

The Parliament of the Commonwealth of Australia
Parliamentary Standing Committee on Public Works

DEPARTMENT OF THE SENATE
PAPER No. 7938
DATE
PRESENTED
24 JUN 1997
<i>Mary Evans</i>

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Report relating

to the proposed

**Sydney Airport: International Terminal—
Olympic Upgrading**

(Seventh Report of 1997)



Parliamentary Standing Committee on Public Works

REPORT

relating to the proposed

SYDNEY AIRPORT: INTERNATIONAL TERMINAL—OLYMPIC UPGRADING

(Seventh Report of 1997)

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA
1997

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**MEMBERS OF THE PARLIAMENTARY STANDING COMMITTEE
ON PUBLIC WORKS**

(Thirty-Second Committee)

Mr Neil Andrew MP (Chairman)
Mr Colin Hollis MP (Vice-Chairman)

Senate

Senator Paul Calvert
Senator Alan Ferguson
Senator Shayne Murphy

House of Representatives

Mr Richard Evans MP
Mr John Forrest MP
Mr Ted Grace MP
Mr Michael Hatton MP*

* Replaced The Hon Michael Lee MP on 26 June 1996

Committee Secretary: Bjarne Nordin

Inquiry Secretary: Michael Fetter

Secretarial Support: Lynette Sebo

COMMONWEALTH OF AUSTRALIA

Public Works Committee Act 1969

Order under subsection 18(4)

I, WILLIAM PATRICK DEANE, Governor-General of the Commonwealth of Australia, acting with the advice of the Federal Executive Council and under subsection 18(4) of the *Public Works Committee Act 1969* hereby declare that the public work described in the schedule be referred to the Parliamentary Standing Committee on Public Works for consideration and report.

SCHEDULE

SYDNEY AIRPORT: INTERNATIONAL TERMINAL - OLYMPIC
UPGRADING PROPOSAL

(L.S.)

Signed and sealed with the
Great Seal of Australia on

16 April 1997

WILLIAM DEANE

Governor-General

By His Excellency's Command

(David Jull)

Minister for Administrative Services

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

Sydney Airport: International Terminal—Olympic Upgrading Proposal

On 16 April 1997, His Excellency the Governor-General in Council referred to the Parliamentary Standing Committee on Public Works for consideration and report the proposed Sydney Airport: International Terminal—Olympic Upgrading Proposal.

THE REFERENCE

1. The terms of the reference were as follows:

Sydney International Airport will be the gateway to the Sydney 2000 Olympic Games and in recognition of this the Federal Airports Corporation has begun planning the services and infrastructure needed to support the Sydney promise to the world of providing Olympic and Paralympic games to mark the turn of the century.

The existing terminal and airside facilities at Sydney International Terminal will require expansion in order to meet demands put upon them by the expected growth in passenger numbers over the next 10 years.

Additional facilities required to meet the expected demand by 2003 are ten additional aircraft parking positions, extensions to the aircraft taxiway system, new airside departure lounges and associated retail facilities at Piers B and C, additional check-in and baggage claim facilities, associated building works and related engineering and building services improvements.

Completion of the project will ensure :

- expected airline industry demand will be accommodated through to 2003;
- the level of service provided to passengers is equivalent to world best practice;
- commercial viability of the airport is enhanced; and
- an appropriate return on investment.

2. An elemental cost plan prepared for the project provides for a design and construction cost at completion of approximately \$350 million.

3. In considering the specific elements of this proposal, the Committee, as the main committee responsible for examining the Commonwealth's capital works, would like to emphasise its continuing and historical involvement with Sydney Airport.

THE COMMITTEE'S INVESTIGATION

4. The Committee received a written submission from the Federal Airports Corporation (FAC) and took evidence from FAC officials at a public hearing held at Sydney Airport on Wednesday 21 and Thursday 22 May 1997. The Committee also received written submissions and took evidence from the following organisations and individuals over the two day period:

- Marrickville Council;
- Hunters Hill Council;
- No Aircraft Noise Party;
- St Peters, Sydenham, Tempe Neighbourhood Centre;
- Lane Cove Airport Action Inc;
- Australian Quadriplegic Association Ltd;
- New Southern Railway;
- International Air Transport Association (IATA);
- Sutherland Shire Council; and
- Leichhardt Airport Working Group.

5. Written submissions were received from the following organisations and individuals:

- Mr Robert McClelland MP—Federal Member for Barton;
- Lane Cove Council;
- Hurstville City Council;
- Access Australia Consultants Pty Ltd;

- Australian Quarantine and Inspection Service (AQIS);
- Australian Customs Service;
- Bus and Coach Industrial Association (NSW);
- Airport Link;
- Mr J D Clark;
- Ms June Lunsmann;
- Mr D W Lidbetter;
- Airline Operators Committee;
- Department of Land and Water Conservation (NSW);
- Environment Australia—Biodiversity Group;
- Environment Australia—Environment Protection Group;
- Families at Work;
- Commonwealth Fire Board;
- Ku-ring-gai Community Committee on Aircraft Noise;
- State Chamber of Commerce (NSW);
- Australian Heritage Commission; and
- Airservices Australia.

6. On 31 January 1997, in anticipation of the project being referred, the Committee undertook an extensive inspection of the international terminal and was briefed on planning options then being considered for the expansion and refurbishment of terminal facilities.

7. A list of witnesses who appeared at the public hearing is at APPENDIX A. The Committee's proceedings will be printed as Minutes of Evidence.

BACKGROUND

Terminal location

8. Sydney international terminal and its associated aircraft stands and aprons are situated within the north-west sector of Sydney Airport, bounded to the south and east by Runways 07/25 and 16R/34L respectively and to the north and west by the Alexandra Canal and Cooks River.

Existing facilities

9. The original international terminal was opened in 1970 and then comprised a terminal building and associated piers—now known as Pier B. Over the years, it was expanded to accommodate 17 aircraft gates, including two remote stand-off positions north of Pier B.

10. In 1992, an extension to the international terminal was completed with the introduction of Pier C. This increased the overall gate capacity from 17 positions to provide a total of 26 aircraft gates.

11. More recently, in 1996, an additional remote position west of Pier C was added to accommodate curfew regulation changes.

Existing aircraft gates

12. The existing international apron provides active stands for 22 wide bodied and two narrow bodied aircraft. There are three remote stands, two for wide bodied and one for narrow bodied aircraft.

Importance of Airport

13. Sydney is the major airport in Australia and forecast traffic growth suggests it will remain preeminent in terms of passengers, aircraft movements and economic benefits. It is Australia's busiest commercial airport, currently catering for more than 20 million passengers per annum. In relation to international travellers, Sydney serves almost as many passengers as all of the other Australian airports.

14. The FAC advised the Committee that a report, recently produced by the Institute of Transport Studies of the University of Sydney, on the economic significance of Sydney international airport concluded that:

Sydney Airport is a major economic activity. This can be measured in a direct annual impact of 33,500 full-time jobs, \$3.9 billion in annual expenditure and subsequent flow ons

to the rest of the economy. More importantly, the airport-related industry is in a strategic position to support the initiatives of the tourism, services and manufacturing sectors as they embrace an export culture and participate in the internationalisation of the Australian economy.

15. The airport supports the employment of some 66,500 people directly or indirectly—approximately eight per cent of Sydney's total workforce. Projected increases in passenger use of the airport has the potential to generate over 200,000 jobs by the year 2003.

16. Sydney Airport is also the major centre for airfreight. In 1995, the value of exports transported exceeded \$6 billion. In 1995/96, international visitors were estimated to have injected \$2.6 billion into the Sydney economy.

17. The close proximity of Sydney Airport to the central business district is a factor which, according to the airlines, encourages fast and efficient business travel. The range of airlines serving Sydney, and the frequency of their services, is a further indication that business travel is now more viable for the people of Sydney.

18. The FAC advised the Committee that Sydney Airport ranks highly among the world's airports and was placed ninth in the 1996 IATA Airport Monitor Survey for passenger convenience and facilities. The airport was ranked fifth by leisure travellers and tenth by business travellers.

THE NEED

Terminal expansion

19. The FAC believes the existing terminal and airside facilities at Sydney international terminal will require expansion in order to accommodate increasing demand from the expected growth in passenger movements over the next five years.

20. The airport will play a key role in supporting the Olympic and Paralympic Games. It is therefore necessary that facilities be available to ensure the smooth movement of athletes and visitors through the terminal.

International traffic

21. In 1995/96, 6.8 million international passengers used the Sydney international terminal. International passenger movements have grown at an

annual compound rate of 6.25 per cent since 1980, with a growth of 10.7 per cent in 1995/96.

22. FAC forecasts, prepared in 1996, are for an average annual growth of 7.9 per cent to 2001, and 4.7 per cent from 2001 to 2006. This growth will result in the international terminal needing to handle 9 million passengers in 2000 and over 11 million passengers in 2003.

Peak hour movements

23. Peak hour movements for arriving passengers in 1995/96 amounted to 2,356. The FAC forecasts a rise to 3,355 (Central Forecast) or 3,778 (High Forecast) by 2003/4. Based on the forecast number of aircraft gates and the associated peak hour passenger flows, the additional facility requirements for 2003 are as follows:

- 10 additional wide body aircraft gates;
- new airside departure lounges and associated retail outlets at Piers B and C;
- additional check-in and baggage claim facilities and associated building works; and
- related engineering and building service improvements.

24. It should be noted that this demand analysis recognises the impossibility of the construction of a second Sydney airport before 2003.

25. International aircraft movements are expected to reach over 60,000 in 2003 and the ability of the current airfield capacity to handle this volume will need to be matched by increased capacity within the terminal to process passengers efficiently, consistent with other world class airports.

Olympic Games

26. The FAC expressed its commitment to support the Games, stressing that any additional infrastructure to handle increased traffic will need to be provided before the Games. The FAC therefore believes that in order to cater for the additional forecast traffic, it is necessary for additional facilities to be designed to standards which will meet 2003 forecasts. This avoids the need for major construction and redevelopment works during the Olympics and the expected busy period immediately post 2000.

Aircraft gates

27. The scheduled peak period which determines capacity requirements at Sydney international terminal is the morning peak which commences at 6.00am and continues to 11.00am.

28. An analysis of international aircraft gate utilisation revealed that in 1996, between 7.30am and 11am, all scheduled aircraft gates were essentially fully utilised and no opportunity existed in this period for additional flights.

29. There are currently 24 active aircraft gates serving international aircraft. Based on growth projections up to 10 additional active gates will be required by 2003. A summary of the forecast staging of these gates is as follows:

Year	1996	1997	1998	1999	2000	2001	2002	2003
Total Active Positions	24	25	26	28	30	32	33	34

Alternatives to be considered

30. A number of community organisations made strong representations to the Committee which, while differing in emphasis, had a common theme of opposition to any further development of the airport. The stance adopted by these organisations is briefly summarised as follows:

- expansion of the terminal is not in the best interest of the community—it will entrench operations at the present airport;
- the airport has exceeded its environmental limits;
- the low aeronautical charges fail to provide an adequate return on the real estate value of the site and provide an inadequate income stream to finance a replacement airport;
- all resources should be put towards the construction of a second airport because the existing airport has no future—in the short term it will need to continue operating but it should be downgraded as the new airport comes into operation;
- no social costs are stated;
- there should be greater use of Brisbane and Melbourne airports;

- under NSW development law, the impact of developments is costed to developers to improve local amenity—there is therefore a need for a cost benefit study to be undertaken and the concept of a tax on development should be considered to take account of the loss of amenity and diminution of property values; and
- an Environmental Impact Statement should be prepared for any further development.

