

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA

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Parliamentary Standing Committee on Public Works

REPORT

relating to the proposed construction of

ENGINEERING SERVICES MALAK AND KARAMA NEIGHBOURHOODS SANDERSON DISTRICT

Darwin, Northern Territory

(SIXTH REPORT OF 1973)

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COMMONWEALTH OF AUSTRALIA

Department of Works,
Melbourne, Vic.

Departmental No. 21
Executive Council Meeting
No. 37

MINUTE PAPER FOR THE EXECUTIVE COUNCIL

Public Works Committee Act 1969-1972

Recommended for the approval of His Excellency the Governor-General in Council that the proposal — Construction of Engineering Services, Sanderson District, Darwin, N.T. (Malak and Karama) (particulars of which are set out in the attached statement) be referred to the Parliamentary Standing Committee on Public Works for investigation and report to Parliament.

Approved in Council

J. L. CAVANAGH,

PAUL HASLUCK,

Minister of State for Works

Governor-General

2 August 1973

Filed in the Records of the Council

K. W. PEARSON

Secretary to the Executive Council

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Parliamentary Standing Committee on Public Works

ENGINEERING SERVICES MALAK AND KARAMA NEIGHBOURHOODS SANDERSON DISTRICT, DARWIN, N.T.

REPORT

On 2 August 1973, His Excellency, the Governor-General in Council referred to the Parliamentary Standing Committee on Public Works for investigation and report to the Parliament the proposal to construct engineering services in the neighbourhood units of Malak and Karama, Sanderson District, Darwin, Northern Territory.

The Committee have the honour to report as follows:

THE REFERENCE

1. The proposal involves the provision of roads and engineering services to 1,933 residential and 44 special lots, forming Malak and Karama neighbourhoods in the Sanderson District on the north-eastern outskirts of Darwin.

2. The proposed 44 special sites are for schools, flats, service stations, neighbourhood shops, parks and recreation areas. Engineering services included in the reference are:

- roads, drainage and footpaths;
- water supply to fire hydrants and house connections;
- sewers;
- electricity reticulation and street lighting;
- grading of playing fields and provision of amenities buildings.

3. Other services outside the neighbourhoods but involved in the reference comprise an arterial road, water supply mains and a reservoir, sewerage and electricity services.

4. The estimated cost when referred to the Committee was \$11.0 million.

THE COMMITTEE'S INVESTIGATION

5. The Committee received written submissions and drawings from the Departments of the Northern Territory and Works and took evidence from their representatives at a public hearing in Canberra on 17 September 1973. A written submission was received from Mr T. A. Bell, M.L.C. of the Northern Territory, Mem-

ber for McMillan, who supports the proposal.

6. We inspected the localities for the proposed sub-divisions when in Darwin on 17 June 1973.

7. The Committee's proceedings will be printed as Minutes of Evidence.

PREVIOUS ENQUIRIES

8. In February 1972, a Committee report recommended the construction of Anula and Wulagi neighbourhoods in the Sanderson District. The report indicated the inclusion of Malak and Karama in the district when demand justified their development.

9. The Sanderson District is one of three residential areas developed or being developed on the outskirts of Darwin to the east of Rapid Creek and immediately to the north of the R.A.A.F. defence reserve. The other districts are Casuarina and Dripstone. Each has four neighbourhood units with Casuarina and Dripstone each providing about 2,400 residential and other lots and Sanderson some 4,000.

10. Since 1965, the Committee have reported separately on the provision of engineering services to each of the four neighbourhoods of the Casuarina District. We have also reported on the provision of engineering services for the district of Dripstone as a whole. During the same period, reports have also been tabled on the provision of main engineering services outside the sub-divisions, including water supply augmentation (1965 and 1969), extensions to Stokes Hill Power Station (1967 and 1971) and sewerage augmentation (1969, 1971 and 1972).

DARWIN'S TOWN PLAN

11. *Outline* The current Darwin town plan was initiated in 1965 and has permitted progressive growth to be planned in an orderly manner. The neighbourhood is the unit of design in residential planning, having its own internal street pattern which is planned to exclude or deter the use of internal roads by

through traffic. There are four neighbourhood units in each district with a system of secondary service roads connecting them to other units and main arterial roads.

12. In accordance with the town plan, the Sanderson neighbourhoods will each be provided with a small shopping centre, schools, parks and other public utilities.

