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THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

## REPORT

relating to the proposed construction of a

# PRIMARY SCHOOL

at

## WAGAMAN

### Northern Territory

(SEVENTEENTH REPORT OF 1970)

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PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

PRIMARY SCHOOL, WAGAMAN  
DARWIN, NORTHERN TERRITORY

R E P O R T

On 8 August 1970, 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 for construction of a primary school at Wagaman in Darwin, 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 primary school in the Darwin suburb of Wagaman. The school is planned to accommodate 360 primary and 200 infant pupils in a single-storey air conditioned complex.
2. A feature of the school is the introduction of the "open plan" concept for part of the teaching areas. This is the first school in the Northern Territory to adopt this principle which has already been used in some new schools elsewhere in Australia.
3. The estimated cost of the work when referred to the Committee was \$875,000.

THE COMMITTEE'S INVESTIGATION

4. The Committee received written submissions and drawings from the Departments of Education and Science and Works and we took evidence from their representatives at a public hearing in Darwin. We also took evidence from Mr. T.A. Bell, M.L.C. and from a representative of the Darwin Teachers' Association.

5. We inspected the site for the proposed school and the newly completed primary school in the adjoining suburb of Alawa.

THE NEED

6. Plans for Darwin's urban development are currently based on a series of districts each comprising four suburbs. Generally, the suburbs are sub-divided to provide about 600 residential lots which have as their focal point, a primary school. Each district has a high school fed by students from the four primary schools.

7. Wagaman is part of the District of Casuarina located about 6 miles north-east of Darwin's city area. The suburbs of Alawa, Jingili and Moil complete the district. The Committee has reported to the Parliament since 1965 on the provision of sub-divisional services to all four suburbs and in 1969, we reported on the primary schools to be built at Jingili and Moil.

8. Alawa has now been almost fully developed and its primary school has been completed and occupied. Housing construction in Jingili and Moil has commenced and is expected to be completed progressively to about the end of 1972. Construction of the primary schools in these latter suburbs are phased for completion in February 1971 (Jingili) and February 1972 (Moil), more or less in step with housing construction.

9. The 600 residential blocks in Wagaman are programmed to be ready for housing construction to commence, in stages, through 1971 with the expectation that by mid-1972 there will be 100 primary school pupils living in Wagaman, enough to justify the opening of the primary school. Prior to that time, primary school pupils from Wagaman will be taken, according to circumstances, at the Alawa, Jingili or Moil schools.

10. The filling of the school will depend on the rate of completion of houses in Wagaman but it is thought that the build-up of enrolments will be fairly rapid after the school opens.

11. The completion rate of houses and the expected growth of primary school enrolments are clearly demonstrated by the following two tables.

Estimated Housing Completions

	May <u>1970</u>	January <u>1971</u>	June <u>1971</u>	January <u>1972</u>	June <u>1972</u>	November <u>1972</u>
Alawa	590	610	640	650	660	670
Jingili	195	310	470	510	560	570
Moil	-	110	240	450	550	650
Wagaman	-	-	-	100	140	270

Estimated Primary School Enrolments

	Design Capacity of School	May <u>1970</u>	January <u>1971</u>	June <u>1971</u>	January <u>1972</u>	June <u>1972</u>	November <u>1972</u>
Alawa	480	410	470	500	520	540	560
Jingili	480	90	400	600	500	550	550
Moil	480	-	-	-	400	500	450
Wagaman	560	-	-	-	-	100	200

12. When an excess of enrolments over capacity occurs at Alawa, Jingili and Moil schools, the surplus pupils will be accommodated in transportable classrooms brought in temporarily for that purpose.

13. The assessment of the requirement for the primary school at Wagaman is based on the experience currently being gained from the establishment of the other primary schools in Casuarina and in the knowledge of the programmes for servicing residential land and for housing construction. The Committee believe that the assessment clearly demonstrates that there is a need for a primary school in the suburb of Wagaman. Furthermore, it is apparent that having regard to the capacity of the other schools in the Casuarina district, the proposed school should be available for occupation about the middle of 1972.

