THE PARLIAMENT OF THE ~~COMMONWEALTH OF AUSTRALIA~~

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

REPORT

relating to the proposal for

EXTENSIONS TO INTERNATIONAL TERMINAL FACILITIES, BRISBANE AIRPORT

Queensland

(Sixth Report of 1981)

Australian Government Publishing Service
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Parliamentary Standing Committee on Public Works

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MEMBERS OF THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

(Twenty-sixth Committee)

Melville Harold Bungey, Esq., M.P. (Chairman)
Senator Jean Isabel Melzer (Vice-Chairman) [1]

Senate	House of Representatives
Senator Bernard Francis Kilgariff	David Bruce Cowan, Esq., M.P.
Senator Harold William Young [2]	Benjamin Charles Humphreys, Esq., M.P.
	Urquhart Edward Innes, Esq., M.P.
	James Leslie McMahon, Esq., M.P.
	Murray Evan Sainsbury, Esq., M.P.

[1] Retired 30 June 1981.

[2] Ceased to be member on election as President of the Senate on 18 August 1981.

EXTRACT FROM
THE VOTES AND PROCEEDINGS OF THE HOUSE OF REPRESENTATIVES,
NO. 27 DATED 30 APRIL 1981

29 PUBLIC WORKS COMMITTEE - REFERENCE OF WORK - INTERNATIONAL TERMINAL FACILITIES, BRISBANE AIRPORT, QLD: Mr. McVeigh (Minister for Housing and Construction), pursuant to notice, moved - That, in accordance with the provisions of the Public Works Committee Act 1969, the following proposed work be referred to the Parliamentary Standing Committee on Public Works for consideration and report: Extensions to international terminal facilities, Brisbane Airport, Qld.

Mr. McVeigh presented plans in connection with the proposed work.

Question - put and passed.

WITNESSES

Barrell, T.F., Esq., Project Manager, Department of Housing and Construction, 145 Eagle Street, Brisbane, Queensland

Clarke, J.J., Esq., Senior Performance Engineer, Qantas Airways Limited, 70 Hunter Street, Sydney, New South Wales

Cox, M.J., Esq., Property Development Manager, Qantas Airways Limited, 70 Hunter Street, Sydney, New South Wales

Darling, Mrs. E.E., M.P., Member for Lilley, Parliament House, Canberra

Duncan, L.D., Esq., Officer-in-Charge, Travel Branch, Department of Immigration and Ethnic Affairs, 167 Eagle Street, Brisbane, Queensland

Fairweather, I., Esq., Chief Engineer and Manager, Department of Works, Brisbane City Council, GPO Box 1434, Brisbane, Queensland

Hinchcliffe, D.B., Esq., Electoral Secretary to Member for Lilley, Commonwealth Parliament Offices, 295 Ann Street, Brisbane, Queensland

Hughes, D.E., Esq., Senior Quarantine Inspector, Commonwealth Department of Health, 232 Adelaide Street, Brisbane, Queensland

Kirkham, B.E., Esq., Acting Regional Director - Queensland, Northern Territory and Papua New Guinea; Qantas Airways Limited, 288 Queen Street, Brisbane, Queensland

Lakeland, E.H., Esq., Controller of Buildings, Department of Transport, P.O. Box 367, Canberra City, Australian Capital Territory

Lawrence, E.J., Esq., Flight Arrangements Co-ordinator, Qantas Airways Limited, 70 Hunter Street, Sydney, New South Wales

Mann, F.G., Esq., Senior Inspector, Special Services Section, Department of Business and Consumer Affairs, GPO Box 1464, Brisbane, Queensland

McCann, N.A., Esq., Regional Director, Department of Immigration and Ethnic Affairs, 167 Eagle Street, Brisbane, Queensland

McLagan, D.S., Esq., Principal Architect (Aviation), Department of Housing and Construction, ACT.TAB Building, 470 Northbourne Avenue, Dickson, Australian Capital Territory