13. The Committee noted that general planning of Malak and Karama differed from earlier sub-divisions in that greater use is made of the cul-de-sac and loop roads and that the percentage of land used for roads in these two neighbourhoods at 15 per cent is significantly less than in previous neighbourhoods at 23.6 per cent. The net desired effect is to further discourage through traffic, improve recreation and home environments and generally provide a greater percentage of land available for residential allotments. There will be approximately 1,000 residential lots in each neighbourhood as against some 600 in districts developed earlier. The larger neighbourhood is considered to be a more appropriate size for establishment of a primary school and a viable unit shopping centre.

14. *Residential lots* Average lot sizes are about 930 square metres, of irregular shape and tending to offer more flexibility in orientation of the dwelling. Previous neighbourhood blocks varied from 745 square metres average in Alawa to 856 square metres in Wulagi. It is expected that the greater physical separation of individual houses will offer more privacy to their occupants and allow establishment of larger gardens to help absorb street and house noises.

15. While the Committee are aware that larger blocks would increase the cost of watering during the dry season and require additional work to control growth of vegetation during the wet, it is felt that the proposed increase in the size of blocks is not significant enough to cause undue concern to residents.

16. *Shopping facilities* Town planning provides a major regional shopping centre in a central district and smaller local facilities only in each of the surrounding districts. Provision has been made for a major centre in Dripstone and a small group of shops are allowed for in units of the Sanderson development.

17. Malak and Karama are the final neighbourhood units to be developed in the Sanderson District and the R.A.A.F. and D.C.A. land north of Sanderson is the last portion of undeveloped prime land left in Darwin prior to

envisaged major development of a future east Darwin area.

18. *Committee's conclusion* The Committee agree that it is appropriate to continue the development of Sanderson District in accordance with the town plan and the general principles of town planning and engineering standards adopted for previous district development. We were pleased to note the Department's continuing research and review attitudes which ensure the development and incorporation of refinements such as those described in preceding paragraphs.

THE NEED

19. *Population* The average annual rate of increase of population in Darwin has been consistently high since 1966 at around 11 per cent to 12 per cent. As the present population of about 41,500 grows, indications are that there will be a gradual movement from a developing community towards a normal composition of males and females, married and single persons and family units. Recent studies on the growth of Darwin suggest a population of about 55,000 in 1975 and 90,000 in 1980.

20. *Demand for housing* Pressures created by the growing rate of population increase are underlined by the accelerating demand for housing and for serviced residential blocks.

21. The housing waiting list for employees of Government departments in the Northern Territory has grown from 238 to 379 in the three years since 1970. On 1 March 1973, the waiting list was for 452 persons and the estimated waiting time was 15-18 months. On the question of the provision of Government housing, the Committee noted that no further suitable land exists at the R.A.A.F. Base in Darwin to meet that Service's requirements beyond 1971-72 and that 70 serviced residential lots have been allocated in Darwin for the R.A.A.F. in the housing program in 1972-73.

22. The Committee were told that due to the housing shortage, rents averaging \$65 per week are being paid for three-bedroom furnished houses. The high rents have forced people to live in caravans in backyards of residences and caravan parks. The Government itself incurs substantial expenditure through subsidising the rents paid for commercial accommodation by people recruited by its departments and who have no Government housing to move into on arrival in Darwin.

23. Residential lots for privately built houses become available either from land serviced by the Government or small areas developed privately. The level of privately developed land sales is not significant when compared with the large scale Government development and therefore does not contribute much to overcoming the shortage of serviced land. Demand for private home ownership is evident from the high premiums paid at public auctions of Government developed land. A shortage of serviced residential land has led to bidding for lots being in excess of the maximum reserve price. In the last auction the average reserve price was \$2,515 in the restricted section and the average price paid was \$3,211. The Government is open to criticism if it does not provide sufficient serviced lots to avoid excessive prices being paid.

24. When the development of the neighbourhoods has been completed, about one-third of the residential blocks will be made available for Government housing and another one-third will be for Housing Commission homes. It is planned that the remaining one-third will be offered by public auction for private development although the latter ratio has not been achieved with the earlier neighbourhood site allocations. The business blocks will also be offered publicly by auction. In all cases, the blocks are available under leasehold tenure. Leases for urban land in Darwin are offered under a system of reserve prices which are calculated by distributing the assessed total land cost for all blocks in a particular district offered at a particular auction in proportion to their unimproved value for rating. Business leases are offered at a reserve price of 75 per cent of the current unimproved value or the cost of development of the land, whichever is the greater. The average cost to develop an equivalent block in the neighbourhoods of Malak and Karama is \$3,846. The basis of equivalent blocks is the actual number of residential blocks plus allowances for the frontages of sites for flats, high schools and special development. Up to this stage, no allowance has been made for the provision of parks, recreation areas, shops and primary schools which have been common to all neighbourhoods. The average costs of equivalent blocks in previous sub-divisions were Dripstone \$3,400 (July 1970) and Anula and Wulagi \$3,640 (September 1971).

