties and mining camps.

9. The southern region is the area generally south of Elliott township and is served by the Tennant Creek and Alice Springs hospitals. The northern region comprises the area north of Elliott (excluding the East Arnhem region) and is served by the Katherine, Darwin and Casuarina hospitals, the latter of which is now being constructed. The East Arnhem region when fully established will be served by the new hospital at Nhulunbuy on Gove Peninsula.

10. Although each hospital has its own area of responsibility, patients are referred, as required, to the larger hospital of each district, direct to Darwin Hospital or to hospitals outside the Territory, as necessary.

NEED FOR NEW AND EXPANDED HOSPITAL FACILITIES

11. Tennant Creek Hospital The present hospital was commenced during the period 1935-36. The original unit was a one storey, timber framed structure with wooden floors and was designed to provide 6 beds. Over the intervening years, facilities, staff and ancillary accommodation have been gradually expanded to provide for a total of 29 beds comprising 15 for medical, surgical and gynaecological; 5 for tuberculosis and geriatric; 7 for paediatric and 2 for obstetrics.

12. The Committee concur that many of the existing buildings have outlived their usefulness and that the accommodation provided therein is inadequate and generally below acceptable standards. The Committee also agree that a number of recently erected buildings are quite satisfactory and can be integrated into the new facilities.

13. The bed utilisation level at Tennant Creek Hospital has decreased from 64% in 1971 to 44% in 1972 and 33% in 1973.

14. The local population considers the existing facilities to be below acceptable modern standards and this has contributed to the low level of utilisation. Other contributory factors are the inability of the hospital to attract permanent medical and nursing staff and the consequent lack of confidence by the public in the quality of health care, and the decreasing utilisation of hospital facilities by admitting officers of the Aerial Medical Service based in Alice Springs.

15. It is expected the level of bed utilisation will improve to the widely accepted ratio of 85% of beds occupied to beds provided, when satisfactory facilities are available.

16. Population Factor The Tennant Creek Hospital draws its patients from an area which extends beyond the boundaries of the township of Tennant Creek. The five year period prior to the 1971 census saw a 68% increase in the population of Tennant Creek. Major factors responsible for this increase were the opening of two new mines (making a total of five) and a flash smelter by Peko Mines N.L. for the production of gold, copper and bismuth, which provide employment for 900 persons and, currently, nearly 200 contractors. This expansion is expected to level

off for the present. As at 30 June 1973, the population of Tennant Creek township was 2,245 and the rural population of the area was 2,846, making a total population of 5,091 in the Tennant Creek Hospital area of responsibility.

17. The table below shows the anticipated increases in population to 1990 and figures are based upon the following factors:

Aboriginal Population - Urban and rural growth rate - 2% per annum

Other Population - Urban growth rate 1973-1975 - 7% per annum
1976-1980 - 5% " "
1981-1985 - 3% " "
1986-1990 - 2% " "
Rural growth rate - 6% " "

Tennant Creek Hospital - Area of Responsibility	1972-73	1974-75	1979-80	1984-85	1989-90
Aboriginal	1,113	1,158	1,280	1,413	1,560
Other	3,978	4,532	5,947	7,419	9,089
Total	5,091	5,690	7,227	8,832	10,649

18. Bed/Population Ratios In its reports on the new hospitals at Alice Springs (1971) and Casuarina (1972), the Committee endorsed a bed/population ratio of 6 per 1,000 non-Aboriginals and 12 per 1,000 Aboriginals. The Committee were advised that this ratio had been revised to about 6 per 1,000 for both non-Aboriginals and Aboriginals. This has been due, in part, to increased domiciliary care being available, thereby permitting the earlier discharge of patients from hospital. In addition, Tennant Creek Hospital patients requiring intensive or specialist treatment will be transferred to a major hospital.

The following table depicts the forecast increase in bed requirements at Tennant Creek Hospital:

	1974	1976	1978	1980	1982
Urban	2,402	2,699	2,976	3,281	3,481
Rural	2,979	3,268	3,589	3,946	4,344
Total Population	5,381	5,967	6,565	7,227	7,825
Beds Required	30	32	36	38	42

19. On the basis of the foregoing statistics, it is considered that new facilities should be constructed to provide for a total of 42 beds comprising 26 medical, surgical, gynaecological, tuberculosis and geriatric; 10 paediatric and 6 obstetric.

20. Committee's Conclusion The Committee concluded that there is a need for new and expanded hospital facilities to meet the requirements of the Tennant Creek Hospital and its area of responsibility.

THE PROPOSAL

21. Site The site of approximately 10 acres is located west of the town centre within the Hospital Reserve and is bounded on the north by Windley Street, on the south by South Street, on the east by Schmidt Street and on the west by Leichardt Street.

22. The existing hospital occupies portion of the north end of the site. With the exception of the new superintendent's residence and the work to be carried out in the existing brick ward and the laundry/boilerhouse, all new construction will be on unoccupied land to the south of the existing hospital. All work will be contained within the site boundaries.