Moore, W.W., Esq., Collector of Customs, Queensland, Department of Business and Consumer Affairs, GPO Box 1464, Brisbane, Queensland

Reid, G.K.R., Esq., First Assistant Secretary, Ground Facilities Division, Department of Transport, P.O. Box 367, Canberra City, Australian Capital Territory

Sanderson, G.C., Esq., Principal Engineer, Co-ordinator-General's Department, Executive Building, 100 George Street, Brisbane, Queensland

Stokes, L.C., Esq., Tour and Charter Manager, Greyhound Coaches Pty Ltd, 96 Victoria Street, West End, Queensland

Tees, Ms. A.P., Director/Secretary, Skenner Enterprises, P.O. Box 1, Broadway, Queensland

Treloar, H.J., Esq., Acting Senior Assistant Collector of Customs, Department of Business and Consumer Affairs, GPO Box 1464, Brisbane, Queensland

Walker, R.C., Esq., Engineering Director, Qantas Airways Limited, Administration Building 2, Sydney Airport, Mascot, New South Wales

Walton, H.R., Esq., Director, Aviation Security, Department of Transport, P.O. Box 367, Canberra City, Australian Capital Territory

Wheeler, T.M., Esq., Director, Business, Department of Transport, P.O. Box 367, Canberra City, Australian Capital Territory

Woonton, I.W., Esq., Chief Engineer, Airport Planning and Development, Department of Transport, P.O. Box 367, Canberra City, Australian Capital Territory

Young,D.G., Esq., Director (Technical), Co-ordinator General's Department, Executive Building, 100 George Street, Brisbane, Queensland

C O N T E N T S

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

INTERNATIONAL TERMINAL FACILITIES
BRISBANE AIRPORT, QUEENSLAND

R E P O R T

By resolution on 30 April 1981, the House of Representatives referred to the Parliamentary Standing Committee on Public Works for investigation and report the proposed extensions to international terminal facilities, Brisbane Airport, Queensland.

The Committee has the honour to report as follows:

THE REFERENCE

1. The Proposal referred to the Committee is to enlarge passenger holding lounges, check-in areas and the baggage claim areas to alleviate congestion and to provide additional aircraft apron parking.

2. The works proposed will extend the life of the international terminal until approximately 1990.

3. It is intended that these extensions be available in time to handle the increased passenger traffic expected through Brisbane Airport during the Commonwealth Games in September 1982.

4. The estimated cost of the proposal is $2.8 million at February 1981 prices.

THE COMMITTEE'S INVESTIGATION

5. The Committee received written submissions and drawings from the Department of Transport and the Department of Housing and Construction and took evidence from their representatives at

a public hearing in Brisbane on 18 and 19 June 1981. Written submissions and evidence were received from QANTAS Airways Ltd., the Queensland Government, Brisbane City Council, Greyhound Coaches Pty Ltd, and Skennar Enterprises. At the request of the Committee officers of Department of Health, the Department of Immigration and Ethnic Affairs and the Bureau of Customs gave evidence. Mrs Elaine Darling, MP, presented submissions. Written submissions were also received from Senator D.J. MacGibbon and Mrs R.B. Himstedt.

6. Prior to the public hearing the Committee inspected the International Terminal facilities at Brisbane Airport.

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

BACKGROUND

8. The existing International Terminal Building (ITB) at Brisbane Airport was officially opened in December 1975. Prior to that international passenger traffic arrived and departed through a converted igloo hangar constructed during the Second World War. The need for the present ITB arose from passenger capacity limitations, siting, structural and safety factors. The present ITB was not referred to the Committee for investigation and report to Parliament, being exempted on the grounds of urgency. However the site and nature of the building were in accordance with a report prepared by the Bureau of Transport Economics in March 1974. Construction of the ITB at the site finally chosen was considered on the basis of easier site preparation, access and costs.