31. The main factor prompting community representatives to make these submissions is aircraft noise. Community representatives were questioned if real estate values had been affected by the aircraft noise problem. While not offering expert advice, most indicated that the value of houses in suburbs surrounding the airport had moved in line with the general housing market in Sydney. This perception has been confirmed in informal discussions with housing industry bodies. However, a representative of Sutherland Shire Council advised that house prices had fallen by 10 per cent in the Shire.

32. The Committee also questioned community representatives about the effects of substantial expenditure by the Commonwealth (the taxpayers), on noise insulation of houses and schools in suburbs under flight paths. The Mayor of Marrickville addressed this question in the following terms:

I believe, on balance, that it has had a positive impact. There have been some elements that have not been as satisfactory as they should have been. The majority of people are better off. I would put it in this context: they are very significant deficiencies because of an artificial cap that has been imposed by the Government on the works on peoples' homes—that is, there is a \$45,000 limit and some homes cannot be effectively insulated for that quantity of money.

Secondly, while I acknowledge that there is a benefit to people, you have to look at the lifestyle issue of living in a home that is sealed off from the outside world. Your world becomes the walls within which you live and you cannot insulate the backyard so your kids can play, or you can play in a park. Yes, there is definitely a benefit. I remain an advocate of and support the insulation program, but I would like to make the point that it does have its limits. A very key element is the Government imposed cap of \$45,000 on the

homes to achieve the insulation levels. (*Minutes of Evidence—Public Hearing—21 May 1997, p. 97*)

33. A representative of a community organisation suggested noise insulation provided to housing under the flight paths should have been to a standard equal to that applied to any work on the international terminal.

34. The Committee believes the Commonwealth has been responsive to community concerns about aircraft noise by implementing noise insulation measures. Further responses are under consideration.

35. The Committee questioned the FAC about the implications of the Long Term Operating Plan for Sydney (LTOPS) being developed by Airservices Australia. The FAC advised the Committee at the public hearing that the time for public comments on the LTOPS had concluded and that it was under consideration by the Government.

"Do nothing" option

36. As a first step in addressing the practicalities of not meeting the need for additional facilities and in the absence of a decision on a second Sydney airport, the Committee questioned the FAC about the implications of adopting a "do nothing" option.

37. It was emphasised that the need for increased gate positions and consequential passenger processing and support infrastructure is driven not by the Olympic Games, but rather by forecast growth in aircraft movements and passengers. The FAC advised that the impact of the "do nothing" scenario would be felt from this year and result in increased delays. Service criteria have been set for the time passengers can expect to wait to be processed. At check-in counters, for example, it is normal for passengers to be processed in 2.3 minutes. If, therefore, these facilities were not upgraded or increased, the level of service would start to decline. In terms of aircraft movements, the Committee was advised that the "do nothing" scenario would result in aircraft possibly waiting for an hour or 1.5 hours on taxiways before accessing aircraft parking positions. Inside the Customs hall, passengers could be left waiting for up to two hours for their baggage.

Second Sydney airport

38. The FAC advised that it supports the concept of a second Sydney airport. The Committee understands that a decision on the location of the airport awaits the finalisation and Government consideration of Environmental Impact

Statements. The second Sydney airport solution would therefore not address the immediate requirement to cater for increased demand for gate positions at Sydney. It was suggested also that greater use of Melbourne or Brisbane could be made. The FAC response was that people choose to fly to nominated cities.

Peak hour and gate positions

39. The Committee questioned the FAC about the basis of the demand for gate positions and if the daily peak period could be extended, thereby obviating the need for expansion of the terminal.

40. The FAC advised that, at Sydney, the daily peak occurs between 7.30am and 11.00am. Factors which contribute to relatively narrow scheduling windows for international aircraft at Sydney include:

- elapsed clock time between port of origin and destination;
- curfews at departing airports and the curfew in Sydney;
- connections at port of origin; and
- desired time of departure and arrival.

41. By way of illustration, a representative of IATA, with more than 40 years of airline experience, predominantly in airline planning, advised that the following constraints would apply to an airline wishing to schedule a flight from Sydney to London:

- between 11.00pm and 5.00am—subject to the curfew;
- at 6.00am—no connections into Sydney also Sydney passengers would need to check-in at 4.30am;
- between 7.00am and 8.00am—no connections and could not return from London to Sydney on the same day;
- between 9.00am and 2.00pm—arrive in London during the restricted night period and would require a quota slot—no slots are available;
- between 3.00pm and 4.00pm a departure is possible; and
- between 5.00pm and 10.00pm—transit through Singapore at an undesirable time when no connections are available.

42. In summary, only two hours are freely available for airline scheduling.

43. The reverse would apply to aircraft flying to Sydney from London.

44. A further factor is the movement cap, which in Sydney for domestic and international aircraft, is 80 movements per hour. When achieved, this will force the greater spread of movements.

45. The FAC advised that the framework for a slot system will be released by the Minister for Transport and Regional Affairs for public comment. The FAC supports the introduction of a slot system as a means by which it can effectively manage growth and reduce delays in cluster scheduling. Such a system would need to take account of: the curfew, movement cap, scheduling windows, number of gate positions and the capacity of the terminal to process passengers at a predetermined level of service.

Committee's Conclusions

46. **Sydney Airport, as the main gateway to Australia, has an essential role in meeting increasing passenger demand into the next century.**

47. **As no decision on the location of a second Sydney airport has yet been made, Sydney Airport remains the only international airport in NSW.**

48. **If the improvements required to cater for increased traffic are not made, the ability of the airport to cope with demand will be seriously impeded.**

49. **The timing of the Olympics and its associated pressures on facilities mean that any improvements will need to commence immediately in order to avoid construction during the Olympic period.**

50. **Forecasts provided by the Federal Airports Corporation indicate that ten additional gate positions and associated facilities are required which would satisfy requirements until 2003.**

ALTERNATIVES CONSIDERED

Expansion zones

51. For the purpose of identifying planning options the site has been divided into two zones:

- the western expansion zone; and

- the northern expansion zone.

52. Initially, a number of planning options which met the requirement for additional aircraft gates were identified and evaluated for the western expansion zone. Following establishment of a preferred option for this zone, a series of planning options were investigated for the northern expansion zone. As a result, a long term plan for the whole site was identified.

Western expansion zone

53. A series of aircraft parking layout options was developed by examining the existing aircraft parking arrangement and identifying possible changes to satisfy increasing demand. Pier C currently provides gates for nine wide bodied aircraft and is restricted in expansion to the east by the existing southern apron. Hence, the only available area for expansion is west towards the Cooks River.

54. The following three options were investigated:

- Option 1—expansion of Pier C;
- Option 2—additional single-sided pier ; and
- Option 3—additional satellite.

55. Option 1 was identified as the preferred planning option for the following reasons:

- centralised terminal and aircraft servicing facilities;
- simplified passenger flows, decision points and facilitation;
- optimisation of retail/commercial objectives;
- more economical to construct; and
- easier to operate and maintain.

Northern expansion zone

56. A total of six planning options focusing on the northern area, around Pier B and beyond were identified. These are illustrated in Appendix B. The options looked at various terminal configurations which included pier, linear and satellite developments.

57. Each option was assessed in terms of its ability to provide the additional aircraft stands and terminal facilities needed to meet projected demand in 2003.

58. The preferred option is Option 5, which can be amended to Option 6 should this become favoured prior to implementation in the longer term. These options were chosen for the following reasons:

- most efficient aircraft parking layout;
- reduced walking distances from airside departures lounge;
- ease of expansion; and
- reduced duplication of terminal facilities and future flexibility potential.

Costing of options

59. The Committee asked the FAC if the options which were identified had been costed. The FAC advised that the preferred options would be less expensive than others. The FAC believe a simple solution has been adopted involving the construction of what was described as a "temporary" concourse, with the apron areas being permanent.

Committee's Conclusion

60. Options were considered for developing two expansion zones and the preferred options (1 and 5) are the least costly and most appropriate.

THE PROPOSAL

61. The proposal provides for the development of international facilities to accommodate projected demand up to 2003, including the demands generated by the Olympic Games in 2000. The proposal has been designed to be compatible with various operational constraints at the airport, including the cap on movements, the curfew and the proposed slot control system. The FAC believes, from analysis, there is sufficient room within the constraints to cope with additional arrivals projected under demand forecasts.

62. The proposed development comprises the following elements:

- expansion and improvements to the landside terminal;
- expansion of Pier C and associated apron and taxiway works;
- expansion of Pier B and associated apron and taxiway works; and

- construction of a northern concourse.

Expansion and improvements to landside terminal

63. The proposed expansion and improvements to the Landside Terminal Arrivals Level comprise:

- extension of the Pier B building face to align with Pier C frontage providing space for a new arrivals hall, new Customs Hall and retail outlets;
- refurbishment of the existing Pier B arrivals area to provide an extended baggage claim hall with 7 extended baggage claim units and linked through to the existing Pier C baggage claim area;
- construction of new inwards duty free outlets; and
- construction of access link to the new rail station.

64. The FAC advised that a more expensive option would centralise the inwards immigration facility to provide greater flexibility for government agencies in processing peak loads from both piers. The merits of this option would be considered further during the concept design phase.

65. The proposed expansion and improvements to the Landside Terminal Departures Level comprise:

- building throat of the Pier B departures concourse extended north to accommodate relocation of security control to improve access and circulation;
- existing line of immigration counters repositioned and a new entry formed;
- Pier B check-in desks extended to accommodate additional counters and provision of one additional island;
- expansion of landside retail areas; and
- a plant room and offices relocated.

66. A more expensive option would centralise the outwards immigration facility. This would be considered further during the proving phase.

Pier C and associated apron works

67. The proposed expansion and improvements to the Pier C Airside Arrivals Level comprise:

- construction of a new arrivals concourse to service new aircraft gates;
- modifications to existing concourse for arriving passengers and provision of new transfer/transit access to the departures level; and
- provision of new arrivals duty free outlet.

68. The proposed expansion and improvements to the Pier C Airside Departures Level comprise:

- development of new airside node by constructing a building extension to the existing departures concourse providing additional retail outlets, departure lounges and gate boarding access; and
- vertical access to be provided to airline lounges above.

69. The proposed expansion of the Western Apron to provide additional aircraft stands and taxiways comprises:

- construction of three new wide body aircraft stands and associated taxiways; and
- construction of a new field taxiway parallel to Runway 07/25 (East/West).