23. The Committee agreed that the site selected is suitable for the proposed redevelopment programme.

24. Details of the Proposal The proposal submitted to the Committee comprises:

- two storey building providing medical and paramedical facilities, administration and single storey ward accommodation of 42 beds;
- kitchen block, providing accommodation for kitchen, staff dining and stores;
- village type accommodation for nursing and paramedical staff;
- remodelling existing brick ward to provide three flats;
- superintendent's residence;
- alterations and additions to existing laundry and boilerhouse;
- landscaping and road works;
- swimming pool;
- demolition of certain buildings comprising existing hospital and staff accommodation.

25. Description of the Proposal The main single and two-storey hospital block is to be planned around a garden courtyard to achieve a pleasant garden setting which will provide protection from the winds and will contrast with the hot harsh barren landscape prevailing in Tennant Creek. This courtyard will be available to ambulant patients, their visitors and friends.

26. This hospital unit has been designed to:-

- ensure a minimum of walking for nurses and staff in ward areas;
- provide conveniences and services to patients as close to the bed as possible;
- avoid cross traffic;
- provide a positive separation of clean and dirty areas; and
- permit planning flexibility of structure and services to meet future demands.

27. The buildings have been designed with overhanging eaves to provide shadow on the glass during summer months and reduce the glaze and heat loads within the buildings. Consideration of the initial cost and annual maintenance has been a deciding factor in the choice of materials to be used in all buildings.

28. Hospital Block This will be a single and two-storey fully air conditioned building to accommodate wards, supporting diagnostic, treatment facilities and administration.

29. The ground floor accommodation will include an outpatient department, casualty department, radiology, pharmacy, laboratory, operating theatre suite, central sterilising department, reception, surgical ward, medical ward including non-infectious paediatrics, maternity ward, delivery suite and infectious ward. The first floor accommodation will consist of administration offices, medical office, Board/conference room and a library.

The standard of accommodation and the extent of services to be provided for patient care will be the same as in other hospitals operated by the Department of Health throughout the Northern Territory

30. The new wards will provide accommodation for 42 beds and 10 bassinettes.

31. Services Block This single storey structure will accommodate kitchen and stores, staff dining and recreation, hospital stores and staff amenities.

32. Staff Accommodation This accommodation is to be planned as a village for 24 nursing and paramedical staff, each person occupying an air conditioned bedsitting room with self-contained toilet and cooking facilities. The standard of accommodation will be comparable to that for the Alice Springs and Casuarina Hospitals.

33. A swimming pool will be provided.

34. Conversion of Existing Buildings On completion and occupation of the new main ward block, the existing air conditioned brick ward will be remodelled to provide three self-contained flats. The existing laundry/ boilerhouse building will be extended to house the extra mechanical plant required to serve the new building.

35. Integration with the Tennant Creek Community Health Centre The proposal in general terms provides for the hospital facility to be used in conjunction with the almost completed Community Health Centre which is located east of the town centre. This accords with normal practice for health maintenance units to be separate from hospitals. The Community Health Centre has been designed for the promotion and maintenance of health as distinct to the treatment of disease at the hospital.

Although they are separate entities it is envisaged that there will be an interchange of staff, the objective being a comprehensive health care system.

36. Future Expansion Provision has been made in the plan for future ward accommodation should future expansion of the inpatients' facilities be necessary. The administration, outpatients and paramedical facilities are adequate to cater for a greater number of beds.

CONSTRUCTION

37. Structure The hospital block, service block and staff accommodation will be of brick bearing wall construction with concrete floors. The addition to the laundry/boilerhouse will be of steel frame construction. Foundations will be conventional pad and strip footings.

38. Finishes External finishes to the hospital block, service buildings and staff accommodation will be finished in facebrickwork. Window frames will be alumimium and the roof metal deck. The extension to the laundry/boilerhouse will be constructed of similar materials to the existing building.

39. Internal partitions will be generally brick walls and demountable partitions with metal door frames and glazed screens. Walls in certain areas will be face brick, painted brickwork, ceramic tiles, hard plaster, stained timber and welded sheet vinyl.

40. Floor finishes generally will be vinyl tiles, granolithic, ceramic tiles with conductive sheet vinyl in the operating theatre and delivery suites.

41. Ceilings will be acoustic tiles or fibrous plaster and will not be provided in plant rooms or the laundry/boilerhouse.

42. Mechanical Services Air conditioning will be provided to meet comfort and medical requirements and will be of conventional type. Air conditioning systems serving the existing morgue and brick ward block will be upgraded and modified. Tempered air will be provided to the kitchen and laundry areas. Cooling will be provided by the connection of air handling equipment to a central chilled water system.

43. Mechanical exhaust ventilation will be provided in service areas such as bathrooms, toilets, dirty utility rooms, plaster room and x-ray darkroom. Plant rooms will be served by mechanical supply ventilation systems.

44. Central chilled water plant and oil firedlow temperature water boilers will be located in the extension to the existing boilerhouse and provision will be made for future load growth. Standby equipment will ensure reliability of service. Reticulation from the central plant to the various buildings will be via covered ways.

45. Steam raising equipment to serve the laundry, kitchen and central sterilising department will be located in the existing boilerhouse as required.