9. The Committee's Tenth Report of 1979 (Parliamentary Paper 343/1979) covered the Initial Works of Phase 1 of the airport redevelopment comprising site reclamation, construction of a floodway channel, a new runway, associated taxiway system

and engineering works. In that report the Committee recommended deferment of a new airport until at least 1986 and further recommended that a new ITB should be included in Phase 1 works of Airport development. The latter recommendation was based on evidence that taxing distances for international aircraft would be excessive and could be dangerous. The master plan for Brisbane Airport ultimately provides for a new ITB, to be located on the western side of the main 02/20 runway, to cost about $32.0 million.

10. The balance of works of the airport redevelopment will be the subject of further references to the Committee.

11. Current Facilities The ITB is divided into a number of functional areas for processing outgoing and incoming passengers, accommodating visitors, as well as facilities for QANTAS, which handles all airline activities, and various Commonwealth Departments.

12. Outgoing passengers check in at the ticketing area in the public departures hall. Their baggage is placed on a conveyor belt which takes it outside the building for loading onto aircraft baggage containers. After checking in passengers proceed through outward immigration and security to the forward lounge where they wait until called to board their aircraft.

13. Incoming passengers enter the terminal through the health holding lounges. After health clearance they go through the primary customs area, where quarantine, customs and immigration formalities are carried out, enter the customs hall, collect their baggage, go through formal customs and enter the public arrivals hall.

14. Transit passengers enter through the health holding lounges and after health clearance go to the forward lounge.

15. Visitors to the terminal remain in the public concourse.

16. A number of government departments and agencies responsible for quarantine and health, immigration and security and customs have offices and other facilities located throughout the building.

THE NEED

17. Passenger movement on international services at Brisbane Airport increased from 4,562 in 1960 to 341,372 in 1980, an average annual growth rate of 24.1 per cent. International aircraft movements increased from 260 in 1962 to 3,339 in 1980, increasing at an average annual rate of 15.2 per cent. Actual and forecast passenger and aircraft movements, provided by the Department of Transport are given below.

Year	Passengers	Aircraft Movements
1971	56,257	1,685
1972	71,049	1,748
1973	107,046	1,814
1974	133,917	1,906
1975	190,443	2,856
1976	254,530	3,500
1977	250,855	3,149
1978	272,188	3,375
1979	301,112	3,129
1980 (provisional)	341,372	3,339
1985	499,800	4,540
1990	637,900	4,800
1995	814,200	5,030

18. The Department of Transport believes the projections reflect the likely long term impact of new pricing structures

and economic conditions. Passenger movements are expected to grow at 7.9 per cent to 1985 and 5 per cent thereafter.

19. About 50 per cent of the passenger traffic using the ITB is Trans-Tasman. The recent requirement for New Zealanders travelling to Australia to hold passports has imposed an additional workload on processing facilities.

20. The terminal opened in 1975 and was designed to handle 240 arriving and 240 departing passengers every 20 minutes.

21. Occupancy figures, or load factors have increased and most B747 aircraft now have a seating capacity in excess of 400 passengers. Thus arrival or departure can exceed 240 passengers with a current peak on Wednesdays of 600 passengers arriving in 15 minutes.

22. Evidence indicated that in the 12 month period ending 15 June 1981 there were 108 occasions when the number of originating and transit passengers in the forward lounge has exceeded 400 in a 60 minute peak period. The forward lounge was designed for 480 outbound and transitting passengers; its size was reduced by 100 square metres as a consequence of security arrangements introduced after the terminal was built. The actual capacity of the forward lounge is thus less than 380 people with a seating capacity of 60 per cent. The lack of depth in front of the outward immigration desks causes queues of departing passengers stretching beyond the entrance door and into the public concourse area.

23. Facilities for arriving passengers are similarly deficient in a number of areas. With increased load factors and almost simultaneous arrival of some flights the health holding area has insufficient space and queues often extend

through the entrance to the outside of the building. In the primary customs area queues extend to the health desks in the health holding lounge, causing delays to health processing. In the luggage claim area the non-continuous conveyor belt unit was designed to handle baggage from 240 passengers every twenty minutes. The conveyor belt is no longer suitable due to congestion caused by the significant increases in the volume of baggage.

