

Parliamentary Standing Committee on Public Works

REPORT

relating to

NORFOLK ISLAND AERODROME UPGRADING OF FACILITIES

(Twenty-fifth Report of 1980)

1980

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA
PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

R E P O R T

relating to

NORFOLK ISLAND AERODROME
UPGRADING OF FACILITIES

(Twelfth Report of 1980)

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PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

NORFOLK ISLAND AERODROME
UPGRADING OF FACILITIES

R E P O R T

On 29 July 1980, His Excellency the Governor-General in Council referred to the Parliamentary Standing Committee on Public Works for investigation and report to Parliament the proposed upgrading of Norfolk Island Aerodrome facilities.

The Committee has the honour to report as follows:

THE REFERENCE

1. The proposal referred to the Committee is for the upgrading of Norfolk Island Aerodrome facilities to allow the introduction of medium jet aircraft operations.

The components of the proposal are:

- the construction of a paved runway to replace the existing grass runway;
- strengthening the extension of other aircraft pavements; and
- minor improvements to the passenger terminal and associated services.

2. The estimated cost of the proposal when referred to the Committee was \$6.2 million at May 1980 prices.

THE COMMITTEE'S INVESTIGATION

3. The Committee received written submissions and drawings from the Departments of Transport, Home Affairs and Housing and Construction and took evidence from their

representatives at a public hearing on Norfolk Island on 2, 3 and 4 September 1980 and in Canberra on 9 September 1980. The Committee also received submissions and took evidence from representatives of the Norfolk Island Government, East West Airlines, Norfolk Island Airlines, Norfolk Island Accommodation Proprietors' Association, Society of Descendants of the Pitcairn Settlers, Flora and Fauna Society, Norfolk Island Tourist Board, Norfolk Island Conservation Society and Hawker Pacific Pty Ltd. In addition, Mr. E. Howard, MLA, Chairman, Norfolk Island Legislative Assembly Select Committee on Tourism and a number of private individuals gave evidence.

4. The Committee received submissions from the Australian Conservation Foundation, the National Trust, Norfolk Island Chamber of Commerce and Mr. Bryan Nunn, MLA, and letters from the Australian Federation of Airline Pilots, the Heritage Commission, the Department of Science and the Environment as well as a number of private individuals.

5. Prior to the hearing, the Committee inspected the runways and terminal buildings at Norfolk Island Aerodrome and the St. Barnabas' Chapel near the north-west end of the proposed runway.

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

BACKGROUND

7. Norfolk Island The Island, of volcanic origin, is situated in the Pacific Ocean at latitude 29° 2 minutes south, longitude 167° 57 minutes east. It is approximately 8 km long by 5 km wide, 1680 km east of Sydney and 966 km north of Auckland. The Island is small, the area being 3455 hectares; the average elevation 100 metres and rises to a height of over 300 metres in two small peaks. The Island was discovered by Captain James Cook in October 1774 during his second voyage around the world. Fourteen years later in 1788, a British convict station was established and the first settlement continued until 1814 when changes in Government policy led to the evacuation of the Island.

8. The second settlement began in June 1825 after the British Government re-opened Norfolk Island as a prison for the worst law-breakers in New South Wales and Van Diemen's Land. The Island was again abandoned in June 1856 and the second settlement ended and it ceased to be a prison island when the last convicts left for Hobart.

9. The third settlement began in June 1856 with the arrival of nearly 200 Pitcairn Islanders who were descendants of the survivors of the mutiny on HMS Bounty in 1789.

10. Whaling had been carried on intermittently from the Island since 1863 but due to the scarcity of whales and the drop in the price of whale oil, the industry was abandoned in 1963.

11. A Melanesian village was established on Norfolk Island in 1866 and St. Barnabas' Chapel consecrated in 1880. From 1902 until 1962 Norfolk was part of the Pacific cable network. In 1913, the Island became a Territory of the Commonwealth of Australia.

12. The Aerodrome Norfolk Island aerodrome was constructed in 1942 to support the Allied war effort in the South Pacific. It facilitated access to the Island for tourists and led to tourism becoming the most important industry on the Island.

13. Tourism Airline services between Sydney and Norfolk Island were commenced by Qantas using Lancastrian aircraft in October 1947 and in 1948 the Department of Civil Aviation assumed control of the aerodrome. In June 1949 Qantas introduced DC4 Skymaster aircraft on the Sydney-Norfolk Island route. In the ensuing years the number of tourists visiting the Island by air has steadily increased. Tourists were attracted to the Island by its unique character, its historical significance and by the unhurried nature and character of island life.