70. The proposed Pier C building works also provide space at apron level for baggage facilities and ground support equipment parking.

Pier B and associated apron works

71. The proposed expansion and improvements to the Pier B Airside Arrivals Level comprise:

- extension to concourse to accommodate additional and relocated aerobridge positions;

- concourse extended at the pier bifurcation to allow new transit/transfer security control and connection to new northern concourse; and
- provision of new arrivals duty free outlet.

72. The proposed expansion and improvements to the Pier B Airside Departures Level comprise:

- building extension to north of Pier B bifurcation to create a new common departure lounge area and expanded retail area, together with connection to the new northern concourse;
- provision of extensions to the end of each pier for additional boarding lounge areas for the new aircraft gates; and
- provision of new and relocated aerobridges positioned to suit new aircraft positions.

73. The proposed expansion of the eastern apron to provide an additional aircraft stand and taxi lanes will comprise the construction of one new wide body aircraft stand and associated taxi lanes. At the northern apron, it is proposed to construct six new wide body aircraft stand and associated taxi lanes. Space beneath the expanded Pier B at apron level is provided for baggage and ground support equipment functions.

Northern concourse

74. It is proposed to provide an additional concourse to serve new aircraft stands on the northern apron. This will consist of the construction of a new concourse, 12 metres wide, to connect the Pier B node to four new aircraft stands.

Gate positions

75. The Committee questioned the FAC about the impact on traffic flow of the provision of additional gate positions. The FAC advised that historically, when additional capacity is introduced, a spike in the use of gate positions develops. This is due to airlines rescheduling aircraft operating outside a desirable peak period into the peak periods if there is capacity. An objective of the delivery of the facilities is to add new gates incrementally, in order to spread the peak as much as possible.

New larger aircraft

76. New larger aircraft are expected to enter into service by 2003 at the earliest. Studies undertaken by the FAC indicate that two gates for these aircraft would take the place of three gates designed for B747-type aircraft.

PLANNING AND DESIGN

Planning and design objectives

77. The FAC advised the Committee that the proposed upgrading project "will combine the functional aspects of a world class terminal with exciting contemporary architecture." (*FAC Submission*)

78. The Committee questioned the FAC about how these objectives will be achieved. The FAC advised that at this stage of the proposal, design solutions have been driven by facilitation requirements, not architectural statements. The second phase of the project will therefore aim at reflecting to passengers, both business and tourist, an environment which removes anxiety and which is friendly and comfortable and will use the airport to reflect the city, State and country. The Committee encouraged the FAC to develop an appropriate architectural style.

Terminal design—Passenger facilitation

79. The proposed airside departure lounges will maximise access to an increased number of aircraft gates. Within the constraints of the existing terminal, a key planning objective is to reduce walking distances and simplify passenger flows. The FAC believes this approach will achieve the best operational solution, whilst enhancing both passenger amenity and commercial opportunities.

80. Where practical and cost effective, the project aims to achieve greater cross-utilisation of facilities, thereby avoiding a situation where a unit terminal reaches its own peak while the second terminal operates below capacity, for example, check-in during departures, and baggage claim during arrivals.

Baggage facilities

81. The proposal allows for extensions to the existing sophisticated common-use baggage system to achieve timely facilitation and operational flexibility and efficiency.

Aprons and taxiway design

82. A primary objective of the project has been to optimise the aircraft parking layout by providing as many aircraft stands as possible in the area available within a safe and manageable operating environment. The number and location of aircraft gates and taxiway routes reflects this philosophy.

Design Standards

83. In order to provide sufficient space within each of the main arriving and departing areas, it is important that the appropriate 'level of service' is identified. Levels of service (LOS) are defined by IATA as being space standards required to achieve a certain degree of passenger comfort. The LOS categories range from a high LOS Category A, which is excellent, to a low LOS Category F, which is unacceptable.

84. The proposed facilities will be designed to LOS Category C. This is the normal benchmark standard for international facilities at large gateway airports and provides for a good level of service, condition of stable flow, acceptable delays, and a good level of comfort. The Committee questioned the FAC about the adoption of the Category C standard and was advised that very few airports in the world are designed to higher standards. Category C standard terminals are the norm for Australia, reflecting an expectation of the airlines to provide the inherent level of service. The FAC therefore believes the additional cost of providing a design to a higher standard would not be prudent expenditure. The FAC did, however, indicate that whilst the physical building standard will be Category C, the level of quality and customer service expected will be Category A. This could be achieved without necessarily increasing construction costs but by adopting a regime of customer service, continuous improvement and other attributes of quality.

Fire protection and safety

85. The FAC advised the Committee that the terminal facilities will be designed within the intent of the Building Code of Australia (BCA), appropriate to a building of the size and proposed function as an airport terminal. The Commonwealth Fire Board (CFB) questioned the sole use of the BCA as the basis of the design of fire protection measures. Sole reliance on the BCA will address minimum fire protection and public life safety measures but may not fully address protection measures required to protect the asset, its contents and business activities. For this reason, the CFB considers it necessary for risk management considerations to be taken into account.

86. The CFB suggested that because it is envisaged that the development will be designed under the performance based provisions of the BCA, it will be necessary for fire protection and fire safety facilities to be determined by a recognised fire safety consultant and certified by a qualified and experienced building practitioner. In addition, the CFB suggested that appropriate fire services, including the NSW Fire Brigade, should be consulted during the design and construction phases of the proposed development.

87. In response to these suggestions, the FAC advised the Committee that a fire study of the international terminal was recently completed by Trevor Howse and Associates. It is the intention of the FAC to comply with the BCA and other relevant codes.

Child care provision

88. Consideration will be given to the requirements for child care facilities in consultation with appropriate representative bodies.

Acoustics

89. Consideration will be given, during the proving stage, to specific measures to protect the terminal environment from noises created by an operational airport. Particular attention will be given to passenger comfort and convenience.

Energy conservation measures

90. High priority will be given to the achievement of operating efficiencies in the design through a range of energy management and conservation measures. These measures are expected to include:

- maximum use of daylight to reduce dependence on artificial light;
- provision of a building management system to control lighting, power and air conditioning in accordance with building usage, to optimise performance;
- maximum use of outside "free cooling" for air conditioning;
- use of high energy lighting units; and
- variable speed drives in escalators.

Contributory work

91. The complexity of this development necessarily involves contributory works by others. These works include:

- hydrant refuelling system by oil companies;
- any non common use counters and associated systems by airlines or other tenant users;
- fit-out of lounges, offices and other user-dedicated spaces by those users;
- fit-out of commercial leased spaces by concessionaires; and
- facilities for Customs, Immigration, Quarantine and Police functions by relevant departments.

Customs

92. The Australian Customs Service (ACS) employs over 400 people at the terminal and has primary responsibility for the clearance of all arriving and departing passengers and their baggage. This includes a responsibility for Immigration processing on behalf of the Department of Immigration and Multicultural Affairs and screening on behalf of the Australian Quarantine and Inspection Service (AQIS). The ACS has a processing target for Immigration clearance which specifies that 95 per cent of arriving passengers should be processed through the "primary line" in less than 30 minutes. Attempts at improving the rate are being made, especially during the morning peak traffic period, through the use of Advance Passenger Clearance, increased staff and other enhancements. ACS advised the Committee that the FAC has undertaken to continue consultations during the project to facilitate the support of operational requirements. ACS believes there would be significant improvements by:

- the establishment of single "primary" immigration (inwards and outwards) processing lines—as opposed to the current situation which provides processing lines in each pier; and
- a redesign of the baggage examination area—this will allow for the full integration of the X-ray machines into the process.

93. The ACS also endorsed the approach of "no build" during the Olympic year. It stressed that all airport organisations will require some unencumbered lead time to test all facilities and processes in preparation.

94. The FAC advised the Committee that the ACS scheme of single primary lines is being investigated. The recently purchased X-ray equipment will be fully integrated into the baggage processing system. In the end, designers will strike a balance between ACS operational efficiency and passenger movements.

Australian Quarantine and Inspection Service

95. AQIS advised the Committee that consultations with the FAC during further planning will provide scope for significant concerns to be addressed. These concerns are:

- inadequate barrier space for AQIS passenger baggage inspection facilities;
- lack of suitable X-ray equipment sites which are sympathetic to passenger flow; and
- less than adequate accommodation for additional AQIS staff.

96. The FAC advised the Committee that consultation with AQIS in the preparation of the planning study will continue into the next phase of the project. The FAC also indicated that the need to improve facilities for X-ray equipment is understood and will be integrated into the final design.

International Air Transport Association

97. IATA advised the Committee that during initial planning discussions with the FAC, the concept of single outward Government agency processing was opposed. This stance was based on the premise that facilities in the two piers would not be fully utilised. For this reason, IATA remains supportive of the concept of two outward processing zones.

98. The FAC undertook to consult with the airlines and seek their endorsement so that the facilities provided meet their needs as closely as possible.

Airservices Australia

99. Airservices Australia raised a number of operational and technical implications of the proposal related to:

- accessibility to Taxiways A and G during construction and later operations;
- the impact of an additional segment of parallel taxiway proposed for Runway 07/25; and
- displacement of instrument landing system components.

100. The Committee understands Airservices Australia met with the FAC following the public hearing to discuss the implications. Following these discussions, representatives of Airservices Australia met with the Committee in Canberra. Airservices Australia advised that the FAC had confirmed that:

- the straightening of Taxiway A and consequent displacement of the ILS system is not part of the proposal under consideration by the Committee for implementation prior to 2000—full implementation of Option 5 is not scheduled before 2003. Should an alternative precision approach navigation system, such as the Global Navigational Satellite System, not become available within this timeframe, other operational options not involving ILS glide path displacement will be explored by the FAC at the appropriate time; and
- construction of all works can be scheduled so that air traffic under the LTOPS will not be impeded during the construction period.

101. The Committee sought further assurances from Airservices Australia that both its organisation and the FAC are now satisfied that the safety concerns raised have been addressed. Airservices Australia advised the Committee that there are no outstanding issues of concern related to the proposed works.

Committee's Conclusion

102. The Committee accepts assurances from Airservices Australia and the Federal Airports Corporation that air traffic safety measures associated with Option 5 are appropriate and adequate.

Leases affected by proposal

103. The following leases will be affected by the proposal:

- Ansett Airfreight Centre;
- Australian Air Express Freight Centre;

- Ansett GSE Facility; and
- Qantas GSE Refuelling Facility.

104. The FAC advised the Committee that notice has been given to these tenants and they will be required to vacate within 18 months, thereby making the land available for redevelopment.

Air freight facility

105. Ansett raised the following concerns in relation to the proposed relocation of freight facilities:

- the tight timetable of the entire redevelopment, much of which is dependent on the relocation of the freight facilities (both Australian Air Express and Ansett);
- the need to remain at the existing site for a longer period; and
- the identified site for relocated freight facilities has shortcomings.