24. The apron in front of the terminal can accommodate three B747 and two B707 aircraft, or four B747. At present the apron is used by 5 B747 on Fridays, 4 on Sundays and 4 on Monday morning (this includes a B747SP). These occupancies do not include smaller jet aircraft of which a number require parking, particularly on Monday mornings. In the 12 month period ending April 1981 the apron also accommodated 54 other "itinerant" aircraft which included B707 and DC8 aircraft. These aircraft have commonly stayed for 24 hours. Should departures be delayed congestion would occur and in the event of a diverted flight from Sydney there would be insufficient space for all aircraft.

25. It was put to the Department of Transport that it would be possible to avoid the problem of congestion by staggering arrivals and departures throughout the day rather than having flights arriving and departing within 20 minutes of each other and that even if this were not possible the congestion could be reduced by relevant government departments and agencies fully manning their control points.

26. In answer to the first suggestion QANTAS representatives stated schedules should be viewed in the context of schedules flown by an operator on all routes, which are required to comply with curfews, depend on aircraft turnaround times and the availability of aircraft, and the

attractiveness of arrival and departure times. In other words, to change an arrival or departure time to avoid congestion at a terminal may ultimately require a curfew to be broken at another airport, aircraft arriving at an unattractive time for passengers, or aircraft requiring to be redeployed.

27. In answer to the second suggestion that more staff be used to cope with long queues, representatives from a number of departments, in acknowledging this as one option, pointed out that even though more passengers are being processed, the average time it takes to process a load has remained fairly constant. This has been achieved by procedural and administrative arrangements. More staff would certainly help, but delays could also occur in the baggage claim area. Departments have a permanent staff at the terminal and additional staff are brought in to man additional points as required, so the congestion cannot be attributed solely to manning levels at check points.

28. Committee's Conclusion The existing International Terminal Facilities at Brisbane Airport are inadequate.

THE PROPOSAL

29. The aim of the proposal is to extend the ITB to permit the loading and unloading of two arriving and two departing Boeing 747 aircraft, each holding 444 passengers, in one hour. To do this will require increasing the present floor area of 7068 square metres by 3110 square metres and to rearrange some functional areas. The extensions will be along the full apron frontage of the building and along both sides. The enlarged floor area will be allocated as follows:

- the health holding lounge area to be enlarged by 200 square metres or 100 square metres for each lounge; these will be on the apron side of the building and will provide more space in the primary customs area;
- the primary customs area to be enlarged by 390 square metres to provide more queuing space;
- the baggage claim facilities in the customs hall will be enlarged and the present non-continuous conveyor belt will be replaced by a continuous belt system to handle baggage from a fully loaded B747;
- the baggage check in area to be enlarged by 185 square metres; as mentioned previously this area near the departure entrance becomes congested by milling passengers and visitors; the enlarged area is designed to cope with increased outward passenger movement, reduce the mingling of passengers and visitors thus expediting the movement of passengers to the forward lounge;
- the forward departure lounge is to be enlarged by 618 square metres; this expansion and the establishment of a bar buffet area and enlarged duty free shop will be able to accommodate about 890 departing passengers with seating being provided for 60 per cent;
- an elevated and enclosed observation deck along the apron side of the building; this has been included to enable visitors to the terminal to observe arriving and departing passengers; at present visitors observe arriving and departing passengers from a knoll at the northern end of the terminal. An undercover walkway, formed by the observation deck overhang has been included to provide some relief to passengers from heat and inclement weather. Access to the elevated observation deck will be from inside or outside the terminal;
- a facility for the operation of customs drug detection dogs will be provided in the baggage breakdown area outside the customs hall.