25. The Committee were told that in respect of the provision of serviced land, it is desirable that planning should be well ahead of the

demand for housing. The optimum situation would be to have design and approval for development of neighbourhoods well ahead so that growth demands could be met as and when needed. To meet this end the Government plans to increase new lots from 801 in 1970-71 to 1,865 in 1976-77, resulting in a desired surplus of serviced lots having regard to the projected demand for housing.

26. *Committee's conclusion* Darwin's population is maintaining a steady growth rate and as a consequence this has caused a continuing requirement for serviced residential land. As the Government is virtually the sole developer of serviced areas, the Committee concluded there is a need to provide the proposed engineering services in the neighbourhoods of Malak and Karama.

DESIGN OF MALAK AND KARAMA SUB-DIVISIONS

27. *Facilities* Malak will provide 848 residential lots, recreation areas and sites for a primary school, secondary school, service station, five shopping lots, flats and other special sites for clubs, etc. Karama will contain 1,085 residential lots, recreation areas and sites for a primary school, service station, a block of five shops, flats and special areas for playing fields, recreation walkways, etc.

28. *Water supply* Domestic water supply will be reticulated throughout the neighbourhoods by pipes located generally within the footpath reservations. Fire protection water will be provided through millcocks on standpipes at regular intervals. Trunk mains will vary in diameter from 525 mm to 225 mm and will connect to the 4.5 Ml (megalitre) elevated reservoir at Moil via existing trunk mains within Anula, and to a proposed new 2.5 Ml capacity reservoir at Berrimah. The Berrimah reservoir is designed to maintain water pressure to the eastern end of Karama. Some associated work will also be provided to ensure the efficient interconnection and operation of this new distribution.

29. Provision is made for a new 55 Ml capacity reservoir which will be located near the intersection of McMillans and Lee Point Roads at ground level. A new trunk main approximately 750 mm in diameter and associated work is proposed along McMillans Road from Holmes Jungle via the proposed 55 Ml reservoir to the existing reservoirs at Moil.

30. *Sewerage* Within the sub-divisions, sewage will be reticulated in a system of varying

sized mains laid mainly at the rear of blocks to minimise lengths of the connections. To enable full use of the blocks in shopping centres, pipes will be located under the footpaths. Sewer reticulation will gravitate to the Sanderson trunk sewer main now under construction and discharge into the Leanyer treatment lagoons.

31. *Electricity* Normal Darwin standards for 11 kV and low voltage overhead reticulation and distribution substations are to be adopted. Underground mains will service the shopping centre areas. Street lighting will comprise sodium and mercury vapour lamps on main traffic routes and the arterial road and twin 20 watt fluorescent lights in minor streets.

32. *Roads* Road widths have been selected on the basis of anticipated traffic volumes and will range from 7.4 metres between kerbs for residential streets to 11 metres for distributor roads and carriageways of arterial roads. One carriageway only of both the Palmerston Arterial (McMillans Road) and Vanderlin Drive will be constructed initially. The second carriageways will be constructed at a later date when the need arises. All roads will be provided with kerbs and gutters. Footpaths will be surfaced with bituminous concrete.

33. *Major roads* The five previous reports of the Committee dealing with the development of sub-divisions in Darwin's north-eastern area have been critical of the absence of a positive approach to planning an arterial road link between the city area and these new developing suburbs. In 1969-70, a study by Government and administrative authorities on the major arterial road requirements in the Casuarina, Dripstone and Sanderson Districts resulted in a program of arterial road development being undertaken. As part of this program, the widening of the Stuart Highway and Bagot Road has been completed.

34. In August 1972, the Committee reported on a proposal to provide a second arterial road to serve the adjoining north-east suburbs. However, having regard to strong public reaction against the recommended route, much of which had not been voiced at the time of the public hearing, the Government did not proceed with the project but referred it back to the Committee for further report. The subsequent report in July 1973 recommended an alternative route for the Palmerston arterial, which follows the prolongation of McMillans Road at Coconut Grove to the mouth of Ludmilla Creek, across the golf links, along the cliff tops at

Fannie Bay, continues along East Point Road beyond the intersection with Ross Smith Avenue and leads into the city at the Daly Street end. On 12 September 1973, the House of Representatives resolved that it was expedient to proceed with the proposal on this alternative alignment.