106. The FAC advised the Committee that the facilities will not be demolished until replacement capacity is provided on the airport. The FAC also pointed out that any future airfreight facilities will need to cope with the growth of airfreight that is expected through to 2003. Current facilities are under pressure to cope with demand and the FAC is therefore looking at a long term freight solution, part of which is to call for expressions of interest from operators able to provide high quality freight handling facilities. Ansett and Australian Air Express will need to apply for and demonstrate to the FAC by this process that they have the desired solution to cope with demand. Both Ansett and Australian Air Express are two of 20 applications that have been received to undertake freight activities.

107. The FAC also advised the Committee that existing international freight facilities offered are those of a duopoly. The FAC is therefore looking for choice to be provided to international carriers not wishing to be aligned with the duopoly. It is therefore intended that existing capacity be relocated prior to the facilities being demolished to allow for additional apron parking.

Security

108. The facilities and systems will be designed to meet relevant national and international standards.

New Southern Railway project

109. A station for the New Southern Railway is currently under construction beneath the terminal and will be linked with the upgrading project. The railway will link Central Station with Campbelltown and is a joint NSW Government and private sector development which will cost \$900 million. The Government will spend \$670 million on tunnel and track construction and private enterprise will construct and operate four stations between Green Square and the domestic and international terminals.

110. The cost to private enterprise will be \$230 million. Return on investment in the privately funded stations will be by a surcharge on fares paid by passengers using the four stations. The majority of private debt will be repaid by passengers using the two airport stations. It was submitted that the success of the project, from a State and private enterprise point of view, is highly dependent on the growth in the use by passengers and the proposed extension of facilities at the international terminal.

CONSULTATION

111. Consultation has taken place with the following organisations:

- Airline Operators' Committee and major airlines;
- Airservices Australia;
- Australian Customs Service;
- Australian Quarantine and Inspection Services;
- Civil Aviation Safety Authority;
- Commonwealth Department of Immigration & Multicultural Affairs;
- Department of Land and Water Conservation;
- Commonwealth Department of Transport and Regional Development;
- Environment Australia;
- International Air Transport Association;
- New South Wales Government; and

- NSW Tourism Commission.

112. Representatives of IATA advised the Committee that they had been presented with conceptual plans and suggested that the Committee recommend the continued active involvement of IATA and individual airlines in the design process. The IATA representatives also recommended that a terminal operating plan should be developed as soon as possible in order to gain an appreciation of how and where the various functional elements will be located and how they will operate. This includes the location of airlines throughout the terminal.

113. The FAC advised the Committee that consultation will be vital in the preparation of the plan to ensure optimum utilisation of terminal facilities.

114. Critical elements of terminal design were the subject of 14 issue papers on various facilitation elements, prepared over a two year period. These papers were compiled in consultation with user groups ranging from Government agencies to individual airlines. They looked at:

- check-in counters;
- immigration;
- baggage handling systems;
- security;
- gate demands;
- forecasts; and
- international benchmarking.

115. The FAC pointed to an example of consultation already taking place in the area of baggage handling systems, where \$3 million worth of improvements have been undertaken over the past few years. These improvements were driven and managed by organisations who operate the system. The membership of the group comprises FAC staff and airline representatives who were responsible for the preparation of a brief and the commissioning of a consultancy firm to undertake the detailed design of the new system to satisfy the needs of the project.

116. In relation to other terminal users, the FAC advised that several consultative bodies have regular meetings. Meetings are held with retail tenants on a monthly basis and future meetings will focus on impending construction to foreshadow construction planning and intentions in a timely manner.

117. The FAC also has consultations with airlines by way of a number of committees and believes it is working productively with them to ensure the solution delivered is one which meets the airlines' requirements.

118. In relation to local government organisation, the FAC advised the Committee that a detailed briefing was made to the Sydney Airport Community Forum on 21 February 1997 and to the Sydney Airport Community Consultation Group during March. As well, FAC officials made presentations to four local council mayors and their general managers.

Provisions for people with disabilities

119. The FAC advised the Committee that the terminal design will incorporate standards and features to assist people with disabilities in obtaining maximum access to facilities.

120. The Australian Quadriplegic Association (AQA) expressed concern that five of the nine options for the northern and western expansion zones will discriminate against people with physical disabilities and create unnecessary hardship and dependency when undertaking air travel. The question of standoff parking is relevant in this regard because it would involve people with disabilities, usually in wheelchairs, having to be lifted into rear doors of aircraft by forklift. AQA therefore recommended that a quality assurance approach be undertaken, to increase consultation with people with disabilities in all phases of development from the design through to operational management and maintenance.

121. The FAC assured the Committee that AQA have been invited to take part in the detailed design process and (recognising that Australian Standards do not adequately cater for people with disabilities), to exceed standards, wherever possible, in terms of requirements. The FAC also acknowledged that the Paralympics will take place after the Olympics and that both must be a success.

122. In response to suggestions of potentially discriminatory practices inherent in standoff positions, the FAC advised the Committee that four standoff positions will be used mainly for aircraft parking or aircraft with longer turnaround times. The FAC expects that aircraft using these positions would unload at an aerobridge gate, be towed to one of these standoff positions and be towed back to an aerobridge position to reload.

Committee's Conclusion

123. The success of the project is dependent on continuing and adequate consultations between the Federal Airports Corporation and all affected users.

Committee's Recommendation

124. Particular attention should be given to the needs of people with disabilities during the detailed design phases.

ENVIRONMENT

125. At the time of the public hearing the FAC was undertaking an assessment of environmental effects of the proposal in accordance with the provisions of the *Environment Protection (Impact of Proposals) Act 1974* and relevant procedures. The assessment covers economic, social, air and water quality, road traffic, noise and aircraft operations effects from both construction activities and operation of the extended terminal. Additionally, the proposal was under examination, in the context of the proposed LTOPS, currently under consideration.

126. It was suggested to the Committee that the environmental impact assessment being undertaken by the FAC for submission to Environment Australia should contain a recommendation that an EIS be prepared. Environment Australia—Environment Protection Group confirmed the FAC had indicated that the project will be referred in accordance with the provisions of the Act and the associated administrative procedures. It is the responsibility of the Minister for the Environment, Sport and Territories to determine, following the receipt of the impact assessment, whether a public assessment of the project in the form of an EIS or a Public Environment Report (PER) is necessary. The Committee believes the Minister should carefully assess the issues raised at the public hearing, in particular the call for a cost-benefit analysis and compensation for loss of amenity to residents in southern bayside suburbs.

127. The Committee remains critical that environmental clearances for the project were not obtained by the FAC from Environment Australia before the public hearing was held. At the public hearing, the FAC advised the Committee that the impact assessment would be referred to Environment Australia within ten days following the hearing. The FAC indicated that the assessment would:

...take into account issues coming forward both in the written responses that the Committee has had from interested parties and also the proceedings over these two days. (*Minutes of Evidence—Public Hearing—21 May 1997, p. 60*)

128. It is clear that all relevant facts relating to the impact of the proposal were not available to the Committee as part of its inquiry. The environmental impact of the proposal featured prominently during the hearing. Under the Act the issues raised before the Committee are required to be addressed in the environmental impact assessment. This was under preparation at the time of the hearing. The Committee does not see itself as a substitute for an appropriate environmental assessment of any proposal. This responsibility rests with proponents complying in a timely manner with the provisions of the Act before proposals are referred to the Committee

PROGRAM

Project delivery system

129. The project will be delivered via a Project Management—Design and Construct contract with a Guaranteed Maximum Price. This delivery system was adopted by the FAC in the recently completed Brisbane international terminal. The stages of the project are:

Planning Study	Complete
Proving Phase	May 1997 - Oct 1997
Confirmation Phase (Design)	Nov 1997 - Feb 1998
Commitment Phase (Construction)	By Dec 1999.

130. The successful contractor will be appointed in mid May 1997, upon which the Proving Phase will begin. Subsequent phase appointments are conditional upon relevant approvals. Detailed programming has identified the need for early works commencing around July 1997 and involving mainly pavement and associated airside works. These early works can be undertaken in parallel with the Proving and Confirmation Phases.

131. The Proving Phase will maintain flexibility for review of the planning options developed during the Planning Study.

Development program

132. All construction and commissioning works are planned to be complete by January 1, 2000.

133. Based on the assumption that the necessary approvals are obtained, design of the initial apron works were planned to start in May 1997. In order to provide new aprons, early land preparation works will be required. As a result, the design and construction of the aprons is the most critical activity from a program point of view with early works scheduled in July 1997. It is expected that major terminal structure works will commence in early 1998.

Operational considerations

134. Construction work will be staged to minimise the effect on operations. The existing number of active gates and aerobridge served gates will be retained at all times and increased on an incremental basis as construction proceeds, to meet forecast demand. The construction works associated with the proposed expansion of facilities are expected to generate 300-400 jobs during the period of main activity.

135. The staging of construction activities will ensure that there will be minimum disruption to operational activities and passenger comfort. Method of Work Plans will be prepared for each work stage to ensure this. Appropriate boardings will be provided to screen off work areas and, if necessary, some works will be undertaken outside normal terminal operating hours.

Occupational Health & Safety

136. The new facilities will be constructed adjacent to or within the existing complex. Construction planning will ensure that there will be minimal disruption to existing operations. Suitable precautions will be taken, where necessary, to ensure safe public access through work areas.

137. Due consideration will be given to providing a work environment consistent with the appropriate legislation.

Asbestos

138. Materials containing asbestos were used in ceiling spaces of the original terminal (Pier B). Where new terminal works require disturbance of these areas, appropriate precautions for the containment or removal of asbestos will be taken to ensure the safety of building workers, terminal staff and the public.

COST AND REVENUE

Cost

139. The estimated cost of the works is \$350m, broken down as follows:

	\$m
Terminal Works	187
Apron and Taxiway Works	85
Project Management & Design	23
Contingency/Escalation/Site Allowance	55

Cost of retail facilities

140. The Committee questioned the cost and the amount of space which will be made available for lease by retailers. The FAC advised that the retail space to be provided from within the total budget will comprise the shell only, which retailers will need to fit out at their own cost. Retail space will be increased by 9,000 square metres at a unit cost for shell space of \$1,500 per square metre. In total, retail shell space will cost about \$20 million.

Revenue

141. Revenue sources are passengers and, to a lesser extent, the non-travelling public and the airlines. The main sources of income arise from aerocharges and retail spending revenues.

142. IATA advised the Committee that it would support a development which is cost effective and one in which all airline charges are transparent. IATA has been assured by the FAC that current aerocharges are not expected to increase and that funding of the proposed development will be recovered from the growth in the number of aircraft movements and growth in retail revenue. This was confirmed by the FAC. The project was put to the FAC Board on the basis of cost recovery from the time improved facilities are delivered (December 1997) through to the design year of 2003. The Committee was assured that, on the basis of financial modelling, the project meets the FAC's internal rate of return.

143. The FAC advised the Committee that retail sales were the subject of extensive market research. This recognised that the airport is in competition with other retail outlets. Nevertheless, the FAC believes a considerable amount

of sales are unique to airports and to duty free establishments. At present sales revenue within the terminal is about \$250 million per annum. In comparison, a regional shopping centre, such as Westfield, generates about \$500 million per annum.