Other significant internal rearrangements and additions are as follows:

- the relocation of car rental areas from the centre of the arrivals hall, thereby increasing space for arriving passengers;
- an additional departure tax collection booth;
- relocation of some offices to provide more space for processing outward passengers;
- additional toilets in the forward lounge;
- an additional three outwards Customs/Immigration desks;
- alterations and additions to office areas occupied by Commonwealth departments;
- additional space for the currency exchange concession.

It is also proposed to extend the aircraft apron by 40 metres towards the southwest which will give the apron capacity to accommodate five B747 aircraft.

30. Construction details are set out in Appendix A. A site plan and a floor plan, providing more detail, follow Appendix A.

31. Alternatives In evidence the Department of Transport stated the only alternative to the proposal would be to construct a new ITB, to be completed in 1986, on the site chosen for the New Brisbane International Airport. It would mean the existing ITB would continue to be used for a further 3 and a half years.

32. On the other hand an analysis showed that it was clearly more economical for extensions to the present ITB, costing $2.8M, which would enable it to be used until 1990. By this time a new terminal would be completed as part of the total airport redevelopment.

33. Tyre Requirements As mentioned in paragraph 9 the Committee recommended in its 1979 report that a new ITB should be included in Phase 1 works of the airport development. This recommendation was based on evidence that taxing distances for international aircraft between the present ITB and the proposed 02/20 runway would be excessive and could be dangerous. Taxing distances will range from 2.8 kilometres for a takeoff on runway 02, to 6.45 kilometres for a takeoff on runway 20.

34. The safety problems have been overcome by changes to operating procedures and an increase in typre ply ratings on inboard landing gears. The revised operating procedures include slower taxing speeds and less braking.

35. The taxing distances to apply at Brisbane will fall within the range applying at a number of overseas airports with similar long taxing distances which are as follows:

Honolulu	4.5 km	(average, but up to 8 km)
Singapore	5.5 km	
Dallas Fort Worth	6.5 km	
John F. Kennedy	4.2 km	
Chicago O'Hare	4.5 km	

36. Under the revised operating procedures and increased tyre ply ratings both the Department of Transport and QANTAS believe the taxing distances between the present ITB and the proposed new 02/20 runway will not cause any tyre problems. The United States Federal Aviation Administration issued a new tyre standard in November 1979 to come into effect in December 1982 for wide bodied aircraft.

37. Committee's Conclusion The proposed extensions to the building and tarmac and other alterations are satisfactory.

38. Revenue from Concessions The proposal includes provision of additional space for food and liquor services to be provided and the duty free shop to be expanded. Revenue returns to the Commonwealth from the duty free concession amount to $43,000 per month as a consideration to trade and $3,210 per month rental. The lease on the existing duty free store expires in December 1982. The terms of the consideration to trade is on an escalating basis which will ensure that increased takings will give a higher return to the Commonwealth. The Department of Transport indicated that because of the lease the cost of relocation would be met by the Commonwealth. The Committee believes, however, that there may be scope within the lease agreement for the lessee to contribute towards the cost of relocation. The Department of Transport should explore this further.

39. Parking Additional space for carparking is not included in the proposal. The Department of Transport believes the present car park to be adequate. It can take about 280 cars and is run by a concessionaire. The ring road around the car park encompasses a larger piece of land than the car park and provides sufficient space for overflow parking on days when there is excessive demand. The land is available for ready conversion to a car park extension if and when required. The Committee believes that the question of adequate car parking should be carefully monitored by the Department of Transport.

40. Buses In evidence it was stated there is an urgent need for a special study of the methods by which passengers travelling in groups are met by coach operators and assisted in locating coaches. It was pointed out there is no holding area outside the customs hall to assemble groups, the footpath outside the terminal is too narrow and becomes crowded with travellers boarding hire cars and buses as well as travellers moving along the footpath to the coach parking area. The Department of Transport advised that local management procedures can be implemented to overcome congestion problems. The Committee

believes there to be considerable scope for improving the situation beyond implementing local management procedures and suggests the question of locating coach parking bays closer to the exit be fully investigated and reported in the Department's annual report.