#### THE PROPOSED SCHOOL

14. Administration Community education at all levels in the Northern Territory and the provision of buildings for such purposes are Commonwealth responsibilities. However, by agreement, the South Australian Government provides teachers and the South Australia curriculum is followed. The State also advises on educational aspects of siting and design of schools. The latter arrangement applied to the Wagaman School.

15. Planning Outline The school is designed to provide education for both primary and infant pupils in the one building complex under the control and direction of the headmaster. The buildings provide for functional separation of each section but with easy access to areas common to both. The Committee were told that the interior layout of teaching space has been designed to give effect to modern needs of flexibility in instruction and modern developments in co-operative teaching, team teaching and open space organization and planning of lessons. We noted that the Department of Works, as the design authority,

has benefited particularly from the experience of the South Australian Department of Education in planning for this concept.

16. The positive steps taken to incorporate open space planning in the interior design of classroom space results in flexibility and movement to give effect to modern techniques and learning situations. The important physical teaching requirements include a large carpeted teaching space, practical space for the "wet area" (or practical work area), an acoustically separated withdrawal room for special activities including very quiet or very noisy groups, a resource centre for audio-visual equipment, learning laboratories, reference books etc. and an outdoor area.

17. The large teaching space can be broken up by the use of flexible and mobile furniture designed to double as storage and to provide visual separation of classes or groups.

18. As not all teachers are able to work in open space situations, it is proposed that about half the classrooms will be self-contained in the traditional manner. We noted that open space rooms will be designed for subsequent partitioning either temporarily or permanently, should this be found to be necessary.

19. Facilities The administrative section will accommodate the headmaster's, staff and visitors' offices, a waiting area, sick rooms, staff common room, toilets, amenities, stores and work rooms. The library complex and librarian's office area will have shelf storage for 10,000 books.

20. The introduction of the open learning concept in this school will involve three large teaching spaces equivalent to about 50% of the total classroom accommodation. The balance will be standard classrooms and a large

preparatory room for infant pupils. Supplementing the large teaching spaces will be the withdrawal rooms, acoustically treated for use for very quiet or very noisy group activities and the "wet areas" where elementary natural science and handicraft projects will be undertaken. The latter are to be provided with bench sink units and a gas supply and the floor will be covered with vinyl tiles. Associated with the teaching spaces will be two rooms where staff can prepare work programmes and carry out other activities usually performed in individual classrooms.

21. Separate covered assembly areas are proposed for primary and infant children and a school canteen will be easily accessible from both. A general purpose room of the primary department is to adjoin the covered assembly area. This room with its annexe will provide for group activities including film screening. Sliding doors separate the room from the covered assembly area and when opened will enable the room to be used as a stage with the annexe doubling as a dressing room.

22. Public Use of Facilities We noted that at the discretion of the headmaster, the facilities of the school can be available for public use in accordance with the usual Darwin practice. In particular, the covered assembly areas, general purpose room, canteen and toilet facilities are so planned that their use is possible without opening other parts of the school.

#### THE SITE

23. The site of 21 acres, which includes 10 acres for playing fields and an oval is comparable in size to the Jingili and Moil primary schools. It is bounded by Wagan Terrace, Wagan Place, Malay Road and Limmen Street and is centrally located in the neighbourhood. The school will be accessible to children without having to cross any major roads. The site has a slight fall from east to west and is sparsely timbered.



24. The Committee believe that the site selected is suitable.

#### THE BUILDING PROPOSALS

25. Design Approach The design submitted to the Committee is for a single-storey school with classroom wings grouped about two courtyards. The administration section and the infants wing are to form a large block on the northern side of a central court with the primary classrooms as a block on the southern side and the covered open assembly areas, general purpose room, tuck shop and kitchen etc. to the east. This design allows for a division of the school into its elements with each wing serving a separate function.

26. The open space classroom areas are not separated from neighbouring classes by permanent partitions but the same floor space has been allowed per pupil as in a conventional classroom. The areas which would be corridor space in a conventional design will serve as buffer zones between classes and provide a useful spill-over space for large scale instructional methods. These areas are to be fully carpeted to deaden noise.