144. It was stressed by the FAC, that without retail outlets, the only revenue stream remaining would be increased aeronautical charges. Retail sales are therefore the means by which charges are kept low and the cost of air travel is contained.

145. The FAC advised that while current aerocharges are not expected to rise and remain among the lowest in the world, the increase in aircraft movements suggests at least a linear growth in aerocharge revenues. The real possibility that smaller aircraft will be replaced with larger B747 and wide wing aircraft and greater capacity utilisation by the airlines, support assumptions that aeronautical revenue will increase in greater proportion than actual movements might indicate.

Committee's Conclusion

146. A large proportion of the cost of the proposed investment will be offset by increased revenue expected from retail operations. The Committee was assured by the FAC of the commercial viability of the project.

Committee's Recommendations

147. The Committee recommends the proposed Sydney Airport: International Terminal—Olympic Upgrading project proceed at an estimated cost of \$350 million.

148. Any further development of Sydney Airport should have appropriate environmental clearances before being referred to the Committee.

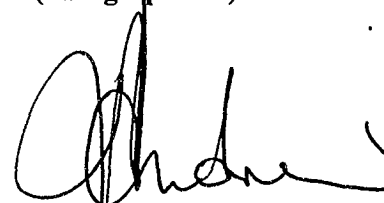
CONCLUSIONS AND RECOMMENDATIONS

149. The Committee's conclusions and recommendations and the paragraphs in which they appear in the report are set out below:

1. **Sydney Airport, as the main gateway to Australia, has an essential role in meeting increasing passenger demand into the next century. (Paragraph 46)**
2. **As no decision on the location of a second Sydney airport has yet been made, Sydney Airport remains the only international airport in NSW. (Paragraph 47)**
3. **If improvements required to cater for increased traffic are not made, the ability of the airport to cope with demand will be seriously impeded. (Paragraph 48)**
4. **The timing of the Olympics and its associated pressures on facilities mean that any improvements will need to commence immediately in order to avoid construction during the Olympic period. (Paragraph 49)**
5. **Forecasts provided by the Federal Airports Corporation indicate that ten additional gate positions and associated facilities are required which would satisfy requirements until 2003. (Paragraph 50)**
6. **Options were considered for developing two expansion zones and the preferred options (1 and 5) are the least costly and most appropriate. (Paragraph 60)**
7. **The Committee accepts assurances from Airservices Australia and the Federal Airports Corporation that air traffic safety measures associated with Option 5 are appropriate and adequate. (Paragraph 102)**
8. **The success of the project is dependent on continuing and adequate consultations between the Federal Airports Corporation and all affected users. (Paragraph 123)**
9. **Particular attention should be given to the needs of people with disabilities during the detailed design phases. (Paragraph 124)**
10. **A large proportion of the cost of the proposed investment will be offset by increased revenue expected from retail operations. The Committee was assured by the FAC of the commercial viability of the project. (Paragraph 146)**

11. The Committee recommends the proposed Sydney Airport: International Terminal—Olympic Upgrading project proceed at an estimated cost of \$350 million. (Paragraph 147)

12. Any further development of Sydney Airport should have appropriate environmental clearances before being referred to the Committee. (Paragraph 148)



Neil Andrew MP
Chairman

19 June 1997

WITNESSES

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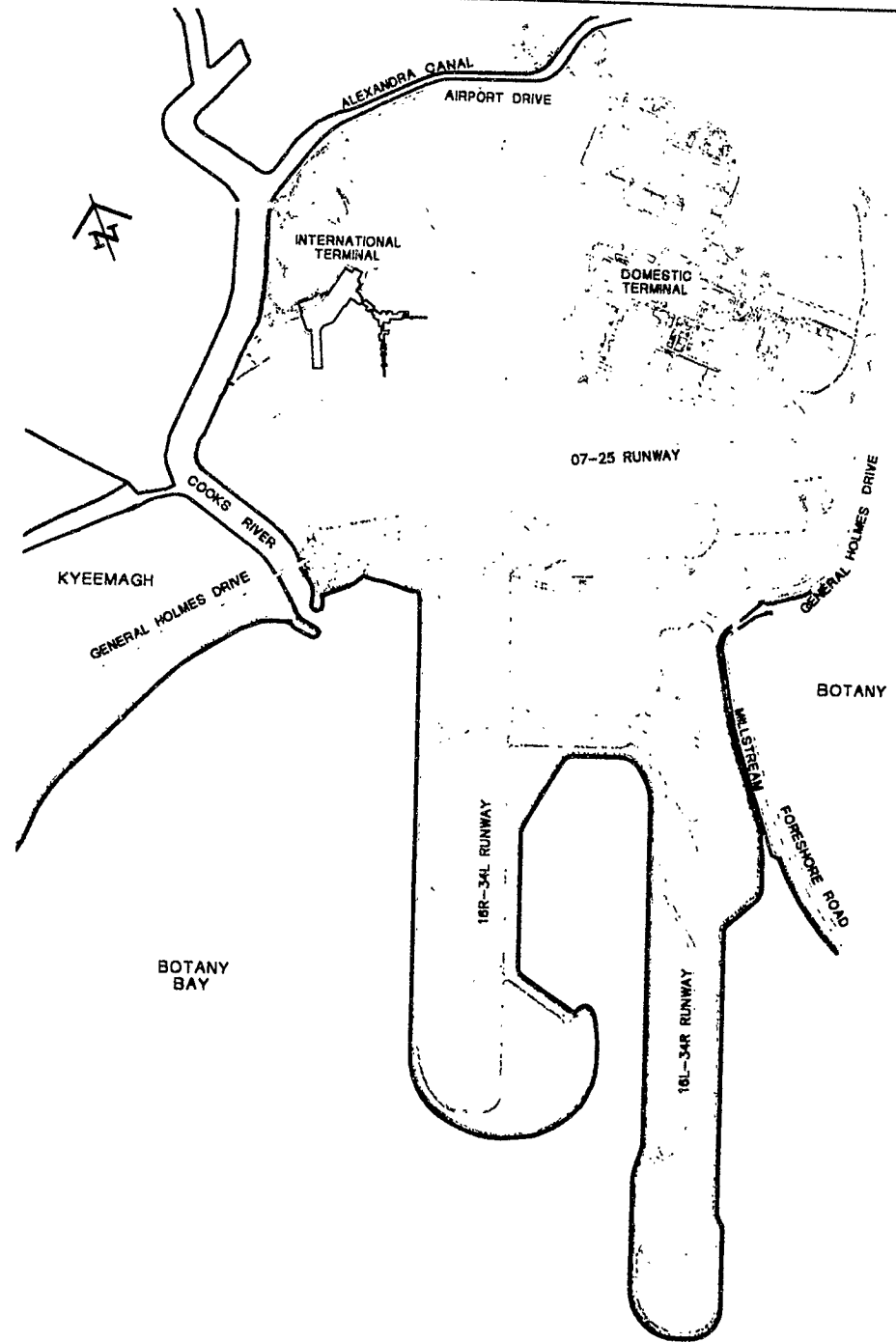
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2232

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2020

PROJECT PLANS

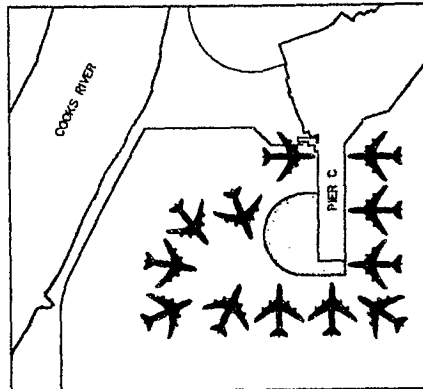
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Sydney Airport - Locality Plan

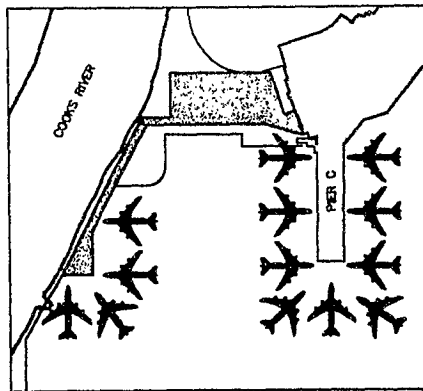


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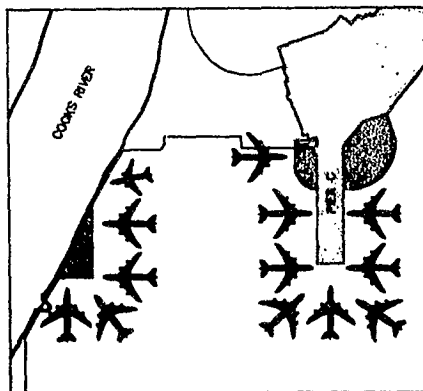
Western Expansion Zone - Planning Options



OPTION 1

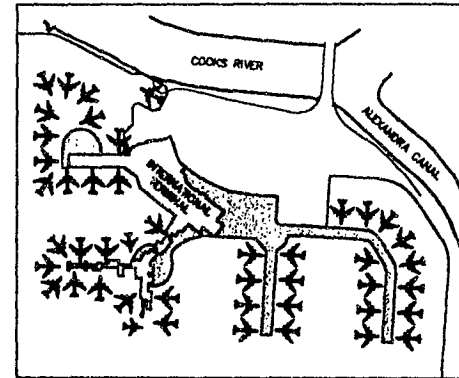


OPTION 2

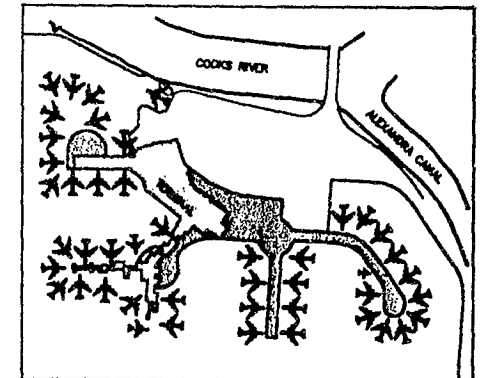


OPTION 3

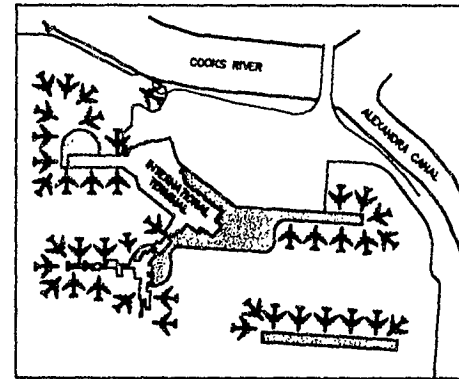
Northern Expansion Zone - Planning Options