14. In May 1975, the Department of the Capital Territory, the Commonwealth Department responsible for providing the Island administration, foreshadowed a need for upgrading the

aerodrome to provide a modern and economic transport link between Australia and Norfolk Island because the service being provided by Qantas was uneconomical. The Department published a draft Environmental Impact Statement (EIS) which analysed the need, gave details of the proposed development and possible alternatives, broadly assessed the environmental impact of the proposal and proposed safeguards. The draft EIS was released for public comment in May 1975.

15. The Nimmo Royal Commission At the same time a Royal Commission was appointed to make recommendations on the future of Norfolk Island, its constitutional relationship to Australia and the most appropriate form of administration for it. The Royal Commission was conducted by the Honourable Sir John Nimmo. During the Royal Commission hearing, the need to upgrade the aerodrome was argued strongly by airlines and the Commonwealth Department of Transport. The Royal Commission conclusions (Parliamentary Paper 305/1976) in respect of air services were that:

- only one airline operator take over from Qantas; that operator to be in a position to ensure continuity of service by having available suitable numbers of aircraft and by being able to integrate the Norfolk Island route with other routes so that tariffs can be kept to a minimum and high standards be maintained without subsidisation by the Commonwealth Government;
- the airport be upgraded to enable it to cater for both the immediate and foreseeable future demands, and to yield maximum flexibility in the use of both passengers and freight-carrying aircraft, i.e. to enable heavier jet aircraft to be employed if and when necessary;
- if it is necessary to move buildings or residents as a result of upgrading the air service, those affected be compensated;

- all possible care be taken to safeguard the environment in executing airport improvements;
- the Commonwealth Government finance and control the Island airport related activities;
- upgrading work on the airport be commenced as soon as practicable in view of the age and obsolescence of the DC4 aircraft;
- there remain scope for other relatively minor air services, which at present operate to and from the Island, to continue.

16. Norfolk Island Act 1979 Following consideration by the Government of the Royal Commission reports, it decided to establish a form of self-government for the Island. Prior to that decision the Island had a form of colonial administration using an Administrator and an Advisory Council.

17. Following the passing by Parliament of the Norfolk Island Act 1979, the Island now has an elected Legislative Assembly and Government. The Island is a Territory under the authority of the Commonwealth Government but has a degree of separateness from the Federal system which differs from that of the states and mainland Territories. The Island operates its own administration, finances, customs, health and welfare and is responsible for tourism. The Commonwealth retains authority over air transport and because tourism and air transport overlap, complementary policies require to be developed and implemented by both the Island and Commonwealth Governments.

18. Select Committee on Tourism As a first step to developing an Island tourism policy, by resolution of 7 May 1980, the Legislative Assembly appointed a Select Committee to examine and make recommendations on all facets of tourism. This enquiry, currently being carried out, is examining existing tourist accommodation, the most desirable tourist levels, the feasibility of promoting increased tourism or of preventing excessive tourism and to examine ways tourism

can be most beneficial to the Norfolk Island residents. The Committee was advised that the Select Committee aims to have a report ready for consideration by the Norfolk Island Government by the end of 1980 or early in 1981.

19. Present Services to Norfolk Island Qantas ceased operating the Sydney-Norfolk Island route in 1977 and since the withdrawal of the DC4, East West Airlines has operated on the route using Fokker Friendship F27-500 aircraft. Because of the excellent safety record of these aircraft a concession has been granted for its operation despite its operational and safety shortcomings. On the Sydney-Norfolk Island route, the aircraft does not meet the requirements of the '90 minute rule', an international safety standard which requires that a twin-engined aircraft must at all times have a suitable aerodrome within 90 minutes flying time at normal engine cruising speed. It was established that the F27 presently exceeds the 90 minute rule by about 15-20 minutes. Because of the need to meet International Civil Aviation Organisation (ICAO) standards, the Department of Transport has indicated it will not permit the 90 minute concession to continue indefinitely and has agreed to allow operations of F27-500 aircraft only until the end of 1982.