SUBSEQUENT USE OF THE ITB

41. According to the Department of Transport the extensions will permit the terminal to operate until 1990. Because of this the Department of Transport was not in a position to plan in detail the eventual use of the building. It was mentioned the ITB site is proposed as an area for airfreight handling operations in the planning for the new Brisbane Airport. Its location near port facilities, some industrial areas and the QANTAS freight terminal were cited as factors favouring this planning.

42. QANTAS stated it would prefer to have air freight facilities adjacent to passenger terminals to avoid the cost of shunting aircraft long distances from the passenger terminal to the freight terminal.

43. A number of freight handling organisations have expressed an interest in establishing facilities at the airport and the building would suit some of them. Mention was also made of the possibility of using the building for workshops.

THE SITE

44. The ITB is located about 2 kilometres north of the existing domestic terminal facilities and about 4 kilometres south of the site proposed for the new domestic terminal complex which will form part of the remainder of the Phase 1 work for the total redevelopment of Brisbane Airport.

45. Access to the ITB is by sealed road either from the existing domestic facilities or from Sugarmill Road.

CONSULTATIONS

46. The proposal has the support of the Queensland Government and the Brisbane City Council. Both bodies expressed a desire to have the work completed in time for the Commonwealth Games. As part of the general upgrading of roads in Brisbane the Brisbane City Council is currently upgrading Kingsford Smith Drive which is the main route to the terminal.

47. Curfew The question of curfews was raised by a number of witnesses during the hearing. The Department of Transport advised that the curfew on the present runway system will remain until the runways are decommissioned and until the 02/20 runway becomes operational.

FOUNDATIONS FOR NEW ITB

48. In evidence it was suggested that work should immediately commence for the placing of fill for the new international terminal building. It was claimed that the presence of a dredge already on site would make this a practical proposition as well as affording savings in cost. The Department of Housing and Construction advised that there were no significant economic arguments warranting the fill being placed now.

49. It is planned to have the new International Terminal completed by 1991 and work on the terminal would commence in 1988. This means fill would not be required until 1987 if a year is to be allowed for settling to take place. The Committee has received a further reference relating to the provision of additional filling for a cross runway and the suggestion will be further examined by the Committee during that investigation.

LIMIT OF COST

50. The estimated cost of the extensions when referred to the Committee is $2.8M at February 1981 prices and comprises:

Building Extensions	$2.62M
Apron Extensions	$0.18M
	$2.8M

PROGRAM

51. One of the design constraints is that the building must remain in use for international passenger processing during the construction period. Accordingly construction activity has been planned to permit passenger operations to continue with a minimum of disruption and inconvenience to the public.

52. The construction period is twelve months, planning to commence in August 1981. External extensions to the terminal will be carried out during the early part of the period with internal alterations and additions programmed later. The building extensions are planned to be completed before the end of June 1982 with the apron extensions to be completed by the end of December 1981.

53. Committee's Conclusion The Committee recommends the construction of the work in this reference.

RECOMMENDATIONS AND CONCLUSIONS

54. 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.	THE EXISTING INTERNATIONAL TERMINAL FACILITIES AT BRISBANE AIRPORT ARE INADEQUATE	28

2. THE PROPOSED EXTENSIONS TO THE BUILDING AND TARMAC AND OTHER ALTERATIONS ARE SATISFACTORY 37

3. THE ESTIMATED COST OF THE WORK IS $2.8M AT FEBRUARY 1981 PRICES 50

4. THE COMMITTEE RECOMMENDS THE CONSTRUCTION OF THE WORK IN THIS REFERENCE 53

M.H. BUNGEY
Chairman

Parliamentary Standing Committee on Public Works
Parliament House
Canberra ACT
20 August 1981

APPENDIX A

CONSTRUCTION

55. The proposed extensions to the existing International Terminal Complex cover building extensions with alterations to mechanical, electrical, hydraulic and stormwater services and extension of the existing aircraft apron. The materials, finishes, fittings and other extensions will be compatible with the existing terminal.