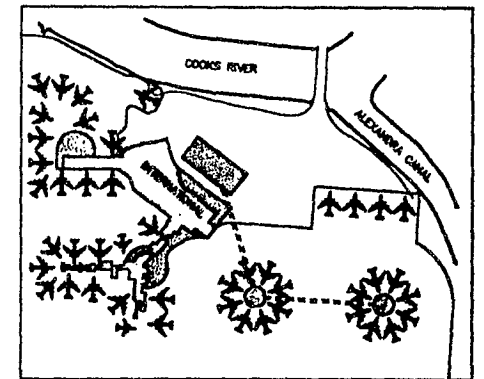
OPTION 1



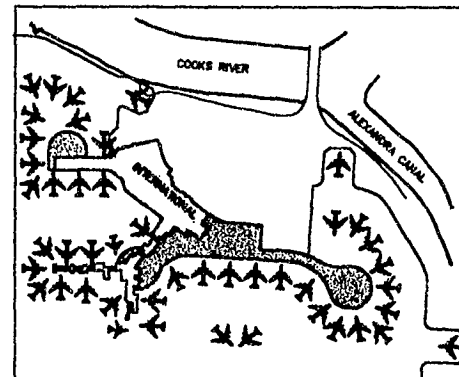
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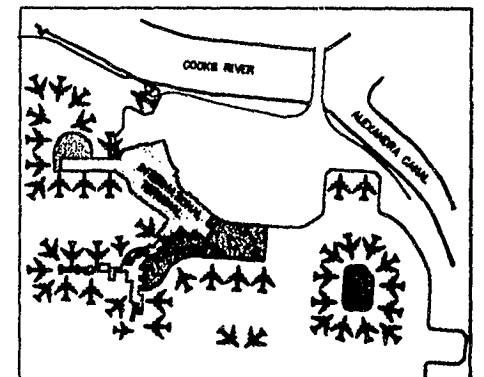
OPTION 3