20. Regular air services currently operating to and from Norfolk Island are set out below:

<u>Airline</u>	<u>Aircraft Type</u>	<u>Passenger Capacity</u>	<u>Frequency</u>	<u>From</u>
East West	F27-500 *	Limited to 36	5-6 per week) 8-9 in peak) periods)	Sydney
Air New Zealand	F27-500	About 40	3 to 4 per week	- Auckland
Norfolk Island	Beechcraft Super King Air	9-10	Daily 3 per week via	- Brisbane Lord Howe Island

* Fitted with long range tanks.

Once a week - Melbourne (charter only)

The Qantas DC4, which operated from 1949-77 had a passenger capacity of approximately 64.

21. Present Aerodrome Facilities The present aerodrome has two runway strips - the primary grassed runway (11/29) is 1707 metres long, set in a 152 metre wide strip. Because it is grassed (one of only two unsealed runways used by regular airlines in Australia) it has structural strength limitations and braking and directional control problems when wet. Its longitudinal slope exceeds international standards for medium jet operations.

22. The secondary runway (04/22) is 1554 metres long and 30 metres wide and is set on a 91 metre wide strip. It has a thin coralline gravel pavement with a light bituminous coating. Pavement failures are regularly occurring and constant maintenance is necessary to keep the runway operational. Its length and pavement thickness preclude its unlimited use by medium jet aircraft.

23. A major maintenance effort over the next one or two years is required to keep the grass runway in order as well as the corallined strip.

24. The introduction of medium jet aircraft would require work on the aerodrome because present facilities are incapable of safely accommodating sustained and regular usage by aircraft of this type.

25. The existing terminal building handles traffic from East West Airlines, Norfolk Island Airlines and Air New Zealand on a regular basis. The terminal is cramped and inadequate for passengers and staff and has no passenger screening facilities. It is proposed to extend the passenger lounge area and allow an improved arrangement of terminal activities.

THE NEED

26. Evidence supporting the upgrading of Norfolk Island aerodrome was based on the following factors:

- the Norfolk Island economy is predominantly based on tourism;

- the maintenance of the economy is dependent on retaining a competitive and viable tourist industry;
- regular airline services to Norfolk Island are a necessary pre-condition for this;
- because of the need to meet ICAO standards, it is Government policy not to extend the duration of present Sydney-Norfolk Island route airline operations using F27 aircraft beyond 1982;
- regardless of the type of aircraft and airline finally selected to operate the route, the aerodrome requires upgrading because it is showing signs of wear from present traffic.

27. The question revolves around the scale of the proposed upgrading. The need is to provide regular viable airline links conforming with Department of Transport requirements to Norfolk Island for use by tourists, residents and for freight. The scale proposed for medium jet aircraft with a larger freight capacity to meet a strong demand for cargo movement is based on analysis of alternative aircraft types, their economics, their passenger and freight handling capabilities and their addition to the Australia-wide passenger aircraft inventory. Alternative courses of action involving the provision of lesser facilities capable of handling smaller commuter aircraft or aircraft such as the de Havilland of Canada Dash 7 were considered as part of this analysis. To construct facilities for the latter aircraft, the Department of Transport indicated it would require an expenditure of \$3.0 million. Such a course of action would reduce flexibility in aircraft types capable of operating from the Island. It would also require extending the 90 minute concession beyond 1982 and is clouded by uncertainty because of comparative operating costs and the numbers of flights required per week. These uncertainties naturally impinge on the viability of the tourist industry, the viability of the Island and may not guarantee a continuing competitive air fare structure.

28. To overcome the deficiencies, it would be necessary to lengthen and upgrade the runway at a cost of \$4 million which will allow the F27 aircraft from New Zealand to continue to operate. Construction of facilities costing \$6.2 million to cater for medium jet aircraft would guarantee the retention of regular and competitive airline services to and from Norfolk Island. Evidence has shown that one service from the mainland to Norfolk Island may not continue to operate if the aerodrome is not upgraded. In evidence, the Department of Transport stated that \$4 million of the \$6.2 million expenditure would be recouped by the Commonwealth over a forty-year period through its cost recovery program and the remaining \$2.2 million would be a subsidy.

29. Committee's Conclusion To ensure reliable airline services to Norfolk Island which meet ICAO standards, the Committee agrees that the aerodrome requires upgrading.