46. Hot water will generally be obtained by water to water calorifiers located in each building. Hot water for the village flats will be obtained by solar hot water units with electric boosting. The Department of Housing and Construction are to investigate the feasibility of utilising solar hot water units with electric boosting for the hospital.

47. Oxygen, nitrous oxide, compressed air and vacuum will be reticulated to the appropriate areas from central plant. Liquid petroleum gas will be reticulated from bulk storage to the kitchen and laboratory.

48. A linen service will be provided by an expansion of the existing laundry.

49. Food and beverages will be distributed from a central kitchen using a plated tray system.

50. Pathological waste will be destroyed by incineration and other manually handled waste will be disposed of by land fill.

51. Electrical Services Mains power will be reticulated through underground cables from a substation and emergency power will be reticulated to essential areas and services in the hospital. Power outlets will be provided as necessary for hospital requirements.

52. Lighting throughout the buildings will be in accordance with S.A.A. Code recommendations.

53. Other electrical equipment will include clocks, visual indicating nurses call system, two channel radio and one channel background music system to bedsides, a 60-line PABX, roadway and area lighting and MATV television signal distribution system.

54. Fire Protection An automatic thermal fire detection system, fire hydrants, small bore hose reels and hand fire extinguishers will be installed.

55. Civil and Hydraulic Engineering Services Internal roads and parking areas will be bitumen surfaced with concrete kerbs and gutters. Parking space will be provided for 20 visitors cars.

56. Water will be supplied from the town water supply mains and reticulated for domestic, fire fighting and garden watering purposes. Reserve water supply is to be provided in the main block to provide for a temporary shut down of the mains. Automatic watering of the gardens is proposed.

57. Sewerage will be connected to the town system.

58. Committees Conclusion The Committee recommend the construction of the work in this reference.

PROGRAMME

59. The Committee were informed that after an approval to proceed is given, it is expected that the preparation of working drawings and contract documents, calling and analysis of tenders will take 10 months.

60. The construction period is expected to be 27 months from the date of acceptance of tenders.

ESTIMATE OF COST

61. The Committee were provided with a detailed analysis of cost estimates which totaled $4,500,000 made up as follows:

	$
Building work (including $15,000 funds reservation)	2,365,000
Electrical services	380,000
Mechanical services	1,485,000
Hydraulic services	135,000
Civil engineering	135,000
	4,500,000

OTHER OBSERVATIONS

62. Staffing of Hospital The representative of the Tennant Creek Town Management Board expressed some doubts about the successful recruitment of staff to man the new hospital due to the isolated location of the town. The Committee were assured by the Department of Health representatives that every effort will be made to solve staffing problems by the time the hospital is scheduled to be completed. To assist in attracting the staff required for the efficient operation of the hospital, the Committee consider that care should be taken to ensure that accommodation of sufficiently high standard is available.

63. Swimming Pool The Committee noted the lack of detail on this facility but are satisfied with the explanation that the proposed pool will be of a suitable design, 13.2m x 7.6m in area and will be located within the staff village.

64. Accommodation for 'Out of Town' Mothers It was noted with satisfaction that some flexibility had been allowed in retaining the existing nurses accommodation and matron's flat to ensure accommodation for mothers of inpatient children from out of town.

65. Environmental Impact Statement The Committee noted that much of the information in this statement is a repeat of information already provided in submissions from the Departments of Health and Housing and Construction and resulted in most of the statement being "taken as read", thus detracting from the usefulness of the environmental impact statement. The Committee consider that a summary of this statement is all that is necessary.

RECOMMENDATIONS AND CONCLUSIONS

66. The summary of recommendations and conclusions of the Committee is set out below. Alongside each is shown the paragraph in the report to which it refers.

		Paragraph
1.	MANY OF THE EXISTING BUILDINGS HAVE OUTLIVED THEIR USEFULNESS.	12

		Paragraph
2.	A NUMBER OF RECENTLY ERECTED BUILDINGS CAN BE INTEGRATED INTO THE NEW FACILITIES.	12
3.	THERE IS A NEED FOR NEW AND EXPANDED HOSPITAL FACILITIES TO MEET THE REQUIREMENTS OF THE TENNANT CREEK AREA OF RESPONSIBILITY.	20
4.	THE SITE SELECTED IS SUITABLE FOR THE REDEVELOPMENT PROGRAMME.	23
5.	THE COMMITTEE RECOMMEND THE CONSTRUCTION OF THE WORK IN THIS REFERENCE.	58
6.	THE ESTIMATED COST OF THE WORK WHEN REFERRED TO THE COMMITTEE WAS $4.5 MILLION.	61
7.	THE DEPARTMENT OF HEALTH SHOULD TAKE CARE TO ENSURE THAT STAFF ACCOMMODATION OF SUFFICIENTLY HIGH STANDARD IS AVAILABLE TO ATTRACT THE PERSONNEL REQUIRED TO OPERATE THE HOSPITAL EFFICIENTLY.	62

(W.J. FULTON)
Chairman

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10 April, 1974.