OPTION 4

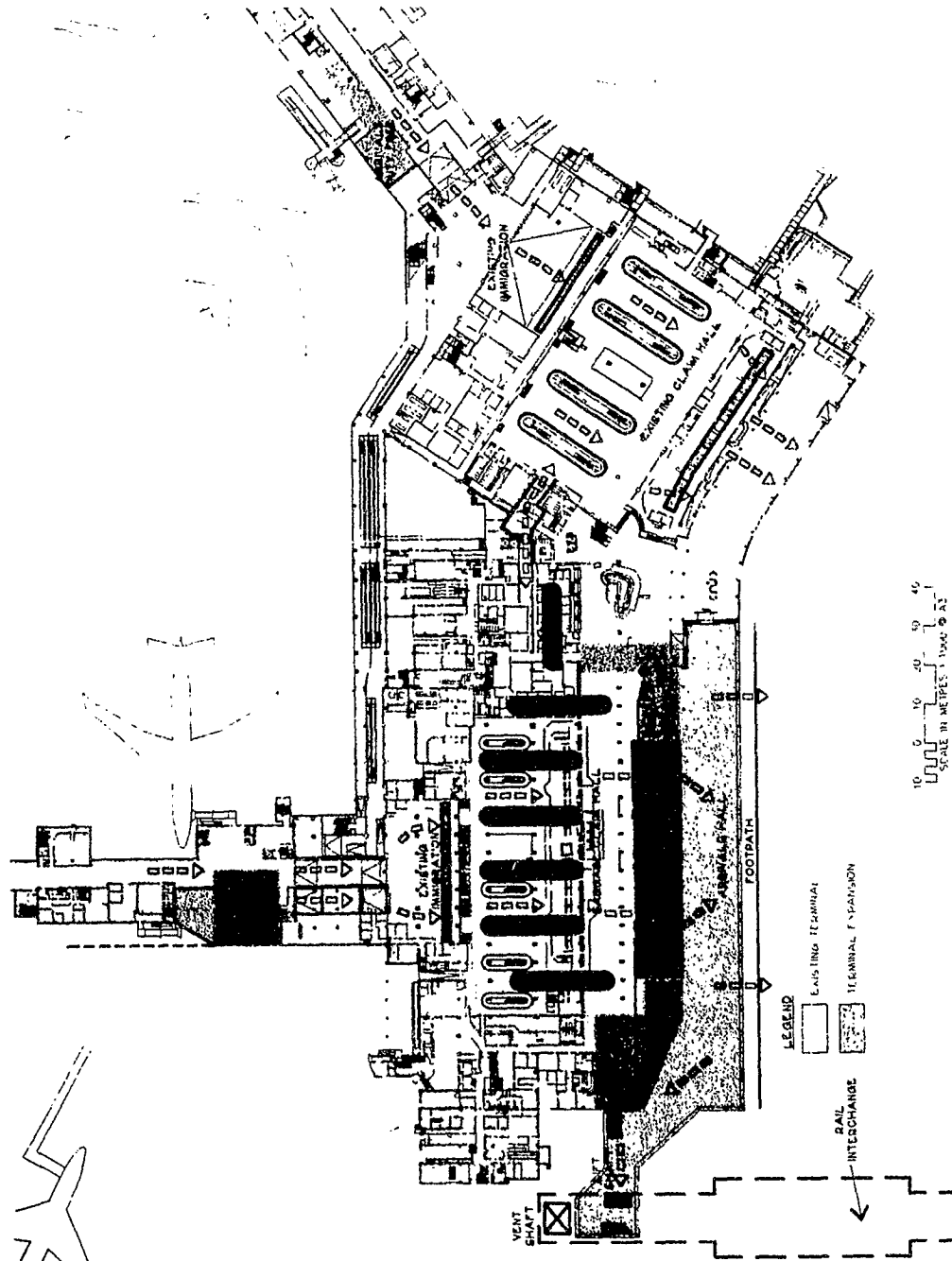


OPTION 5

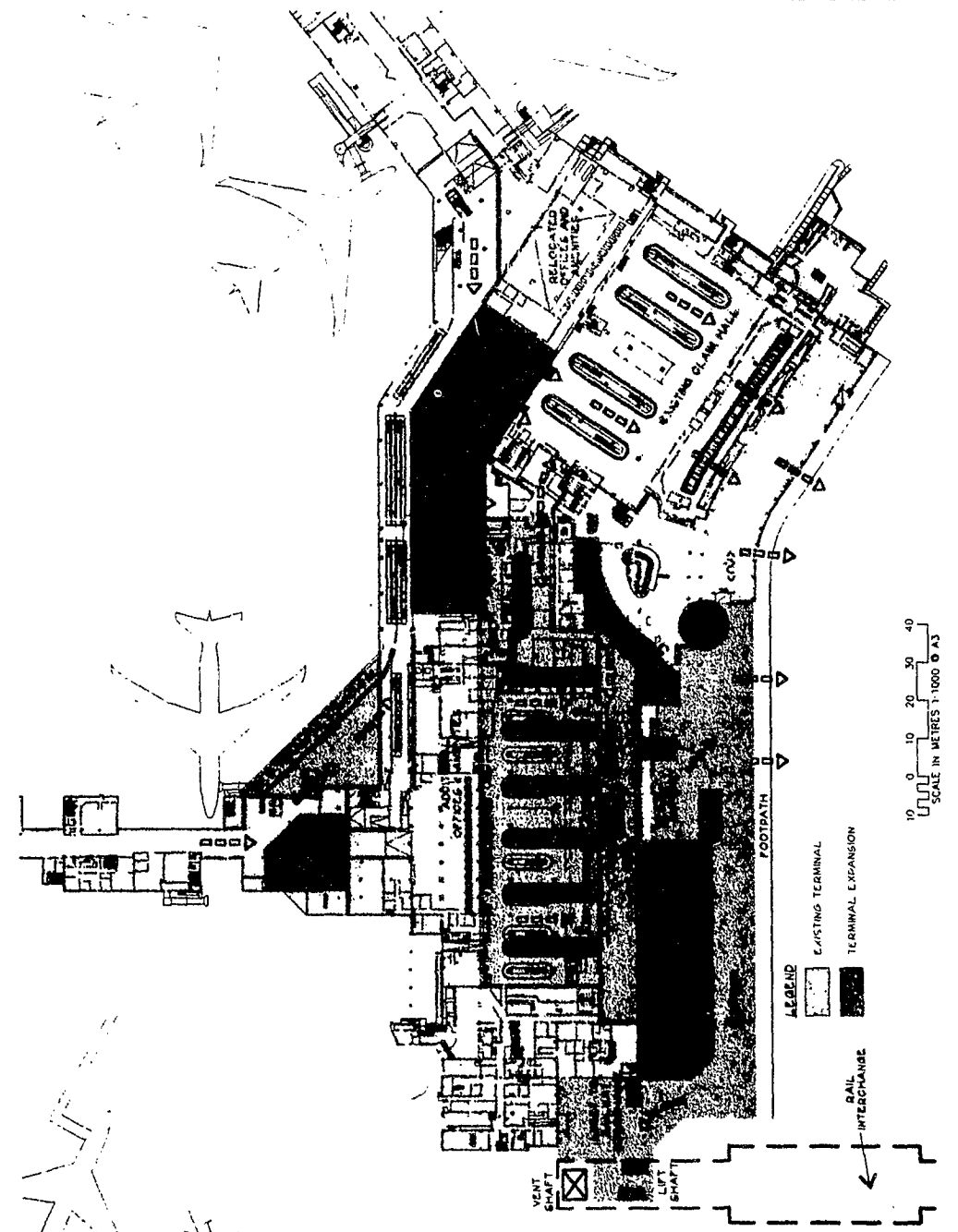


OPTION 6

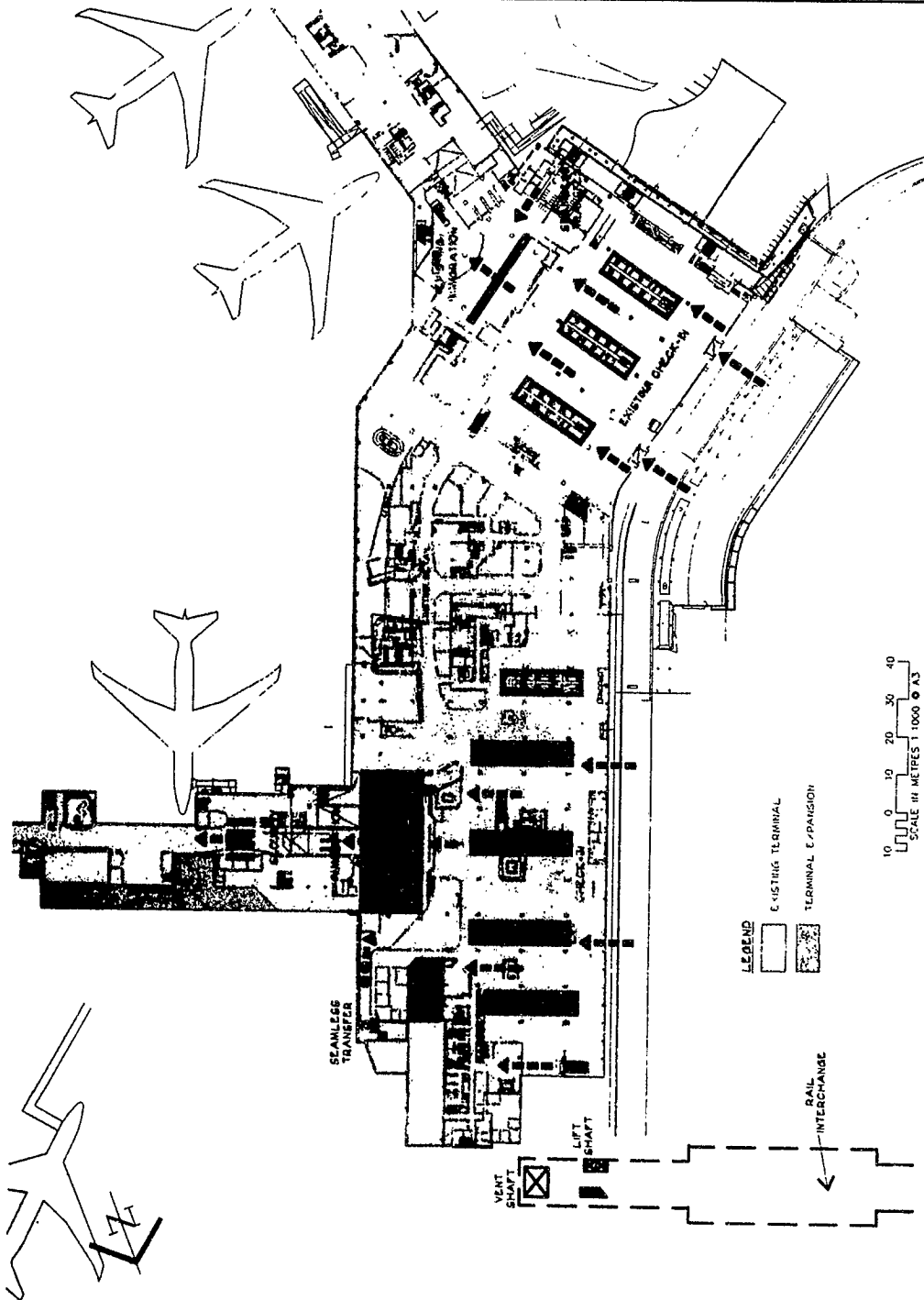
Landside Terminal - Arrivals Level - Proposed Works



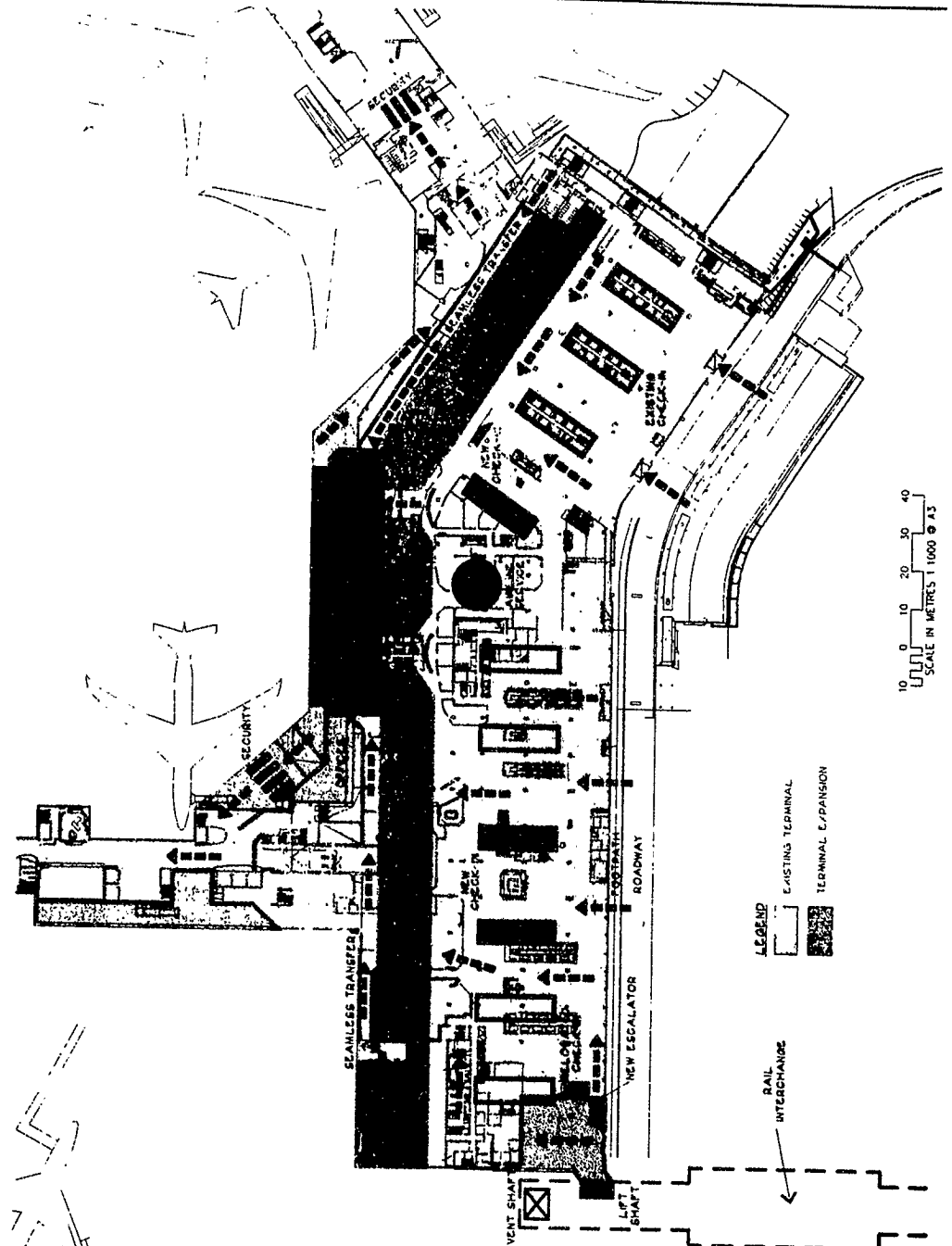
Landside Terminal - Arrivals Level - Centralised Option



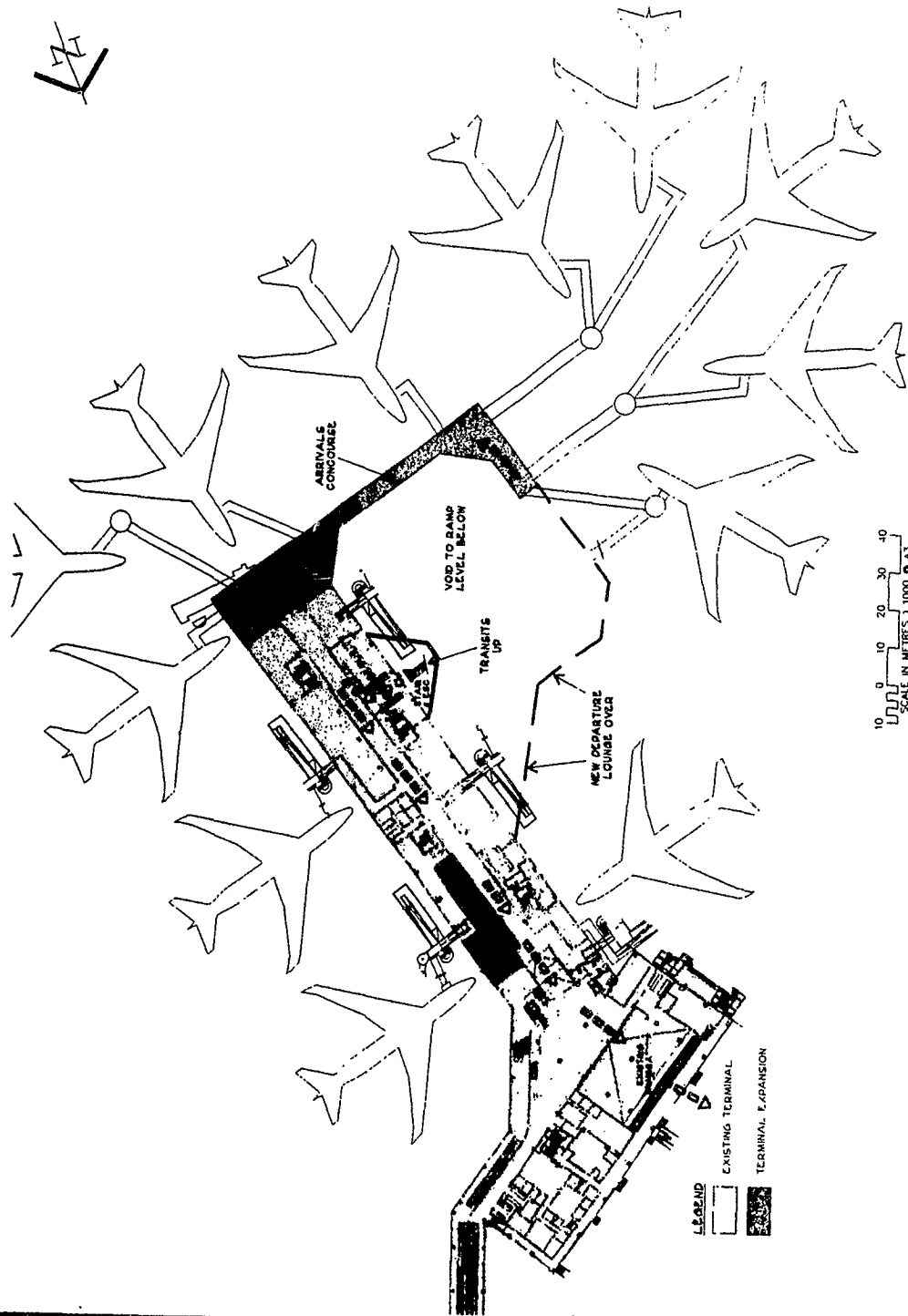
Landside Terminal - Departures Level - Proposed Works