35. Construction of one carriageway of McMillans Road, which forms the eastern part of the Palmerston Arterial, along the southern perimeter of Malak and Karama is included in this work. The second carriageway will be constructed when traffic build-up is sufficient.

36. It is therefore with considerable satisfaction that the Committee can now report in connection with this proposal that recommendations made as far back as 1967 are being put into effect. Completion of the Palmerston Arterial link (and others being planned) together with the steps now being taken to decentralise office and commercial activities to regional centres such as that being established in the Casuarina district and in the future, further to the east, will result in significant improvements to the present traffic congestion in Darwin.

37. *Recreation areas* During the course of the public hearing, the Committee received supplementary evidence from the Department of the Northern Territory outlining the Government's new policy to include the establishment of parks, appropriately lit walkways and recreation areas as part of the proposed works in the construction of new neighbourhood services. In the case of Malak and Karama this will involve an additional cost of \$0.6 million. This additional capital outlay is to be recovered in time by appropriate adjustments to reserve prices for individual blocks to be offered for public auctions and by small increases in housing rentals. Prior to the change in policy the work was undertaken by the Corporation of the City of Darwin according to availability of resources and was subsidised by the Government on a \$1 for \$1 basis. We were told that the Corporation supports the change.

38. In the initial stages of a new neighbourhood facilities are generally limited. Families will be assisted to settle in faster if the normal community amenities are made available as soon as practicable and the Committee therefore commend the Department of the Northern Territory on their endeavour to provide these amenities concurrently with the basic services. The method of recovering the extra cost in-

volved appears to be appropriate, being merely an extension of current practice in determining lot reserve prices and rentals.

39. *Environmental impact* The natural environment of the locations will be completely changed, and whereas existing quarrying activities have caused severe erosion in the area the proposed work is designed to restore the landscape and minimise soil disturbance. The increased population generated by this proposal will have some effects on an adjacent rain forest, the Holmes Jungle forestry reserve. The Committee were told that the Forestry Section of the Department of the Northern Territory will strictly control access to the area. They have a view to its future development as a semi-natural public parkland.

40. *Committee's recommendation* The Committee recommend the construction of the work in this reference.

ESTIMATE OF COST

41. The estimated cost of the work when referred to the Committee was \$11 million. The additional cost of work for recreation areas per paragraph 37 is \$0.6 million. The revised total cost of \$11.6 million is made up as follows:

<i>Internal services</i>	\$
Roads, drainage, water re- tication, sewerage, elec- tricity, recreation areas	9,200,000
<i>External services</i>	
Arterial road, water storage and mains, electricity feeders	2,400,000
	<hr/>
	11,600,000

PROGRAM

42. The work involved in constructing the Malak neighbourhood is proposed for the 1973-74 civil works program and it is planned to invite tenders early in 1974. Estimated time for construction is two years. The Committee were told that the timing of documentation for the Karama neighbourhood will depend on the number of stages into which the project is to be divided. It is expected that design for each stage will take up to six months, or if required, the stages could all be combined and designed as one.

GOVERNMENT HOUSING

43. During the enquiry we were told the Departments of the Northern Territory and

Works have been looking to the need to overhaul housing designs and standards with the aim of reflecting modern living trends and standards, public opinion and more recent developments in town planning, house architecture and living environment. We understand the reviews have reached the stage where the Department of Works is developing a number of new design alternatives which could reasonably be expected to form the bases of new home construction.

44. It can be expected that there will be considerable public interest in the new designs, changes in standards, materials, methods of construction and possible changes in living patterns. The Committee are of the opinion that there would be considerable value in having these matters aired at a public enquiry. However, contracts for construction of Government housing in the Northern Territory are usually arranged in multiples of values less than the mandatory sum for reference to the Committee. We therefore request the Government to give favourable consideration to reference of the proposals to the Committee at the appropriate stage of development.

RECOMMENDATIONS AND CONCLUSIONS

45. 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. It is appropriate to continue the development of Sanderson district in accordance with the town plan and the general principles of town planning and engineering standards adopted for previous district development	18
2. There is a need to provide the proposed engineering services in the neighbourhoods of Malak and Karama	26
3. The Committee recommend the construction of the work in this reference	40
4. The estimated cost of the work is \$11.6 million	41

W. J. FULTON
Chairman

Parliamentary Standing Committee
on Public Works,
Parliament House,
Canberra, A.C.T.
27 September, 1973.