56. Design constraints The main design constraints which have been recognised and provided for in the design approach are:

- the existing structure and partitioning system;
- continuous settlement of the existing building as a consequence of poor subsurface soil conditions;
- the differential rates of settlement between the existing terminal and the proposed extensions - there will be a requirement for structural measures and finishes that can accommodate this differential settlement;
- operation of the existing terminal during construction which will involve alterations to existing functional areas;

57. Structure The existing structural system consists of steel posts and open trusses. The frame for the additions to the holding lounge area and the lateral extensions for check in and baggage claim areas will be of steel posts and beams.

58. Form Extensions to the apron side and the lateral sides of the building will be single storey with an upper level viewing gallery along the apron frontage.

59. Finishes External cladding will match existing metal decking. Internal walls and ceilings will be plasterboard. Concrete floors in new areas will be carpeted in main spaces with heavy duty rubber flooring in heavy traffic areas.

60. Mechanical Services All new internal areas will be airconditioned. The existing airconditioning system, which is provided by a number of dispersed plant installations, will have several more units added. Readjustments to some existing units will also be made. New airconditioning ductwork will generally be concealed. Units for refrigerated drinking water will be installed.

61. A new continuous baggage conveyor capable of handling baggage from passengers from a Boeing 747 aircraft (444 passengers) will be provided. The existing conveyor will be extended.

62. Existing power, lighting, fire detection and public address system installations will be extended to new areas. Lighting will be provided by recessed high intensity lamps and a number of skylights to supplement artificial lighting, will be provided in the central building area. Emergency lighting will also be provided.

63. Direction and information signs will be provided throughout the terminal.

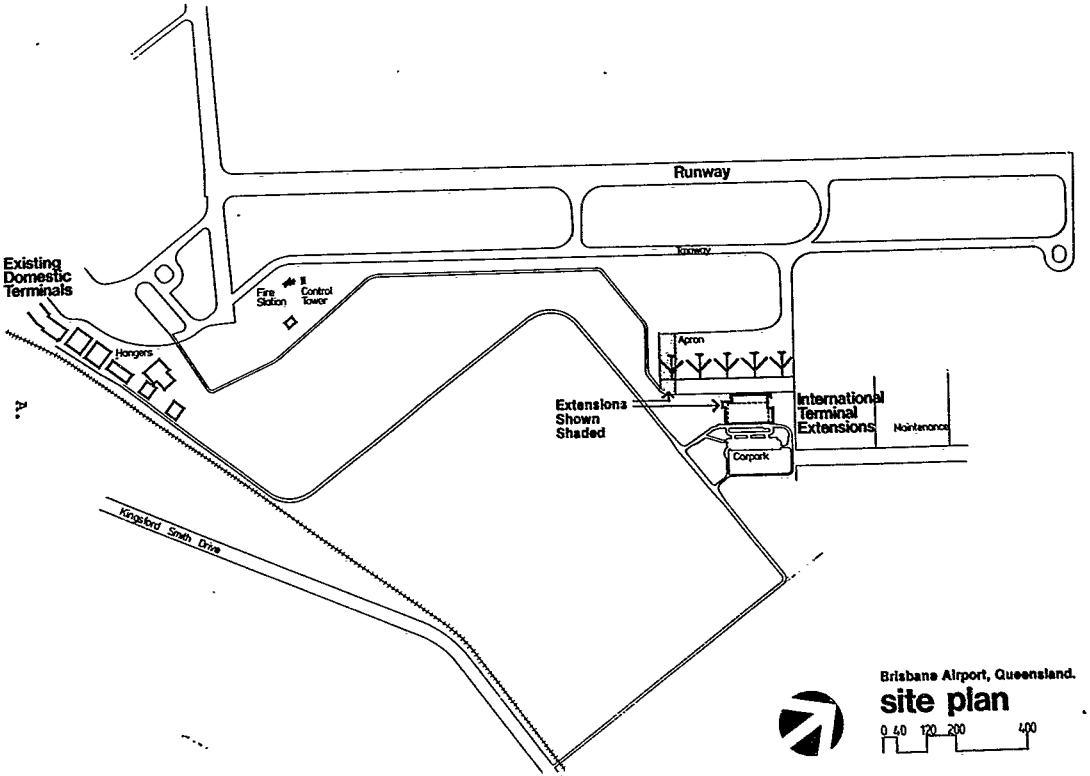
64. Appropriate connections to existing water, sewerage, stormwater and fire hydrant systems to service the new extensions will be provided.