Landside Terminal - Departures Level - Centralised Option



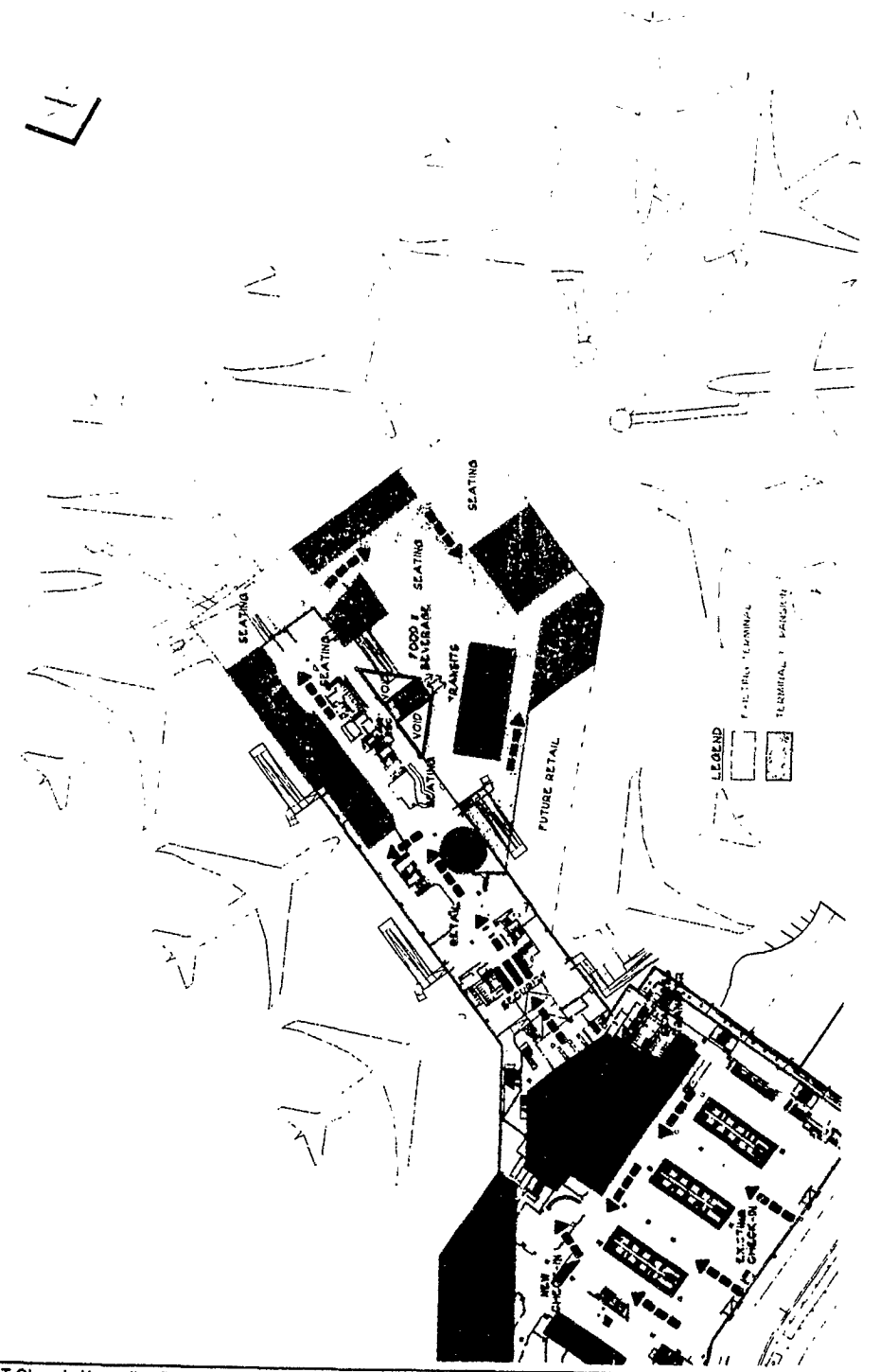
Pier C - Arrivals Level



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TERMINAL EXPANSION

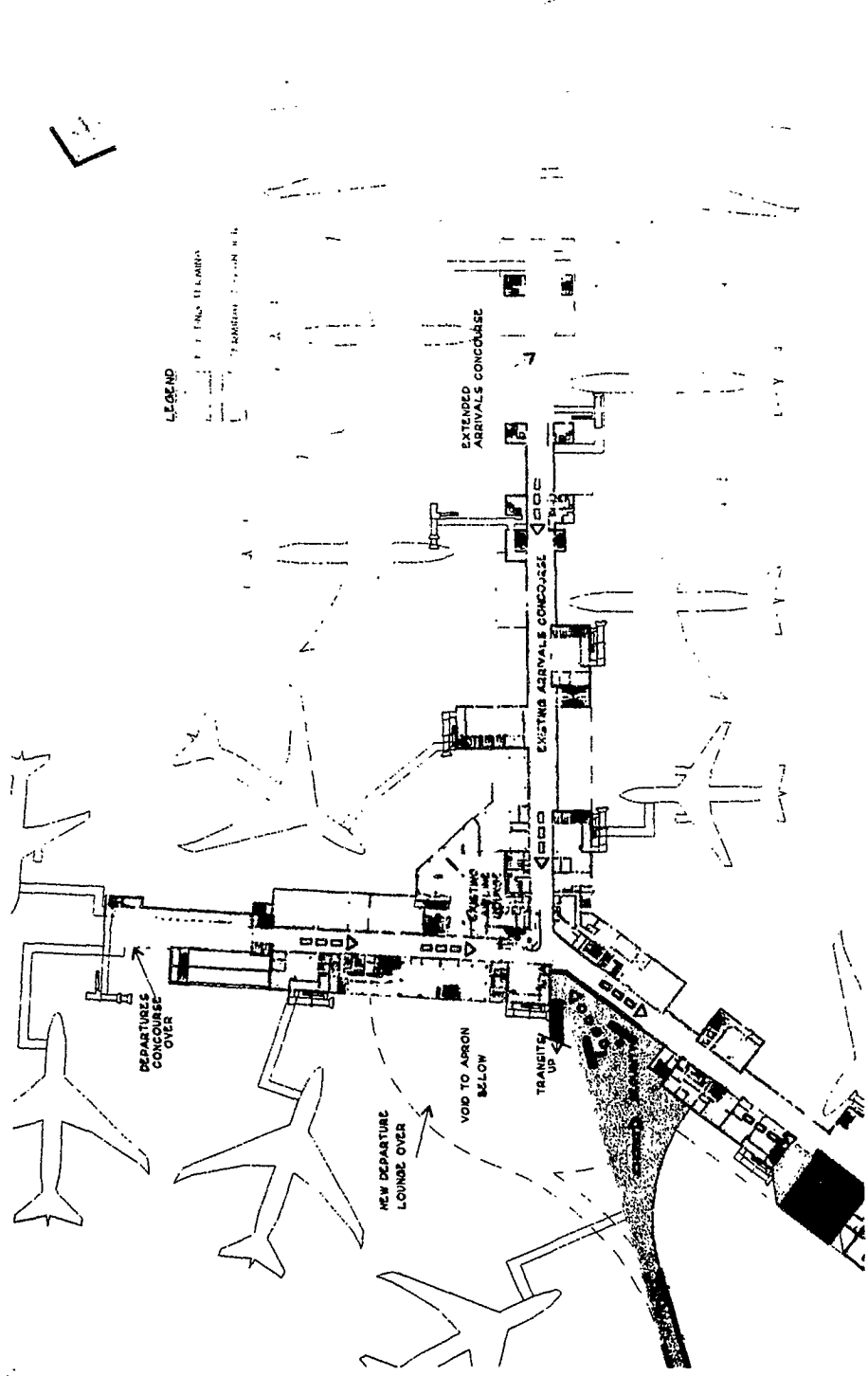
Pier C - Departures Level



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SCALE IN METRES 1:1000 @ 23

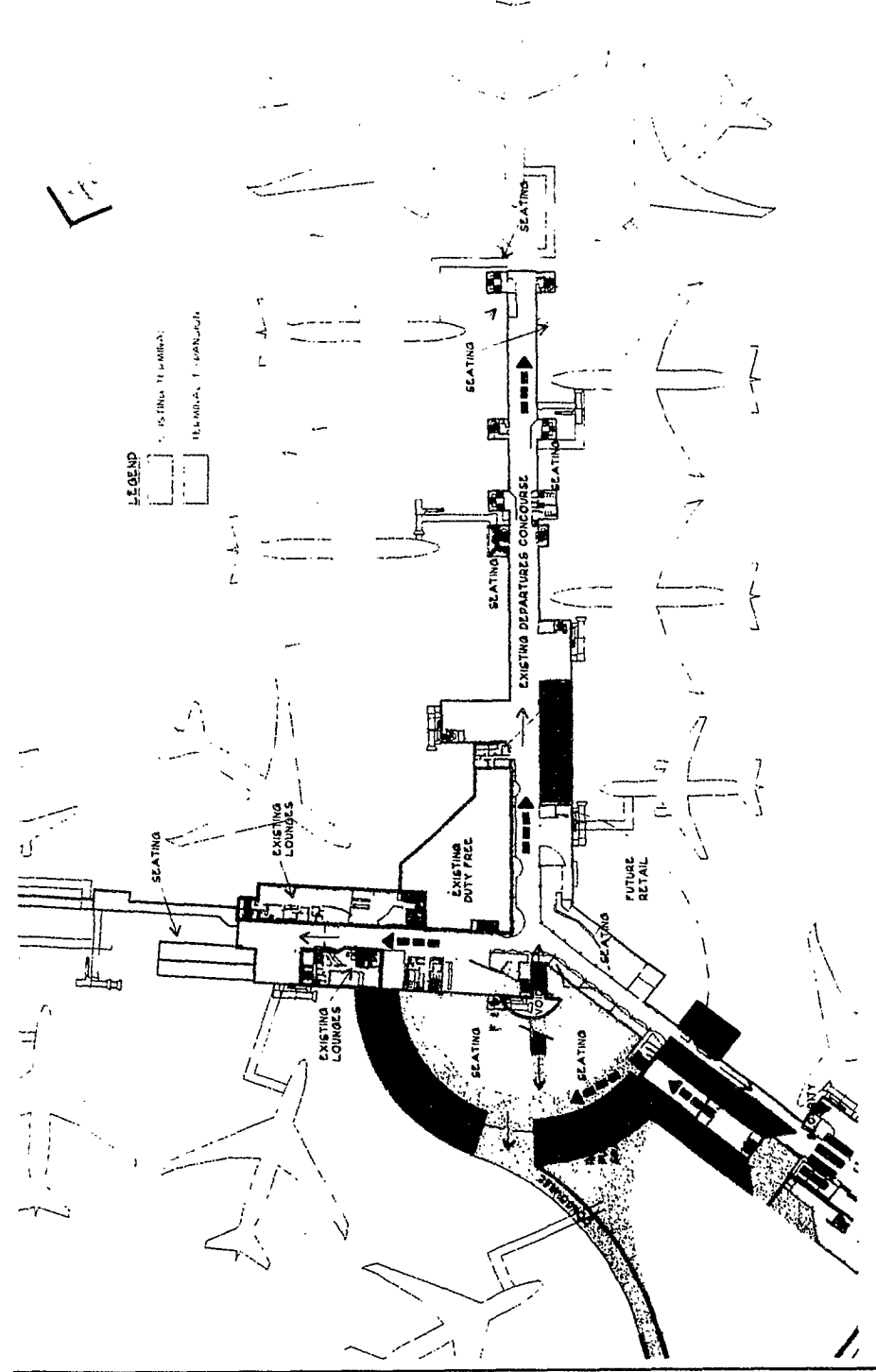
LEGEND
EXISTING TERMINAL
TERMINAL EXPANSION

Pier B - Arrivals Level



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SCALE IN METRES 1:1000 @ A3

Pier B - Departures Level



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SCALE IN METRES 1:1000 @ A3

Northern Concourse - Departures Level