27. As the open space classrooms are essentially general purpose space, ancillary areas are required for specialised purposes. In the infants' wing, the design provides for two preparatory rooms, a practical work area and a fully enclosed withdrawal room which will also double as a teaching room. In the primary section, on the other hand, there are to be four conventional classrooms, two teaching rooms, a semi-enclosed work area and one withdrawal room in addition to two clusters of open teaching areas, each containing three open space classrooms. The practical work areas which will have vinyl floors, will allow for work with clay, paints etc. Withdrawal rooms will be acoustically isolated. A semi-enclosed terrace is to adjoin the infants' preparatory room to enable children to study or undertake projects out of doors.

28. Direct sunlight penetration will be avoided to reduce the load on the air conditioning plant and to prevent glare. This is to be achieved by facing the classroom windows north and south and by providing wide overhangs, fixed horizontal louvres and anti-glare glass to all windows.

29. Construction and Materials The building is to be constructed with steel portal frames, spanning transversely across the building, generally at 13 ft 4 in. centres and at roof level carrying steel purlins which will support the roof decking and ceilings. The portal frames are to be supported on simple spread concrete footings and there will be conventional concrete strip footings under the brick walls where these occur. Floors will be concrete slab on consolidated filling.

30. Walls are to be of burnt clay brick. Spaces between columns in external walls will be filled with aluminium framed windows and insulated wall panels faced on the outside with baked enamel metal sheeting and on the inside with coloured melamine surfaced particle board. Acoustic ceilings will be provided in all classrooms, corridors and special purpose rooms and offices. Utility areas will have asbestos cement ceilings. Roofs will be of galvanised steel decking and suitably insulated.

31. Finishes The finishes will be selected to provide durability with low maintenance costs. Externally, walls will include off-form concrete, face brick and permanently coloured metal sheeting. Steel portal frames are to be painted and eaves linings, roof fascias and sunhoods will be of permanently coloured asbestos cement.

32. The floor finish in classrooms, teaching rooms, offices, corridors and practical work areas will be vinyl tile. The floors of the library, preparatory rooms, open space classroom areas and withdrawal rooms will be carpeted, while

kitchen and toilet areas will have ceramic tile floors. Assembly areas and covered walkways will have floors surfaced with granolithic.

33. Permanent internal walls and partitions will generally be a combination of face brick and render and paint. In toilets, partitions will be pre-cast terrazzo and ceramic tiling will be provided behind sanitary fittings.

34. Mechanical Engineering Services In accordance with the Government's decision to air condition new primary schools in the Zone 1 geographical area of the Northern Territory, it is proposed to air condition the Wagaman school except in toilet and assembly areas, tuck shop, kitchen, foyer and stores. The Committee were told that packaged air conditioning units each of about 20 tons capacity are to be mounted on the roof above the main classroom and administration wings. The roof under these units will be suitably insulated against noise. A small packaged unit is also to be installed in the plant room adjacent to the general purpose room and annexe to serve these areas.

35. Other mechanical services will include hot water to the medical room, kitchen, staff kitchenette and staff toilets, refrigerated drinking water units, kitchen equipment and sanitary and garbage incinerators.

36. Electrical Services Electric power from the town mains will be reticulated by underground cable from the street line to a substation in the school. Lighting will generally be fluorescent and external security perimeter lighting will be provided. General purpose power outlets will be provided as required.

37. A public address and relayed radio system will be installed with loud speakers in all classrooms and functional rooms, assembly areas and courtyards with flares to playgrounds. Electric clocks and outlets for television will be provided in all classrooms.

38. Hydraulic Services Water supply is to be drawn from the town mains in adjacent streets. We noted that sewerage will be connected to the town sewers and that an automatic lawn watering system for the oval is also proposed.

39. Civil Engineering Works and Landscaping Internal service roads and a parking area for 25 cars will be bitumen surfaced and have concrete kerbs and gutters. Site works will include forming the oval and the basketball courts. As many of the existing trees as possible are to be preserved and landscaping will include the planing of tropical trees and shrubs.