THE PROPOSAL

30. It is proposed to use the existing 11/29 grass runway as the main runway by sealing and extending it from 1707 metres to 1890 metres (within a grass strip 2010 metres by 150 metres) and by rotating its centreline 2° 20 minutes in an anti-clockwise direction. This will enable maximum runway length within the existing aerodrome boundary to be obtained as well as increasing the distance of the centreline from St. Barnabas' Chapel, located at the north-western end of the property, from approximately 40 metres to 100 metres. It is also proposed to provide a sealed pavement between the runway end and the strip end to improve its friction surface as a safety measure. The runway length has been designed for F28-4000 aircraft and the pavement and taxiway thicknesses are based on anticipated aircraft operations.

31. It is proposed to use the northern portion of the 04/22 sealed runway as a taxiway and the central 15 metres will be strengthened. The 04/22 runway, where not strengthened, will be resealed and usable for occasional F28 operations.

32. It is also proposed to expand the existing terminal building by the addition of 170 square metres. This will increase the size of the passenger lounge and facilitate improved arrangements for associated terminal activities such as customs, immigration, flight services and security.

33. The capacity of the terminal septic sewerage system and water supply is inadequate for current usage and the proposed works include the provision of an improved system. The system will be designed to cope with proposed load requirements following the introduction of medium jet aircraft. Improvements to the water supply will be derived from the scheme established for runway construction and will be either from a bore or a dam located within the aerodrome boundary. Water will be reticulated to the building area for use in toilets and other appropriate areas.

34. Site works and services associated with navigational aids planned in association with the project are also included in the proposal. The equipment itself is not included in the total project cost.

35. The Committee notes that the proposal would provide an aerodrome which could take aircraft up to medium size jets for the next ten years at least, without major expenditure.

THE SITE

36. The aerodrome is located near the south-west corner of the Island and the intersecting runways straddle two intersecting ridges. The country surrounding the aerodrome falls away rapidly except at the north-western end of the 11/29 runway.

37. The only possible alternative site for an aerodrome on the Island is at Steels Point. The cost of acquiring and developing a site there would be prohibitive; it is under cultivation and would require compulsory acquisition and extensive earthworks.

38. Upgrading of the present aerodrome site will require the re-routing of Ferny Lane and the Committee requests that care be exercised to ensure that roadworks and vegetation removal is carried out in a manner which minimises the effect on the environment. The upgrading will also require runway clearance surfaces to be protected by primarily lopping rather than removing about 50 Norfolk Island pines. The Committee believes extreme care should be taken in the lopping and removal of these trees.

39. A site for the quarry from which the estimated 30 000 cubic metres of crushed rock is to be obtained for the aerodrome upgrading had at the time of the public hearing not been determined. Quarrying is the responsibility of the Norfolk Island Government. Investigations of possible quarry sites, including exploratory drilling, are being carried out on behalf of the Government by a consultant retained by the Department of Housing and Construction. Five potential sites are being investigated and the Administrator and the Legislative Assembly are being progressively advised of results. In evidence, a number of witnesses indicated that quarrying could cause unacceptable environmental degradation.

40. The Committee believes that when a suitable site is selected, the Department of Housing and Construction should continue to liaise and assist the Norfolk Island Administration and that the necessary work should comply with the Environmental Protection (Impact of Proposals) Act 1974. The Committee also believes that consideration be given to the size of explosive charges to be used and the time of day at which blasting operations take place.

41. Committee's Conclusion The Committee agrees that the present aerodrome site is the most suitable for development.

ENVIRONMENTAL CONSIDERATIONS

42. The proposal was the subject of a draft Environmental Impact Statement released for public comment in June 1975. The Final Environmental Impact Statement was released in June 1980. The Committee was advised in endorsing the final EIS the Minister for Science and the Environment recommended the Department of Transport implement all necessary measures and techniques to safeguard the environment, as described in the final EIS, with particular reference to aircraft noise and air turbulence or noise and vibration, particularly on St. Barnabas' Chapel; and that in the event of any future proposal to introduce larger jet aircraft to Norfolk Island, such a proposal be examined in accordance with the requirements of the Environment Protection (Impact of Proposals) Act.

43. The Committee believe that future proposals should not only be examined within the context of existing Commonwealth environmental protection legislation, but that the Norfolk Island Government be closely and effectively involved in its consideration as an equal partner.