65. External Works and Apron Existing road and carparking arrangements and trunk engineering services will not require extensions. The existing apron, some 54,450 square metres, will be extended by 6,600 square metres to

provide parking space for a maximum of five Boeing 747 aircraft at any one time. The extension will comprise 5,240 square metres of high strength aircraft pavement, and 1360 square metres of tug strength pavement. The high strength pavement will be of bituminous concrete, 50 mm thick, on 250 mm of fine crushed rock, on 200 mm of crushed rock and 1500 mm of sand. The tug strength pavement will be of bituminous concrete, 25 mm thick, on 125 mm of fine crushed rock, on 125 mm of crushed rock and 525 mm of sand.

66. An additional hydrant refuelling point will be included in the apron extensions.

67. No additional landscaping on the south-eastern (parking area) side of the building is envisaged. The extensions to the apron side of the building will encroach on the landscaped areas which will be removed.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site plan
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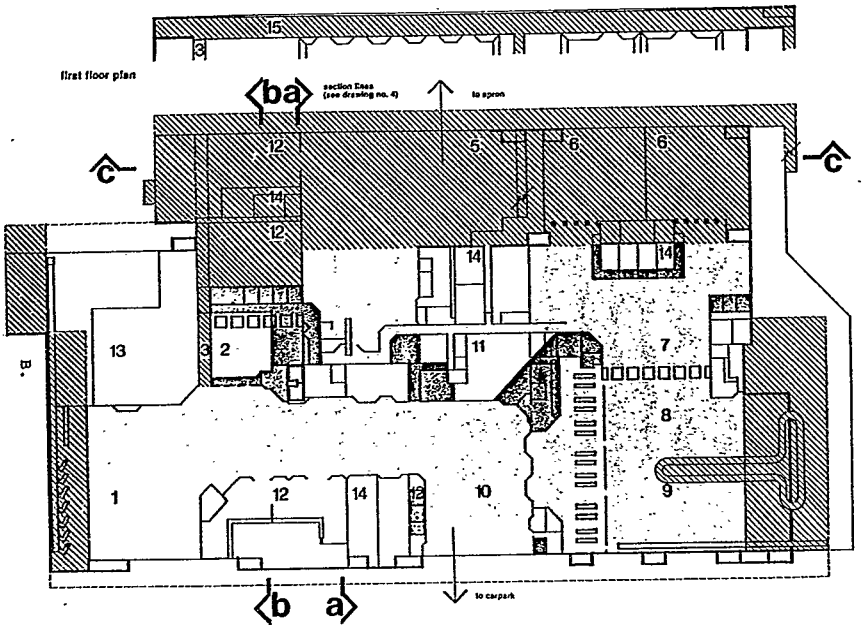

legend

1 departures hall
2 outwards customs
3 ramp to observation deck
4 security check area
5 forward departure lounge
6 health holding lounge
7 primary customs
8 customs hall
9 new baggage conveyor
10 arrivals hall
11 customs
12 concessionaires
13 qantas
14 toilets
15 upper observation deck
proposed extensions
alterations to existing

floor plan

international terminal building

floor plan

0 2 4 10 20 30