40. Stormwater will be collected in underground pipes and flow into adjacent main stormwater drains.

41. Fire Protection A thermal fire alarm system connected to the local fire station is proposed. Hose reels and portable fire extinguishers will be provided inside the buildings and hydrants in the grounds.

42. Committee's Recommendation The Committee recommend the construction of the work in this reference.

WORKS OF ART

43. The Committee were informed that the estimates of cost allow a sum of \$5,000 for the provision of a work of art as a design feature in the school in a form which, at this point in time, is undefined. We also noted the principles and approach which the Government has adopted to the provision of works of art in Commonwealth buildings generally and that in Canberra schools sums of up to \$1,500 and \$2,500 are allowed for this purpose in primary and high schools respectively.

44. The following is an extract from the minutes of the meeting of the Committee which followed the final public hearing and a debate on the evidence.

" It was moved Senator Branson, seconded Mr. Fulton

That whilst there is such a pressing need for better education facilities and an acute shortage of teachers in Australia, we do not recommend spending money on works of contemporary art.

Debate ensued. The Committee divided.

<u>Ayes</u>	<u>Noes</u>
Senator Branson	Mr. Kelly
Mr. Fulton	Senator Dittmer
	Mr. Whittorn
	Mr. Johnson
	Mr. James
	Mr. Corbett

and so it was resolved in the negative.

It was then moved Senator Dittmer, seconded Mr. Whittorn

That we support an expenditure on a work of art at the Wagaman Primary School on the same scale as in a Canberra primary school and ask that steps be taken to ensure that the feature is appropriate to the school and its functions as well as an aesthetic form of environment beautification.

Debate ensued. The Committee divided.

<u>Ayes</u>	<u>Noes</u>
Senator Dittmer	Senator Branson
Mr. Whittorn	Mr. Fulton
Mr. Kelly	
Mr. Johnson	
Mr. James	
Mr. Corbett	

and so it was resolved in the affirmative. "

45. The Committee therefore recommend that a work of art be provided at Waganan Primary School, but with the reservations mentioned in the second motion.

ESTIMATE OF COST

46. The estimated cost of the work when referred to the Committee was \$875,000 as follows:

	\$
Building works	540,000
Mechanical and electrical services	197,000
Hydraulic services, civil works and landscaping	138,000
	<hr/>
	875,000
	<hr/>

PROGRAMME

47. The Committee were told that after an approval to proceed is given, the production of contract documents, invitation and consideration of tenders and the letting of a contract is expected to take 6 months. Construction is then expected to be completed 18 months after a contract is let.

48. We noted that completion is to be phased so that teaching areas will be finished ahead of other work and in time for occupation by the second term in 1972. The target date for the completion of the whole contract is September 1972.

RECOMMENDATIONS AND CONCLUSIONS

49. 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.

	<u>Paragraph</u>
1. THERE IS A NEED FOR A PRIMARY SCHOOL IN THE SUBURB OF WAGAMAN.	13
2. THE PROPOSED SCHOOL SHOULD BE AVAILABLE FOR OCCUPATION ABOUT THE MIDDLE OF 1972.	13
3. THE SITE SELECTED IS SUITABLE.	24
4. THE COMMITTEE RECOMMEND THE CONSTRUCTION OF THE WORK IN THIS REFERENCE.	42
5. EXPENDITURE ON A WORK OF ART SHOULD BE ON THE SAME SCALE AS IN A CANBERRA PRIMARY SCHOOL.	45
6. STEPS SHOULD BE TAKEN TO ENSURE THAT THE FEATURE IS APPROPRIATE TO THE SCHOOL AND ITS FUNCTIONS AS WELL AS AN AESTHETIC FORM OF ENVIRONMENT BEAUTIFICATION.	45

  
(C.R. KELLY)  
Chairman.

Parliamentary Standing Committee on Public Works,  
Parliament House,  
CANBERRA, A.C.T.

23 September 1970.