44. Whilst the proposal has met the requirements of the Environment Protection Administrative Procedures, the Committee is disturbed by the fact that it took nine months for the Final Environmental Impact Statement prepared by the Department of Transport to be released to the public in June 1980 after being cleared by the Minister for Science and the Environment in September 1979.

45. During the five year interval between publication of the Draft and Final Environmental Impact Statements, additional factors concerning the proposal and changes in administrative carriage emerged. The Committee is concerned that a second Draft Environmental Impact Statement was not released. Failure to do this and the inordinate delay in publishing the Final statement are not considered to have been conducive to effective public participation and detract from the spirit of environmental protection legislation.

46. Aircraft Noise The main potential noise impact arising from the operation of medium jet aircraft at the aerodrome will be on St. Barnabas' Mission Chapel, the Chapel Rectory and a house on the western end of the 11/29 runway. Elsewhere on the Island, the Committee was advised, the noise impact stemming from the change from F27 aircraft to F28 aircraft will be relatively minimal.

47. St. Barnabas' Chapel The possibility of noise induced vibrations causing damage to the historic stained glass windows of the Chapel has been of concern to a number of organisations. In evidence, it was pointed out that the Department of Housing and Construction commissioned a leading acoustical consulting firm to study and report on the matter. In their report the consultants state that the introduction of F28 aircraft, coupled with the new runway alignment will not significantly change the nature of the acoustical impact of the noise on the Chapel window. However, they point out that past and existing aircraft noise is contributing to the rate of deterioration, the window already weakened by corrosion, deterioration and age. They recommend the fitment of protection devices to the outside of the windows to mitigate against further elemental and noise vibration induced deterioration and the Committee believes the Department of Housing and Construction should liaise with the Norfolk Island authorities to carry out this recommendation.

48. Tourism During the enquiry, a number of individuals and organisations expressed grave fears that the upgrading of the aerodrome to medium jet standard would produce substantial increases in tourist numbers. Their presence and the additional facilities they would require would cause the character of the Island to be drastically and irrevocably altered. They pointed out both Professor G.J. Butland and Sir John Nimmo had suggested a ceiling of 20 000 tourists per annum and that this number had already been exceeded.

49. The Committee notes that the Legislative Assembly Select Committee on Tourism is examining questions of existing tourist accommodation and the most desirable tourists levels. The Committee believes the upgraded aerodrome will not necessarily of itself lead to unacceptable levels of tourists. Rather, tourist numbers depend on the number of flights to the Island, the number of tourist beds available which presently have an occupancy rate of only 40% and the length of stay on the Island which has steadily declined from 12 nights in 1975/76 to 9 nights in 1979/80. The number of scheduled flights to the Island is controlled by the Department of Transport. The Committee believes any decision by that Department in response to requests from airline operators for increased regular flights to and from Norfolk Island must be referred to the Norfolk Island Government for their agreement.

50. Fears were also expressed during the public hearing that the upgraded aerodrome may lead the Island to become a transit point for aircraft carrying tourists to and from other areas in the vicinity (e.g. New Zealand, Vanuatu, Fiji). The Committee believes any proposals for such arrangements should also be subject to the agreement of the Norfolk Island Government.

51. Committee's Conclusion The Australian and Norfolk Island Governments should negotiate to ensure that controls of tourism, transitair passengers, airline schedule and types of aircraft using the Norfolk Island aerodrome are effective in preserving the Norfolk Island environment and economy.

CONSTRUCTION

52. Aircraft Pavements The central 30 metres of the realigned 11/29 runway and turning nodes will consist of a bitumen seal on 250 mm of fine crushed rock on 150 mm of sand clay mix on compacted silty clay. The 7.5 metre edges of the runway will have a bitumen seal of 150 mm of fine crushed rock on 100 mm of sand clay mix. The crushed rock will be obtained from the quarry.

53. The northern portion of the 04/22 runway, which will be used as a taxiway by aircraft using the 11/29 runway, will have its central 15 metres strengthened by overlaying with 150 mm of fine crushed rock with a bitumen seal. The existing taxiway and apron will be similarly strengthened and the 4 metre wide edges of the taxiway will be the same construction as proposed for edges on the 11/29 runway. The balance of the 04/22, 30 metre wide runway, which will be retained for Fokker F27 operations will, where not strengthened, be bitumen resealed.

54. The project will involve about 250 000 cubic metres of earthworks by excavation and filling within the aerodrome site.

55. Terminal Building Extensions to the terminal building, totalling 170 square metres, will be of timber construction similar to the existing building.

56. Consultations with Authorities Development of the proposal has involved considerable consultation with the Administrator, Norfolk Island, Members of the Legislative Assembly, Norfolk Island, officers of the Norfolk Island Administration, the New South Wales Government Department of Mines, the National Acoustic Laboratories and the National Measurements Laboratories. The proposed upgrading of the aerodrome to medium jet standard has been endorsed by the Norfolk Island Government.

57. Committee's Conclusion Subject to effective controls as indicated in paragraph 51 above, the Committee recommends the construction of the work in this reference.

ESTIMATE OF COST

58. The estimated cost of the work when referred to the Committee was \$6.2 million at May 1980 prices made up as follows:

	\$
11/29 Runway	5 200 000
04/22 Runway	530 000
Taxiway and apron	270 000
Terminal building and services	200 000
	<hr/>
	6 200 000
	<hr/>

59. The main uncertainty in the cost estimate relates to the fine crushed rock for pavement construction which is dependent on the location of the quarry.

PROGRAM

60. The works for this proposal will be designed and put to tender progressively in packages planned to meet the objective for the commencement of medium jet aircraft operations by the end of 1982 subject to the new quarry location being determined by the Norfolk Island Government and all clearances obtained to enable quarrying to commence by the end of January 1981. The whole project is planned to be completed by mid-1983.

RECOMMENDATIONS AND CONCLUSIONS

61. 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.

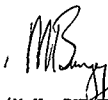
Paragraph

1. TO ENSURE RELIABLE AIRLINE SERVICES TO NORFOLK ISLAND WHICH MEET ICAO STANDARDS, THE COMMITTEE AGREES THAT THE AERODROME REQUIRES UPGRADING.

29

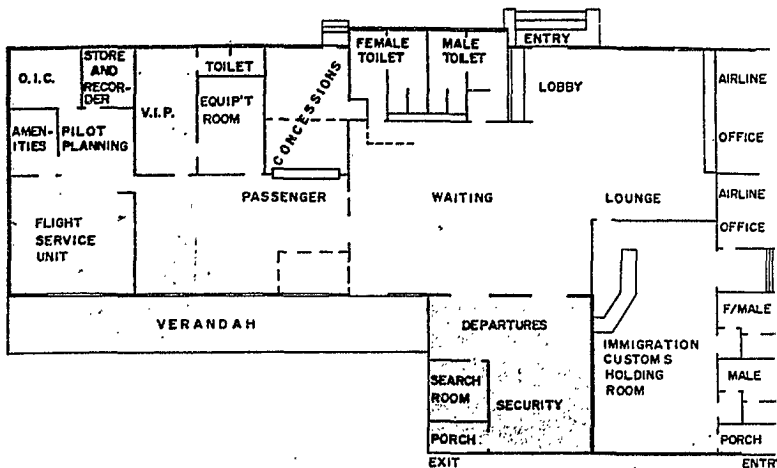
Paragraph

2. THE COMMITTEE AGREES THAT THE PRESENT AERODROME SITE IS THE MOST SUITABLE FOR DEVELOPMENT. 41
3. THE AUSTRALIAN AND NORFOLK ISLAND GOVERNMENTS SHOULD NEGOTIATE TO ENSURE THAT CONTROLS OF TOURISM, TRANSIT AIR PASSENGERS, AIRLINE SCHEDULES AND TYPES OF AIRCRAFT USING THE NORFOLK ISLAND AERODROME ARE EFFECTIVE IN PRESERVING THE NORFOLK ISLAND ENVIRONMENT AND ECONOMY. 51
4. SUBJECT TO EFFECTIVE CONTROLS AS INDICATED IN RECOMMENDATION 3 ABOVE, THE COMMITTEE RECOMMENDS THE CONSTRUCTION OF THE WORK IN THIS REFERENCE. 57
5. THE ESTIMATED COST OF THE WORK WHEN REFERRED TO THE COMMITTEE WAS \$6.2 MILLION AT MAY 1980 PRICES. 58


(M.H. BUNGEY)
Chairman

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

18 September 1980.



LEGEND

PROPOSED EXTENSIONS TO TERMINAL



EXISTING PARTITIONS TO BE DEMOLISHED



SCALE 0 5 10 METRES

NORFOLK ISLAND
TERMINAL BUILDING